

Collaboration in a University System: Effective or Ineffective?

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Abstract

Collaboration among the four universities in the University of Houston System became popular in late 1999 and early 2000. Efforts to work collaboratively to deliver course work to our public were relatively successful according to our evaluations. This study sought to determine the extent to which those efforts were perceived as being valuable by faculty, students, and administrators among two of the four campuses. Our data suggest significant differences between the perceptions of the three groups regarding their awareness of the collaboration that was in place and the value it provided.

In the mid-1990s the University of Houston (HU) System, consisting of four separately accredited institutions, initiated a new venture in interinstitutional collaboration through the establishment of a multiinstitution teaching center (MITC) at two locations in suburban Houston. The academic leadership responsible for designing, implementing, and managing this initiative noted in a subsequent article about it: The concept of intra- and interorganizational cooperation is not new. “Writers and scholars remind us that twenty Greek city-states formed an alliance to defeat Persia around 440 BC. Winning the battle depended upon the proper combination of 200 Greek ships and on attaining the cooperation of many diverse city-states. Today cooperative alliances are being attempted in higher education at an increasing rate for a host of reasons: improving efficiency, enhancing cost savings, providing increased accessibility, and extending the delivery of quality education.” (Bell et al. 1998)

The academic leadership was acutely aware that efforts to realize the benefits of collaboration could not and should not mean an end to intra- and interinstitutional competition (Smith, Carroll, and Ashford 1995). The two had not only to coexist but to reinforce each other if indeed the interests of students, community, and state were to be best served. The conceptual underpinnings for this realization came in the form of a portmanteau term—co-opetition—which means, as Bradenbuger and Nalebuff (1996) explain in a book by that title, “The combining of collaboration and competition into one complex, dynamic and seemingly paradoxical relationship.” In a shared market, success may indeed depend on competing and cooperating simultaneously in order to create win-win situations for all participants and constituencies—a concept based on game theory.

According to Goold and Campbell (1998), the pursuit of synergy, which literally means working together and, which, as applied, assumes the ability of two or more units to create greater value by working together than they could by working apart—

pervades the management of most larger companies; and efforts to determine ways to collaborate more effectively are widespread. However, the authors note that such pursuits often fall short of management expectations and that the efforts may actually destroy value rather than create it. Goold and Campbell (1998) indicate further that the downsides of synergy are every bit as real as the upsides; they are just not seen as such in the enthusiasm to realize the benefits.

Clearly, higher education, including the UH System and others according to McAllister (1995) has in recent years borrowed from business models, with co-opetition being seen as especially valuable for the academy. The purpose of this study was to take a second look in order to determine the extent to which faculty, administrators, and students were actually aware of the collaborative efforts among the UH System universities and to determine the extent to which collaboration was seen as beneficial or not.

Methodology

A ten-item Likert questionnaire was developed to determine the extent to which faculty, students, and administrators at two of the campuses in the UH System were aware of the collaborative efforts and programs that existed. The questionnaire was also designed to survey the effectiveness of those collaborative efforts. The instrument contained five questions that were common to each constituent group along with five questions that were group specific. Responses on the survey were strongly agree (+3), just agree (+2) somewhat agree (+1), somewhat disagree (-1), just disagree (-2) and strongly disagree (-3). Forty-nine of 196 full-time faculty returned the questionnaire (25%). Twelve of the 13 executive level administrators (deans or higher) returned the survey and 178 selected students also completed the questionnaire.

Data Analysis

The survey data were analyzed by determining what percentage of each group demonstrated agreement or disagreement with the five common survey items as well as with the five group specific questions. Tables 1, 1a, 1b, and 1c show the aggregate of the percentages for each group on each survey item. To determine the percent of agreement for each question, the sum of those who responded somewhat agreed, just agreed, and strongly agreed were divided by the total number in the group who returned the survey. For example, (Table 1c), 49 faculty returned the survey and on question #1, 26 of 49 showed some level of agreement which resulted in a 53 percentage agreement rate. In instances where fewer than 49 responses were given to a specific question, the numerator was reduced accordingly. On the common survey items, Group 1, The Administrators, percentages ranged from a low of 36% to a high of 90% (Table 1b). Group 2, The Faculty, percentages ranged from a low of 53% to a high of 91% (Table 1c); and Group 3, The Students, percentages ranged from a low of 53% to a high of 91% (Tables 1, 1a).

**Table 1: Survey on Effects of Collaboration
UHCL – Student Items**

Total % Agreeing	Strongly Agree	Just Agree	Somewhat Agree	Somewhat Disagree	Just Disagree	Strongly Disagree
<i>1. I am aware of collaboration among institutions & faculties of the UH System.</i>						
53	7	7	12	4	5	14
<i>2. I believe such collaboration is beneficial.</i>						
91	24	12	7	2		2
<i>3. I believe I have benefited from such collaboration.</i>						
38	6	3	8	5	5	17
<i>4. I now think of collaboration as a means of addressing needs or problems.</i>						
71	16	6	7	2	2	8
<i>5. I have engaged in collaboration as a means of addressing needs or problems.</i>						
54	16	5	3	2	2	16
<i>6. I have been assigned collaborative projects with other students in class.</i>						
71	23	7	7	3	2	3
<i>7. Principles and practices of collaboration are taught in some of my classes.</i>						
82	19	19	5	2	3	3
<i>8. More time should be spent on teaching students how to collaborate effectively.</i>						
92	25	15	9	1		2
<i>9. Collaborating effectively is as important as competing effectively in today's society.</i>						
100	36	14	3			
<i>10. Faculty and administrators have important influence in modeling collaboration.</i>						
98	27	20	5	1		

Table 1b: Survey of Effects of Collaboration
UHCL – Administrator Items

Total % Agreeing	Strongly Agree	Just Agree	Somewhat Agree	Somewhat Disagree	Just Disagree	Strongly Disagree
	<i>1. I am aware of collaboration among institutions & faculties of the UH System.</i>					
83	2	6	2	1	1	
	<i>2. I believe such collaboration is beneficial.</i>					
75	5	3	1	1	1	1
	<i>3. I believe I have benefited from such collaboration.</i>					
36	1	2	1	3	2	2
	<i>4. I now think of collaboration as a means of addressing needs or problems.</i>					
72		5	3	2		1
	<i>5. I have engaged in collaboration as a means of addressing needs or problems.</i>					
90	3	5	2	1		
	<i>6. Collaboration has expanded my acquaintance with administrators on other campuses.</i>					
100	3	4	5			
	<i>7. Collaboration has improved relationships with administrators on other campuses.</i>					
66		6	2	2	2	
	<i>8. Collaboration has affected my work priorities and time allocated to them.</i>					
72		5	3	3		
	<i>9. Collaboration has enabled the UH System to realize its mission more effectively.</i>					
50	1	2	3	1	3	2
	<i>10. UH System administrators have effectively modeled collaboration.</i>					
18		1	1	2		7

**Table 1c: Survey on Effects of Collaboration
UHCL-Faculty Items**

Total % Agreeing	Strongly Agree	Just Agree	Somewhat Agree	Somewhat Disagree	Just Disagree	Strongly Disagree
<i>1. I am aware of collaboration among institutions & faculties of the UH System.</i>						
53	7	7	12	4	5	14
<i>2. I believe such collaboration is beneficial.</i>						
91	24	12	7	2		2
<i>3. I believe I have benefited from such collaboration.</i>						
38	6	3	8	5	5	17
<i>4. I now think of collaboration as a means of addressing needs or problems.</i>						
71	16	6	7	2	2	8
<i>5. I have engaged in collaboration as a means of addressing needs or problems.</i>						
54	16	5	3	2	2	16
<i>6. I assign collaborative projects to students in my classes.</i>						
63	22	4	2	2	3	11
<i>7. I teach principles and practices of collaboration in my classes.</i>						
72	18	7	7	1	4	6
<i>8. I would like to engage in more collaborative projects with my faculty colleagues.</i>						
82	22	8	7		2	4
<i>9. Collaboration will become increasingly important in the workplace of the future.</i>						
88	27	8	3	1	2	1
<i>10. UH System faculty have effectively modeled collaboration.</i>						
34	1	3	11	4	8	15

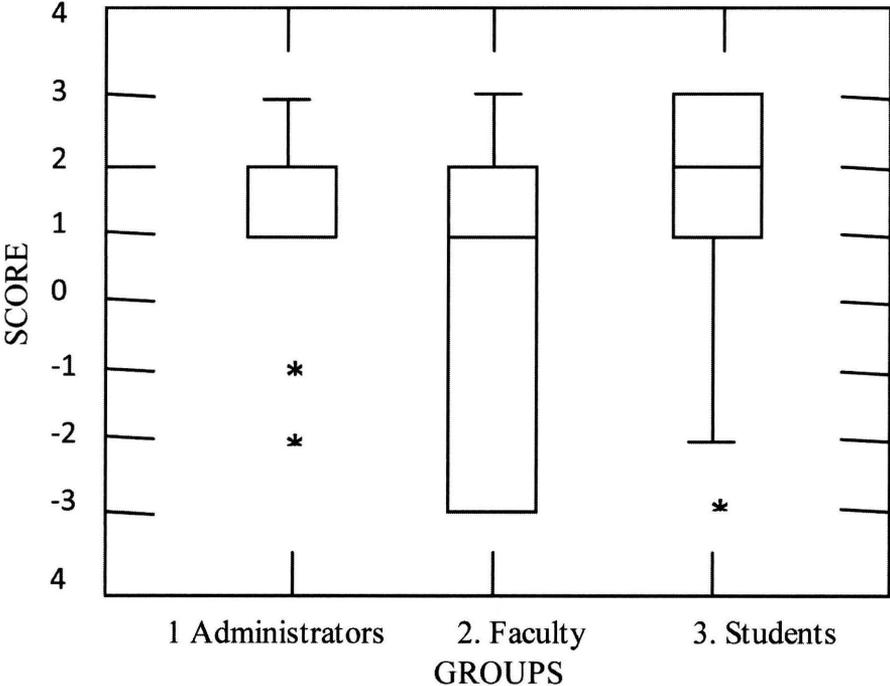
On the Group Specific Questions, the range of percentages for Group 1 (the Administrators) was from a low of 18% or high of 100%; for Group 2 (the Faculty), the range of percentages was from 34% to 88%; and for Group 3 (the Students), the range of percentages was from 71% to 100%.

In addition to determining the percentages of agreement or disagreement among the groups, we wanted to determine if there were any differences among the three groups on the common survey questionnaire items. To measure differences of a single variable across two or more independent groups of cases, a non-parametric statistic, the Kruskal-Wallis (KW) test statistic, was used to determine if there were significant differences among the responses that were given to the five common questions by the three groups. For the KW test, the values of a variable are transformed to ranks keeping track of which ranks come from which group to test if there is no shift in the center of the groups (that is the centers do not differ). This is the non-parametric analog of a one-way analysis of variance. (Wilkinson. 1997).

For two or more groups, the Kruskal–Wallis test statistic measures whether random samples from each group come from identically distributed populations. Question 2 and 5 did not reveal any significant difference among the three groups.

Table 2 shows the median of each distribution, which is marked by the horizontal bar inside the box, for each group on survey item 1. The median for Group 1 on the first survey item is +2. In Table 2 the median and the 75th percentile are the same. For Group 2 the median is +1 and for Group 3 it is +2. Both Groups 1 and 3 have the same median score of +2 while Group 2 has a median score of +1. Was there a difference in the awareness of collaboration among institutions and faculties of the university system? The Kruskal-Wallis test statistic =18.143. Under the null hypothesis that the three groups have the same center, the probability of observing 18.143 is 0.0001 (p-value). The KW test statistic for these data follows a Chi-Square distribution with 2 degrees of freedom. The conclusion is that the responses differ significantly across the three groups. The significant difference appears to result from the spread of the responses among the three groups; in particular, 50% of faculty responses were less than 1, whereas 75% or more of the other responses of each of the other two groups were greater than 1.

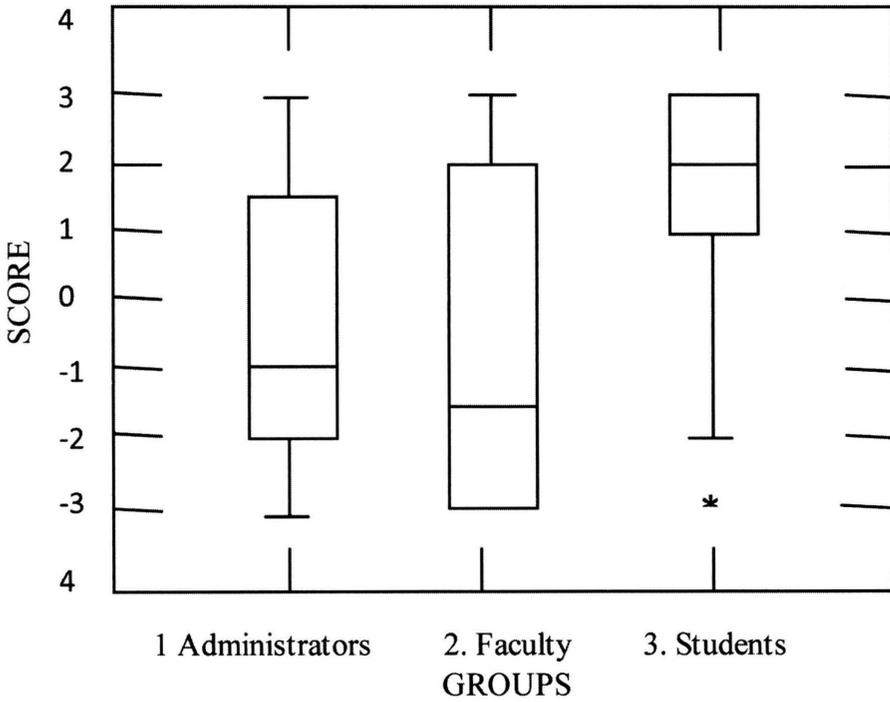
Table 2



Box Plot comparing 3 groups for Item 1

Table 3 shows that the median responses for Group 1 on survey item 3 is -1; for Group 2 the median response is -1.5, and for Group 3 the median response is +2. The significance occurs due to the range in the responses on this item. Both groups 1 and 2 have median scores that are -1 or lower, indicating disagreement while group 3 responses show a median score of +2. The Kruskal-Wallis test statistic = 23.23672, with probability 0.00001 (p-value) of occurring. From these data there appears to be a significant difference in the belief that the three groups had about the benefits of collaboration. The conclusion is that the responses differ significantly among the three groups.

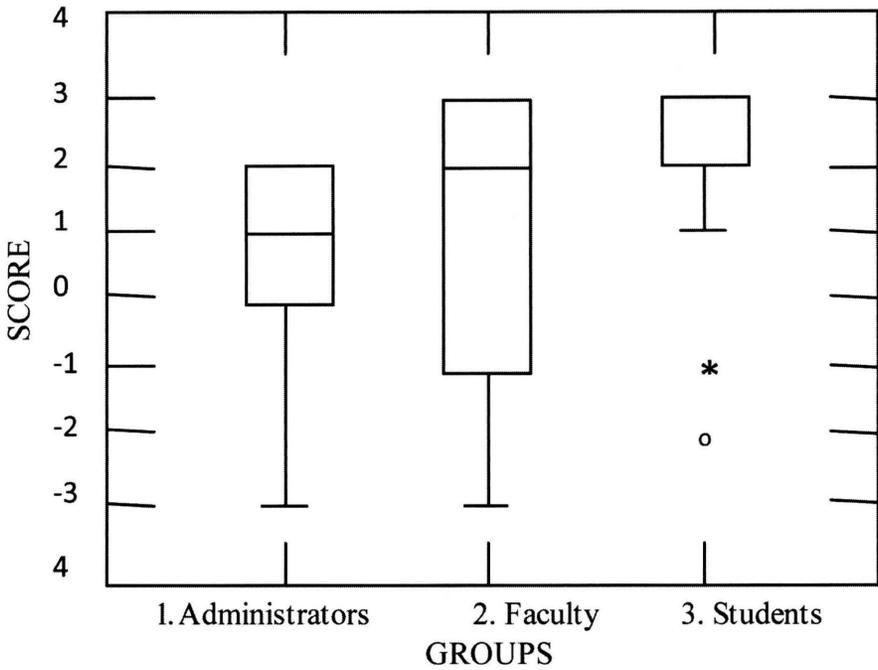
Table 3



Box Plot Comparing Groups for Item 3

Table 4 shows that the median responses for Group 1 on survey item 4 is +1. For Group 2 it is +2; and for Group 3 it is +3. The median, the 75th percentile, and the maximum response are the same for Group 3. Is there a difference in the thinking of the three groups regarding the use of collaboration as a means of addressing needs and problems? The Kruskal-Wallis test statistic = 9.67822, with a (p-value) of 0.00791. The conclusion is that the responses differ significantly across the three groups for survey item 4.

Table 4



Box Plot Comparing Groups for Item 4

Conclusion

The purpose of this study was to investigate the extent to which faculty, administrators, and students of the University of Houston System were aware of collaborative efforts in program delivery as well as to determine if there were differences among the three groups across common questionnaire items. According to the results for Item 1, the faculty responses differed significantly from those of both the students and administrators. Faculty disagreement may have occurred due to the limited numbers of faculty who teach in the off campus sites where such collaborative efforts were evidenced. On item three, faculty and administrator responses disagreed significantly from student responses regarding the belief that they have benefited from such efforts. The difference appears to be a result of the fact that higher educational degree programs are available to students at sites that would normally not have access to such programs. Hence, the real benefit, as perceived by students, may not have been as obvious to administrators and faculty. On item 4, administrator responses disagree significantly with those of the faculty and students. Such differences may have resulted from the direct benefits students and faculty view as occurring at the off campus sites.

By conducting this study, it became readily apparent that developing trust among constituent groups on the four campuses is essential. The perception that one or more of the participants may be trying to use the collaborative effort to take unfair competitive advantage can be fatal to that effort. Furthermore, we have learned the importance of understanding the effective qualities of working relationships and the expressive qualities of various forms on interpersonal conduct. Participants must not only understand the importance of trust to effective working relationships but also understand how those relationships can be affected by the expressive component of interpersonal conduct.

Finally, it is important to develop and implement clear methods of communicating the collaborative efforts among the participating campuses. Such efforts encourage support as well as feelings of inclusiveness within the universities. Additionally, the financial benefits resulting from collaboration in program delivery are substantial. Such benefits include savings in hiring faculty, acquiring new facilities and the maintenance of such areas as well as other in-kind costs, which are inherent in all such efforts. The growth and sustainability of wide spread collaborative program delivery was moderately successful in our system. More success would have occurred had the system been able to provide more financial support for program delivery. As our efforts were developed, each campus had to provide most, if not all, of the needed financial support to get the new programs started. Our experience taught us the importance of developing a thorough and comprehensive plan for the development and delivery of all such collaborative efforts, without which there will be minimal success or no success at all.

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