# Accreditation and Educational Quality: Are Students in Accredited Programs More Academically Engaged?

James S. Cole Shu T. Cole Indiana University - Bloomington

Address correspondence to: James S. Cole Center for Postsecondary Research Indiana University-Bloomington Eigenmann Hall, Suite 419 Bloomington, IN 47406 812-856-3004 colejs@indiana.edu

#### Abstract

There has been a great deal of debate regarding the value of program accreditation. Two research questions guided this study: 1) are students enrolled in accredited parks, recreation, and leisure programs more academically engaged than students enrolled in non-accredited programs, and 2) do students enrolled in accredited parks, recreation, and leisure programs report higher gains regarding academic learning, practical competence, and satisfaction than students in non-accredited programs? This study found students in accredited programs were significantly more engaged in educationally relevant behaviors than students in non-accredited programs. In addition, results indicated students in accredited programs reported higher gains in practical competence and satisfaction. NRPA's new direction for the accreditation process is to focus on student learning outcomes, which may lead to greater differences in the quality of education provided by accredited versus non-accredited programs.

KEYWORDS: Accreditation, educational quality, student engagement

"First of all, in a professional field there has to be some level of minimum competency. Accreditation gives some reasonable assurance of the content and quality of the education opportunities offered by an accredited program" (Mc-Donald, 2003, p. 3). There has been much debate regarding the value of program accreditation for parks, recreation, and leisure programs (Kennedy, 2003; McDonald, 2003). This debate is focused on three main points: 1) is it appropriate to have a common academic core given the diversity of students and program emphases; 2) the rigorous and arduous process of accreditation; and 3) the value of accreditation for the academic program (Kennedy, 2003).

Currently, 94 academic programs in the United States are accredited by the National Recreation and Park Association (NRPA)/American Association for Physical Activity and Recreation (AAPAR) Council on Accreditation (National Recreation and Parks Administration, 2007). These academic programs are found in a wide variety of higher education institutions. According to the Council on Accreditation (COA) there are two fundamental purposes for accreditation: 1) to assure program quality and 2) to assist in program improvement (Council on Accreditation, 2004). To become accredited by the COA, academic institutions are required to provide documentation showing their program meets or exceeds standards set forth by the Council (Council on Accreditation, 2004). These standards are descriptive statements of quality regarding the organization, its operation of its programs, and academic content. In short, these standards are designed to set a minimum level of educational quality in the academic and professional preparation of future parks and recreation professionals (Houghton, 1996).

As the field of recreation, park and leisure studies becomes more diverse, the issue of developing a "common core" has become a pressing concern. As Dan McLean, former president of SPRE, stated, "The notion of a common core, while supported by accreditation standards, may not be so common anymore" (2003, p. 1). McDonald (2003) pointed out that it was almost impossible to develop one set of standards and competencies that would meet the diverse educational needs of the traditional park and recreation, therapeutic recreation, tourism, sport management emphasis areas. McDonald also argued that it has increasingly become "a struggle to satisfy NRPA/AALR accreditation standards and competencies" for departments with diverse programs because these standards and competencies were designed for the traditional park and recreation programs. As a result, a growing number of departments in the field of recreation, park and leisure studies have discontinued or chosen not to pursue accreditation with NRPA/AALR.

The Council on Accreditation (COA) recognizes changes occurring in the field as well as the frustrations experienced at the departmental/institutional level. It has since worked on revising the accreditation standards. In his recent memorandum to chairs of all accredited programs, Roger Coles, Chair of the COA, informed programs of upcoming changes in accreditation standards. While the existing accreditation model utilized by COA is content-driven, Coles explained that prominent accrediting bodies nationwide were "moving away from such process models in favor of student learning outcomes models" (R. Coles, personal communication, July 30, 2007). This means that the new set of the accreditation standards will support "additional attention to student learning outcomes as central

judgments concerning academic quality." Under the student learning outcomes model, departments with diverse programs in park, recreation and leisure-related studies will not focus on what is being taught, but instead on whether graduates are prepared for careers in their profession.

Although the new changes appear to be promising in addressing the issue of identifying a "common core" for a diverse and evolving field, the important question departments, institutions, and the COA still need to ask is whether it is valuable for a program to be accredited. What evidence exists regarding possible relationships between accreditation and program quality? McDonald (2003) called for "some current information that the present competencies are effective in pre-paring students for a profession in parks and recreation, regardless of how the field is defined" (p.4). The goal of this study was to investigate whether accredited and non-accredited programs differed in educational quality.

Typically, accreditation agencies assess program quality by evaluating the inputs and resources (e.g., faculty credentials, curriculum) of the institution and academic department. However, the diversity of park and recreation programs makes it difficult to objectively compare accredited and non-accredited programs based on inputs and resources. Another approach to assessing collegiate quality is to examine the educational process students are required to complete in the program (Pascarella & Terenzini, 2005). In other words, programs are assessed by examining the processes that contribute to student success. For example, whether students are engaged in academically challenging activities, such as correlations between the amount of time spent studying and student performance (Pascarella & Terenzini, 2005). The extent to which students are engaged in educationally relevant activities is an indicator of program quality because departments or programs play an integral role in facilitating these activities. This approach shifts the emphasis of assessment toward an understanding of the educational processes that contribute to student success. However, research investigating the educational quality of accredited parks and recreation program is scarce. This study explores the effectiveness of accreditation by investigating differences in educational quality between accredited and non-accredited parks and recreation programs, addressing a gap in the literature.

#### Student Engagement

Student engagement is the result of two critical features. The first is the extent to which students devote time and effort to their studies and other academically related activities. As stated by Alexander and Murphy (1994), "learning is strongly influenced by the degree to which an individual is invested in the learning process" (p. 12). The second feature is how the institution facilitates and encourages students to be educationally engaged. Does institution provide the opportunity for students to be academically engaged? These two features are not mutually exclusive, instead they are closely related characteristics providing a conceptual framework for understanding that student engagement not only involves individual effort, but is also the result of the opportunities and encouragement provided by the institution.

Over thirty years of research shows that the time and energy students devote to educationally purposeful activities is the single best predictor of their learning and personal development (Astin, 1993; Pascarella & Terenzini, 2005). Recently, Carini, Kuh, and Klein (2006) conducted a comprehensive study to demonstrate these linkages. The purpose of their study was to investigate the relationship of several indicators of student academic engagement with college student outcomes. Student academic engagement indicators included "academically challenging activities" (e.g., number of papers written of 20 pages or more), "active and collaborative learning" (e.g., worked with other students on a project during class), and "student-faculty interaction" (e.g., discussed ideas from reading or classes with faculty members outside of class). Student outcomes were measured using Graduate Record Exam (GRE) scores, Collegiate Learning Assessment (CLA) scores (a college-level critical thinking exam), and collegiate GPA. More than 1,000 students at 14 colleges and universities were included in the study. Significant partial correlations were found between various indicators of student engagement and these academic outcomes. The results indicated that student engagement in "academically challenging activities" was significantly correlated with CLA test scores (r=.10, p<.01), GRE scores (r=.09, p<.05), and GPA (r=.07, p<.05). Student engagement in "active and collaborative learning" was significantly correlated with GRE scores (r=.08, p<.05) and GPA (r=.13, p<.001). "Student-faculty interaction" and college GPA were also significantly positively correlated (r=.13, p<.001). Overall, these patterns of significant partial correlations led the researchers to suggest that "the results of this study corroborate what many other researchers have found, that student engagement is linked positively to desirable learning outcomes such as critical thinking and grades" (p. 23).

A number of research studies have supported the importance of student engagement in student success (Ebert-May, Brewer, & Allred, 1997; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006). For instance, Ebert-May, Brewer, & Allred (1997) reported undergraduate college students in active learning science classrooms reported significantly higher levels of science efficacy and understanding of scientific process skills compared to students who did not experience the active learning classrooms. In 2001, Anaya and Cole (2001) conducted a study that demonstrated the significant positive effects of student-faculty interaction for Latina/o students on their college grades.

What institutions "do" has been most closely aligned with program accreditation and certainly has influence over "what students do." Over the years, research has shown us that what the institutions "do" regarding how they deploy resources, organize curriculum, and provide support services students need to be successful is positively related to student success (Kuh, 2001; Pike & Killian, 2001). For instance, a recent study by Hu and Kuh (2003), analyzed data from over 44,000 students enrolled at 120 colleges and universities. These researchers found that campus environments that emphasized "scholarly and intellectual activities" (e.g., environments that emphasize developing academic, creative, or quantitative qualities) positively influenced student learning in general education, science, and technology. As Pascarella and Terenzini (2005) concluded, "the impact of college is largely determined by individual effort and involvement in the academic, interpersonal, and extracurricular offerings on a campus" (p. 602). Characteristics of high quality educational programs are programs where students are actively engaged in their learning, highly satisfied, and perceive high levels of learning and other gains. The implication for academic programs is clear: programs should fully engage students in a variety of activities that contribute to valued outcomes (Kuh, Kinzie, Schuh, & Whitt, 2005; McKeachie, 2002).

For educators responsible for the delivery of collegiate parks and recreation programs the question remains, do accredited parks and recreation programs provide higher educational quality than those programs not accredited? To investigate this question, student engagement in educationally relevant behaviors was used as an indicator of educational quality. Student self-reported gains and satisfaction were outcome indicators. Often educational researchers, in the absence of standardized test scores, GPA, or other objectively measured academic outcomes, need to rely on self-reported gains as indicators of academic progress. Student reported gains and satisfaction were found to be significantly correlated with standardized scores such as CLA, GPA, and GRE scores (Carini, Kuh, & Klein, 2006).

The premise underlying this study was that accredited programs were doing more to encourage and facilitate student engagement than non-accredited programs. Two research questions guided this study:

- 1. Are students enrolled in accredited parks, recreation, and leisure programs *more academically engaged* than students enrolled in parks, recreation, and leisure programs that are not accredited?
- 2. Do students enrolled in accredited parks, recreation, and leisure *programs report higher gains regarding academic learning, practical competence, and satis-faction* than students enrolled in parks, recreation, and leisure programs that are not accredited?

## Method

Data for this study was collected from higher education institutions in the United States that participated in the *National Survey of Student Engagement* (NSSE) in 2005, 2006, and 2007. The NSSE is administered annually by the Center for Postsecondary Research at Indiana University. Since 2000, over 1,100 institutions throughout the United States and Canada have administered the NSSE to over 1 million undergraduate students on their campuses to collect data regarding educational quality. Data collected by the NSSE is widely recognized by many institutions and the US Department of Education as "a proxy for the value and quality of their [students'] undergraduate experience" (2006, p. 23). The NSSE is a critical component in the national discussion regarding collegiate educational quality. For example, many college educators and administrators have sought an alternative to the traditional college rankings. In response, *USA Today*, in collaboration with the Center for Postsecondary Research at Indiana University recently published the results of 257 institutions that participated in NSSE (USA Today, 2007). The

goal of such a report was to broaden traditional college rankings to include other indicators of educational quality such as student engagement.

Annually, the NSSE collects data from hundreds of thousands of students enrolled at baccalaureate colleges and universities regarding their student participation in programs and activities that promote their learning, personal, and professional development. The NSSE does not collect data regarding student learning per se, but rather collects data regarding the processes that contribute to student learning and academic success. The NSSE is comprised of 85 items regarding the extent to which students are engaged in educationally relevant activities or educational gains and outcomes. A total of 14 additional items collect student demographic characteristics.

Seven scales were created using the NSSE data. These included four "benchmarks of effective educational practice" and three self-report outcome variables (see Table 1). The NSSE Benchmarks of Effective Educational Practice are converted to a scale rated from 0 (low) to 100 (high). The scale for the three self-report outcome variables is rated from 1 (low) to 4 (high). Reliability is a data-dependent characteristic, thus it was important to calculate the internal consistency of the scales from the data used in this study (Thompson & Vacha-Haase, 2000). Internal consistencies for the scales used in this study ranged from a high of .842 (Gains in General Education) to a low of .680 (Active and Collaborative Learning). Skewness and kurtosis did not exceed accepted levels and were deemed adequate for analysis. Table 1 provides additional descriptive characteristics of the scales used in this study. Other psychometric properties of the NSSE are reported in detail by Kuh, Hayek, Carini, Ouimet, Gonyea & Kennedy (2001).

Scale	N resp.	N items	a	Min	Max	Mean	St.Dev.
Benchmarks of effective educational practice							
Level of Academic Challenge (LAC)	2007	11	.748	8.3	93.8	51.83	13.61
Active & Collaborative Learning (ACL)	2011	7	.680	0.0	100.0	54.23	16.24
Student-Faculty Interaction (SFI)	2010	5	.761	0.0	100.0	45.32	19.97
Supportive Campus Environment (SCE)	2012	6	.757	5.6	100.0	61.19	17.43
Self-reported gains							
Satisfaction (SAT)	2013	2	.748	1.0	4.0	3.22	0.69
Gains in General Education (GGE)	2010	4	.842	1.0	4.0	3.02	0.69
Gains in Practical Competence (GPC)	2004	5	.795	1.0	4.0	3.08	0.63

TABLE 1 Scale Descriptives

## NSSE Benchmarks of Effective Educational Practice

- (1) Level of Academic Challenge (LAC): Eleven items that represent challenging intellectual and creative work such as reading, writing, and higher order mental activities.
- (2) Active and Collaborative Learning (ACL): Seven items about how students take initiative for their own learning, and also working with others in solving problems.
- (3) Student-Faculty Interaction (SFI): Five items about interacting in meaningful ways with faculty members inside and outside the classroom.
- (4) Supportive Campus Environment (SCE): Six items that ask students to rate their campus environments and their relationships with other students, faculty, and administrative offices.

#### Self-report Gains

- (5) Gains in General Education: (GGE) Four items from the NSSE asked students to self-report how much progress they had made gaining knowledge and skills in the areas of writing, speaking, thinking critically, and in general education.
- (6) Gains in Practical Competence (GPC): Five items from the NSSE asked students to self-report how much progress they had made gaining practical and career related knowledge and skills.
- (7) Satisfaction (SAT): Two items from NSSE asked students to self-report how satisfied they are with their educational experience.

## Sample

From 2005 to 2007, over 800 higher education institutions in the United States participated in the NSSE. For the purpose of this study, only data from full-time seniors who self-identified as majoring in parks, recreation, therapeutic recreation, leisure, or tourism (shortened to "parks and recreation" from this point forward) were included. Three years of data were combined to obtain a sufficient sample size. Using these criteria, 2,014 parks and recreation seniors were identified in the data file. These students were enrolled at 349 institutions across the United States. Of the 349 institutions in the sample, 72 programs were accredited by COA (277 were not accredited). To assure the appropriateness of combining three years of data, MANOVA was run comparing mean score differences by year on all variables included in the study. No significant differences were found. Thus, it was concluded that it is appropriate to combine these three years of data.

A total of 789 students were enrolled in accredited park and recreation programs and 1225 students enrolled in non-accredited programs. As indicated in Table 2, over half of students in the sample were enrolled in the non-accredited programs. Of those, more than half (58.2%) were female compared with non-accredited programs where just under half (48.5%) were female. The ethnic/racial composition of the two samples were similar, with the majority of students being Caucasian in both (accredited 84% and non-accredited 85%). The sample

Participant Characteristics	Accredited P&R program (n=789)	Non-accredited P&R program (n=1225)
Gender		
Male	41.8%	51.5%
Female	58.2%	48.5%
Ethnicity		
Asian	1.5%	1.1%
Black/African	3.9%	5.9%
Caucasian	84.2%	85.4%
Hispanic	2.0%	1.8%
Other	8.4%	5.8 %
SAT/ACT <sup>1</sup>		
Mean	1026.5	1017.1
St. Dev	178.0	185.7
Institution	Accredited P&R program	Non-accredited P&R
Institution Characteristics	Accredited P&R program (n=72)	Non-accredited P&R program (n=277)
Institution Characteristics Enrollment size	Accredited P&R program (n=72)	Non-accredited P&R program (n=277)
Institution Characteristics Enrollment size	Accredited P&R program (n=72)	Non-accredited P&R program (n=277) 41.5%
Institution Characteristics Enrollment size 1-2500 2501-5000 5001 5500	Accredited P&R program (n=72) 6.9% 9.7%	Non-accredited P&R program (n=277) 41.5% 22.7%
Institution CharacteristicsEnrollment size1-2500 2501-5000 5001-7500	Accredited P&R program (n=72) 6.9% 9.7% 9.7%	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7%
Institution           Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3%	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.0%
Institution Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7%	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8%
Institution           Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500           12501-15000	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7% 12.5%	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8% 3.2%
Institution           Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500           12501-15000           15000 or more	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7% 12.5% 43.1%	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8% 3.2% 10.1%
Institution Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500           12501-15000           15000 or more           Mean	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7% 12.5% 43.1% 14,464.7	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8% 3.2% 10.1% 5,928.3
Institution Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500           12501-15000           15000 or more           Mean           St. Dev	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7% 12.5% 43.1% 14,464.7 9,138.8	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8% 3.2% 10.1% 5,928.3 6,592.4
Institution Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500           12501-15000           15000 or more           Mean           St. Dev           Designation	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7% 12.5% 43.1% 14,464.7 9,138.8	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8% 3.2% 10.1% 5,928.3 6,592.4
Institution Characteristics           Enrollment size           1-2500           2501-5000           5001-7500           7501-10000           10001-12500           12501-15000           15000 or more           Mean           St. Dev           Designation	Accredited P&R program (n=72) 6.9% 9.7% 9.7% 8.3% 9.7% 12.5% 43.1% 14,464.7 9,138.8 86.1%	Non-accredited P&R program (n=277) 41.5% 22.7% 8.7% 7.9% 5.8% 3.2% 10.1% 5,928.3 6,592.4 42.6%

 TABLE 2

 Characteristics of Participants and Institutions

<sup>1</sup> ACT scores were converted to the SAT scale (Dorans, Lyu, Pommerich & Houston, 1997).

of students in the accredited programs had slightly higher mean SAT/ACT scores (1026.5) than students in the non-accredited programs (1017.1). Overall, accredited programs were found at larger, public institutions, whereas non-accredited programs were more often located at smaller, private institutions.

Research has found that gender, SAT/ACT scores, institution size, and institution designation, either a public or private, are associated with student engagement (Pascarella & Terenzini, 2005). Based on this prior research, these four variables were included as covariates in the analysis for this study. The purposes for including covariates was to reduce the error term thereby increasing the sensitivity of the test of main effects and to adjust the mean scores on the dependent variables test by taking into account variability caused by the covariates (Tabachnick & Fidell, 2001).

### Results

Research Question 1: Are students enrolled in accredited parks, recreation and leisure programs more academically engaged than students enrolled in parks, recreation, and leisure programs that are not accredited?

Multivariate analysis of covariance (MANCOVA) was used to investigate the mean differences between students enrolled in accredited programs and students enrolled in non-accredited programs. Enrollment in accredited and non-accredited programs was included as the independent variable (factor), while the four benchmarks of effective educational practice were dependent factors. Student gender, prior academic achievement (SAT/ACT scores), private/public designation, and institution enrollment size were all included as covariates in the model. The main effect for SAT/ACT scores as a covariate was not significant (F=1.270; p>.05; partial  $\eta^2$ =.004). Therefore, SAT/ACT was removed as a covariate and the MAN-COVA was run again with the three remaining covariates. Main effects were found for gender (F=3.779; p<.01; partial  $\eta^2$ =.007), private/public designation (F=4.640; p<.01; partial  $\eta^2$ =.009), enrollment size (F=5.502; p<.001; partial  $\eta^2$ =.011), and accreditation (F=8.308; p<.001; partial  $\eta^2$ =.016). The test of between-subjects indicates that the students enrolled in accredited programs were significantly more engaged than their counterparts in non-accredited programs (see Table 3). Specifically, students in accredited programs reported significantly higher levels of engagement in Level of Academic Challenge (F=9.582; p<.01; partial  $\eta^2$ =.005), Active and Collaborative Learning (F=22.993; p<.001; partial  $\eta^2$ =.011), Student-Faculty Interaction (F=8.235; p<.01; partial  $\eta^2$ =.004), and Supportive Campus Environment (F=19.081; p<.001; partial  $\eta^2$ =.009). The greatest difference in mean scores between these two groups was for Active and Collaborative Learning activities (accredited = 56.9 and non-accredited = 52.4; mean difference = 4.4), while the least difference was in Levels of Academic Challenge (accredited = 53.3 and non-accredited = 50.9; mean difference = 2.4) (see Figure 1).

Though students in accredited programs did report significantly higher levels of engagement, the effect sizes (partial  $\eta^2$ ) were small. Partial eta squared values that are less than .04 are considered small effects, .05-.14 are medium effects, and .15 and larger are large effects (Keppel & Wilkens, 2004). These results indicate a small, but consistent pattern of higher levels of academic engagement for students in accredited programs compared to students in non-accredited programs.

Review of the confidence intervals and standard errors (see Table 4) provided further evidence regarding the extent to which these group differences were meaningful. Confidence intervals provide important information regarding parameter estimates and likely population distributions. Confidence intervals are interpreted

Variables	Mean	F	$\eta^{2}_{_{p}}$
LAC			
Non-accredited	50.901	9.582**	.005
Accredited	53.283		
ACL			
Non-accredited	52.502	22.993***	.011
Accredited	56.896		
SFI			
Non-accredited	44.052	8.235**	.004
Accredited	47.309		
SCE			
Non-accredited	59.504	19.081***	.009
Accredited	63.819		

TABLE 3Adjusted Mean Scores for Each Group1

<sup>1</sup>Covariates include gender, public/private designations, and institution enrollment size

\* p<.05; \*\* p<.01; \*\*\* p<.001



Figure 1. Adjusted mean scores of student engagement

Dependent Variable	Accreditation	Std. Error	95% Confide Lower Bound	ence Interval Upper Bound
LAC	No	.426	50.065	51.736
	Yes	.557	52.191	54.375
ACL	No	.508	51.506	53.498
	Yes	.664	55.594	58.198
SFI	No	.628	42.821	45.284
	Yes	.821	45.699	48.919
SCE	No	.547	58.431	60.576
	Yes	.715	62.417	65.221

 TABLE 4

 Confidence Intervals of Student Engagement<sup>1</sup>

<sup>1</sup>Covariates include gender, public/private designations, and institution enrollment size. See Table 3 for adjusted mean scores.

to indicate the difference in "true" mean scores for the populations in question. For instance, the 95% confident interval for the dependent variable ACL was between 51.5 and 53.5 for students in non-accredited programs and 55.6 and 58.2 for students in accredited programs. Since these two parameter estimates do not overlap, it can be inferred there is a 95% chance that if another sample of students from these same two populations were surveyed the adjusted mean scores for each group would be significantly different and fall within their respective confidence intervals. As indicated in Table 4, the confidence intervals for LAC, ACL, SFI, and SCE do not overlap. Although these differences were small, we can be fairly confident that the true population means were different.

Research Question 2: Do students enrolled in accredited parks, recreation, and leisure programs report higher gains regarding academic learning, practical competence, and satisfaction than students enrolled in parks, recreation, and leisure programs that are not accredited?

MANCOVA was conducted in answering this question. Similar to the analysis for Research Question 1, enrollment in accredited and non-accredited programs was included as the independent variable (factor) and the three self-reported gains as dependent factors. Student gender, prior academic achievement (SAT/ACT scores), private/public designation, and institution enrollment size were all included as covariates in the model.

The main effect for private/public designation (F=2.351; p>.05; partial  $\eta^2$ =.005), was not significant. Therefore, private/public designation was removed as a covariate and the MANCOVA was run again with the three remaining covariates. As Table 5 shows, main effects were found for gender (F=3.474; p<.05; partial  $\eta^2$ =.008), SAT/ACT scores (F=6.244 p<.001; partial  $\eta^2$ =.014), institution enrollment size (F=4.806; p<.01; partial  $\eta^2$ =.011), and accreditation (F=5.943; p<.01; partial  $\eta^2$ =.013).

The test of between-subjects indicates the students enrolled in accredited programs reported significantly higher gains than their counterparts in non-accredited programs in 2 of the 3 outcome variables (see Table 5). Specifically, students in accredited programs reported significantly higher gains in practical competence (F=14.119; p<.001; partial  $\eta^2$ =.010) and satisfaction (F=6.686; p<.05; partial  $\eta^2$ =.005). There was no significant difference between the groups for gains in general education (F=3.149; p>.05; partial  $\eta^2$ =.002). Figure 2 provides the adjusted marginal means after controlling for student gender, prior academic achievement, and institution enrollment size. The difference in mean scores between these two

Variables	Mean	F	$\eta^{2}_{\ p}$
GPC			
Non-accredited	3.012	14.119***	.010
Accredited	3.163		
GGE			
Non-accredited	2.985	3.149	.002
Accredited	3.058		
SAT			
Non-accredited	3.201	6.686*	.005
Accredited	3.313		

TABLE 5	
Adjusted Mean Scores for Each Gro	oup1

<sup>1</sup>Covariates include gender, public/private designations, and institution enrollment size \* p<.05; \*\*\* p<.001



*Figure 2.* Adjusted mean scores of self-reported outcome variables

groups for perceived gains in practical competence was .15 (accredited = 3.16 and non-accredited = 3.01), .11 for reported satisfaction (accredited = 3.31 and non-accredited = 3.20), and .07 for gains in general education (accredited = 3.06 and non-accredited = 2.99) (see Figure 2). Though students in accredited programs did report significantly higher levels of gains in practical competence and satisfaction, the effect sizes (partial  $\eta^2$ ) were considered small (Keppel & Wickens, 2004).

Review of the confidence intervals and standard errors reported in Table 6 provided further evidence that these adjusted mean scores for all the dependent variables were in fact different between these two groups for Gains in Practical Competence and Satisfaction. The 95% confidence interval for GPC for students in accredited programs was between approximately 3.1 and 3.2 and between 3.0 and 3.1 for students in non-accredited programs. The 95% confidence interval for SAT for students in accredited programs was between approximately 3.3 and 3.4 and between 3.2 and 3.3 for students in non-accredited programs. Though these differences were small, since these two parameter estimates do not overlap we can be fairly confident that the true population means were in fact different. Not surprisingly, the confidence intervals for GGE do overlap slightly.

Dependent	ependent 95%			Confidence Interval	
Variable	Accreditation	Std. Error	Lower Bound	Upper Bound	
GPC	No	.024	2.966	3.059	
	Yes	.028	3.107	3.218	
GGE	No	.024	2.938	3.032	
	Yes	.029	3.001	3.114	
SAT	No	.026	3.151	3.251	
	Yes	.031	3.252	3.373	

 TABLE 6

 Confidence Intervals for Reported Student Outcomes<sup>1</sup>

<sup>1</sup>Covariates include gender, public/private designations, and institution enrollment size. See Table 5 for adjusted mean scores.

#### Discussion

Several limitations in this study should be noted. Due to the non-experimental nature of the study's design, findings and conclusions are limited to descriptions of the differences found. Therefore, it is cautioned that the study could not derive claims regarding causation related to accreditation and program quality. Secondly, though we included several covariates to reduce the error term, it cannot be concluded that differences found were due to accreditation since we did not include other possible factors contributing to these differences. For instance, the differences between NRPA accredited and non-accredited programs on student engagement and student success may be correlated with students' personal characteristics and experiences brought to the program. It could also be that only academic programs that are already more engaging seek accreditation. However, what can be claimed is that the mean differences in engagement, gains in practical competence, and satisfaction are not likely due to gender, prior student achievement, and institutional characteristics of size and public/private designation.

Despite these limitations, this study addresses a gap in the research related to questions of educational quality and accreditation of parks and recreation programs. This study provides initial empirical evidence for the effort to resolve the debate regarding the value of academic program accreditation by National Recreation and Park Association (NRPA)/American Association of Physical Activity and Recreation's (AAPAR) Council on Accreditation. This study found that students in accredited programs were significantly more engaged in educationally relevant behaviors than students in non-accredited programs. Specifically, students in accredited programs reported higher levels of engagement in academically challenging activities, active and collaborative learning techniques, interactions with faculty, and activities that indicate a supportive campus environment. Also, students in accredited programs reported higher gains in practical competence and satisfaction.

Though this study found many significant differences, it must be noted that the effect sizes for these differences were quite small. In other words, these differences may not be that meaningful (Keppel & Wickens, 2004). However, it is precisely because the effects sizes are quite small that we need to use statistical techniques to determine differences. As stated by Keppel and Wickens, large effects are "often widely known and there is nothing to be gained from verifying them," therefore "medium and small effects are often the most investigated" (p. 162).

A general conclusion of this study is that parks and recreation students in accredited programs consistently report higher levels of engagement and gains compared to their counterparts in non-accredited programs. Another conclusion is that this study provides evidence that current NRPA accreditation is associated with higher educational quality as indicated by student engagement and reported gains in practical competence and satisfaction. It is beyond the scope of this study to ascertain why students in accredited programs are more engaged and report higher levels of practical competence and satisfaction, but a reasonable explanation can be found in the accreditation standards themselves (Council on Accreditation, 2004). The existing standards for program accreditation cover many areas that may well impact student engagement and student gains. Among them is the requirement that the program have at least three full-time faculty (1.03), two of which must have at least one degree in parks and recreation. This required minimum may help to explain why students in accredited programs report higher levels of student-faculty interaction, compared to non-accredited programs which may not meet that standard. Other required characteristics of accredited programs may also explain some of the observed differences in the data. In particular, students in accredited programs report significantly higher gains in knowledge and skills

related to their careers which may be due to standards stating that there must be opportunity for students to be involved in professional development (5.01), on-going evaluation of academic and career advising (5.04), student professional organizations and activities (5.06), and the focus of competencies as they relate to the profession (8.00). Therefore, it is not surprising that students in accredited programs report higher levels of engagement and gains.

Another conclusion points to the importance of the need to better understand educational processes that lead to student success. We know from previous research that student engagement matters. The new direction of NRPA accreditation focusing on student learning and success is a step toward acknowledging the importance of student engagement. This new focus may lead to a greater difference in educational quality between accredited and non-accredited programs.

In 2003, McDonald put forth the challenge that more information was needed regarding the effectiveness of professional competencies and accreditation. This debate related to accreditation will likely continue. The results of this study respond to the call by McDonald for evidence of effectiveness of present competencies by bringing much needed information to the debate. Further research is needed to investigate the factors contributing to the differences between NRPA accredited and non-accredited programs on program quality indicators, such as student, departmental, and institutional characteristics. In addition, similar studies should be conducted after NRPA switches to the new standards and direction to see whether the differences between accredited and non-accredited programs' quality have changed.

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