

# **An Examination of the Factors Contributing to Student Satisfaction with their Overall Academic Experience**

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## **Abstract**

*Guided by Astin's (1984) theory of student involvement, this study was designed to examine the relationship between both the quantity and quality of students' recreational sports involvement and satisfaction with their overall academic experience. Surveys were randomly distributed to students (N=718) participating in a variety of recreational sports programs. Multiple regression was used to analyze the relationship between the predictor variables (quantity and quality of involvement) and the outcome variable (student satisfaction). Only two measures of the quality of students' recreational sports involvement were significant predictors of satisfaction. Understanding how involvement in campus recreational sports programs contributes to the broader goals of the institution is critical in order to reposition recreational sports as an essential service on post-secondary campuses. Suggestions for future research are made in the context of the limitations of the study.*

**Keywords:** campus recreation, involvement, recreational sports, satisfaction with academic experience, student satisfaction

## **Introduction**

Historically, higher education administrators have been interested in the leisure time of students and the relationship of leisure to students' satisfaction with the college experience (Bloland, 1987). Involvement in extracurricular activities is integral to the total educational program and must be perceived as such rather than be perceived as merely supplemental to the formal curriculum. The proliferation of new multi-million dollar student recreational sports centers across the country over the past two decades has heightened the visibility of recreational sports on college campuses nationwide. Numerous academic benefits have been found to be associated with involvement in extracurricular activities, such as: *enhanced grade point average* (Belch, Gebel, & Mass, 2001; Bryant & Bradley, 1993; Bryant, Bradley & Milborne,

1994); *ease of social integration* (Bryant, et al., 1994; Christie & Dinham, 1991); *gains in student learning* (Kuh, 1993, 1995); *increased retention rates* (Astin, 1993; Pascarella & Terenzini, 1991; Tinto, 1987); *and student development* (Geller, 1980; Nesbitt, 1993, 1998; Todaro, 1993). However, the role of campus recreational sports has been an important contextual variable largely absent from the literature.

Given the competition for university funding, limited facility space for campus recreational sports related programming, trying to meet increasing demands with static or reduced operating budgets, and generating administrative and student support, “perhaps no factor relating to campus recreational sports is more critical than identifying the positive outcomes of participating in campus recreation programs” (Todaro, 1993, p.23). Recreational sports programs can no longer rely on just ‘bean counting’, that is counting the number of participants, frequencies of participation, revenues generated, amount of facility space, facility use hours or the number of programs and services offered as a way to justify their existence on post-secondary campuses. Assessment in the area of campus recreational sports “should begin to recognize, establish, and enhance the educational outcomes associated with active participation in a well-developed, student-oriented program” (NIRSA, 2000, p.16).

In this era of financial restraint and fiscal accountability in higher education, recreational sports directors need to have an understanding of how their programs benefit students as well as the institution. A better understanding of the important contributions that campus recreational sports programs make on post-secondary campuses is necessary to help shift the too frequent perception that campus recreational sports is a residual, to recognition of how these services add great value to the lives of students and to the institution (Crompton, 1993). Given the benefits-based movement and a parallel shift at the post-secondary level for auxiliary programs to demonstrate educational accountability, it is unfortunate that the benefits of recreational sports involvement have so little empirical support. Knowledge of the ways campus recreational sports programs contribute to the broader goals of the institution would be useful to institutional decision makers responsible for weighing the merits of allocating resources to such activities.

### **Related Literature**

There have been a number of studies linking involvement in recreational sports and academic outcomes (Smith & Thomas, 1989; Light, 1990; Miller, Bullock, Clements, & Basi, 2000; Belch, Gebel, & Mass, 2001). In a synthesis of the environmental influences on student development and learning, Astin (1984) formulated a theory of student development that he labeled ‘student involvement theory’ which accounts for “virtually every significant effect ... that contributed to the student’s remaining in college” (p.302). Involvement refers to “the quantity and quality of the physical and psychological energy that students invest in the college experience”

(Astin, p.307). Astin's theory of student involvement is central to understanding the impact that out-of-class experiences, such as involvement in campus recreational sports activities, have on the student experience. Astin (1984, 1993) concluded from evaluating numerous studies, and a longitudinal study of over 250,000 students, that students who participate in almost any type of extracurricular activity are less likely to drop out and are more likely to be satisfied with their college experience than are those who do not participate.

The five basic tenets of involvement theory state: (1) involvement refers to the investment of physical and psychological energy in various student experiences that range in degree of their specificity; (2) involvement occurs along a continuum with different students differing in their level of investment in various experiences at various times; (3) involvement has both quantitative and qualitative features. The extent of a student's involvement in recreational sports, for instance, can be measured quantitatively (number of hours spent participating, number of different intramural sports played etc...) and qualitatively (psychological energy student devotes to the experience, satisfaction with the experience, benefits of the experience, extent and frequency of interaction with others during the experience, etc...); (4) "the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program; and (5) the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement" (Astin, p.298).

Like Astin's (1984) theory of involvement, Tinto (1993) in his interactionist model of student departure, also endorsed the contribution of student involvement to positive educational outcomes for post-secondary students. Tinto further, "emphasized the need to better understand the relationship between student involvement in learning and the impact that involvement has on student persistence" (Milem & Berger, 1997, p.387). Tinto also described ways in which students experience and interact with campus environments, suggesting a strong behavioral component to involvement. This is also consistent with Astin's involvement theory as, "it is not so much what the individual thinks or feels, but what the individual does, how he or she behaves, that defines and identifies involvement" (p.298). While student involvement in campus organizations in general can affect their satisfaction with college (Cooper, Healy, & Simpson, 1994) and decisions to leave (Okun & Finch, 1998), student involvement in recreational sports in particular has been an important contextual variable absent in the literature.

### *Purpose*

This study was designed to add to the extant literature on college student satisfaction with their overall academic experience. Previous studies have generally taken one of two basic approaches: developmental or college impact (Pascarella & Terenzini, 1991). The developmental approach focuses on students and the changes

that occur within them and tends to focus on demographic or various psychological measures of adjustment. The college impact approach focuses on the environmental factors that may influence student satisfaction including various academic factors or measures of academic or social/cultural involvement when explaining student satisfaction.

However, one environmental influence largely neglected in the college impact approach is the effect that campus recreational sports involvement has on students' satisfaction with their overall academic experience. As campus recreational sports programs need to justify their existence to higher education administrators, there becomes the need to link students' participation in these programs with the broader goals of the institution. Students who are satisfied with their overall academic experience persist at higher rates than those who are not. The purpose of this study, then, is to examine if the quantity and quality of student's recreational sports (RS) involvement contributes to understanding student's satisfaction with their overall academic experience. Figure 1 visually represents the relationship between the variables being examined in this study.

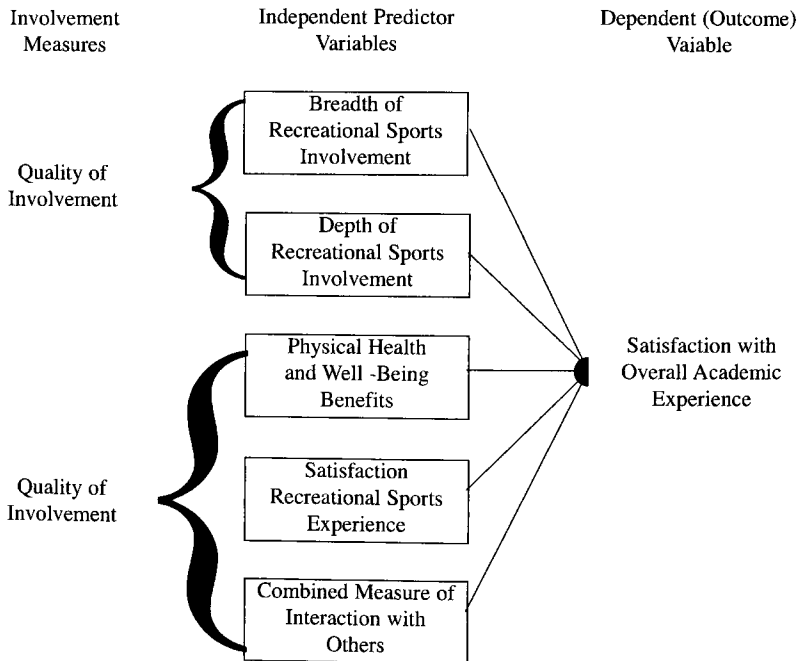


Figure 1 Predictive Model of the Relationship Between the Variables Under Investigation

## Methods

### *Sample*

The Quality and Importance of Recreational Services (QIRS) Survey [National Intramural Recreational Sports Association (NIRSA); 1991, 2000] was administered randomly on-site to students participating in various recreational sports programs over a three week period at a comprehensive post-secondary institution. These programs consisted of aquatics, club sports, group exercise classes (aerobics), informal sports (pick-up basketball, jogging/walking on track), intramural sports (both dual-individual and team sports), and also strength and conditioning rooms. Since this study was guided by Astin's (1984) theory of involvement, only those students involved or participating in recreational sports programs were sampled and each participant had an equal opportunity of being selected.

### *Instrumentation*

The QIRS Survey was developed by the NIRSA (1991) and was initially pilot tested to 591 seniors at a comprehensive doctoral granting institution and then to five different institutions and over 2,586 students. Responses to the instrument questions are normally distributed and the psychometric properties of the benefits scale suggest it is reliable (NIRSA, 1991, 2000). The QIRS survey used in this study consisted of four sections; background demographics, measures of involvement, measures of satisfaction with recreational sports, and a scale measuring academic, interpersonal group, and physical health and well-being benefits. Both the breadth and depth of recreational sports involvement was measured by asking students what campus recreational sports activities they participated in (breadth of involvement) (i.e., intramural and club sports, group exercise, strength training, informal sports, etc...) and if during their involvement they: traveled while participating on a club sports team, served on an advisory board or committee, served as a team captain, received or updated a certification, held an office in a club or council, or worked for the recreational sports department (depth of recreational sports involvement).

### *Measurement*

The quality of student involvement in recreational sports was measured by students' satisfaction with their recreational sports experience, the interactions students had with others while participating, and the benefits they received from participation. Three questions measured recreational sports satisfaction (overall experience, friendliness, and approachability of staff) based on a five-point Likert scale ranging from 'Very Dissatisfied' to 'Very Satisfied'. The combined measure of interaction with others assessed the extent to which students' involvement in recreational sports encouraged interaction with: other students, faculty members, campus administrators, recreational sports staff personnel, individuals from a different ethnic background, and area residents. Individual responses to the different involvement, satisfaction, and

interaction questions were added together to obtain an overall aggregate measure. A higher score indicated a higher level of involvement, satisfaction, or interaction.

The benefits scale was comprised of 20 questions measured on a four-point Likert scale ranging from 'Do Not Participate', 'Do Not Benefit', 'Benefit Somewhat', and 'Benefit Much'. Individual questions were then combined to form an overall aggregate measure for three types of benefits; academic, interpersonal and group, and physical health and well-being. Academic benefits asked questions about: communication skills, problem solving skills, study habits, time management skills, understanding written information, and ability to handle several tasks at once. Interpersonal and group benefits were comprised of questions such as: group cooperation skills, respect for others, feeling a sense of belonging, and leadership skills. Physical health and well-being benefits asked questions about: feelings of physical well-being, sense of accomplishment, sense of adventure, sports skills, fitness, physical strength, stress reduction, balance-coordination skills, and self-confidence. Higher scores on each benefits scale indicated benefiting more within that area.

## Results

The participants ( $n=718$ ) in this study were male ( $n=406$ , 60.8%) and female ( $n=262$ , 39.2%) undergraduate (122 freshmen, 152 sophomores, 148 juniors, 161 seniors) and graduate ( $n=93$ ) students at a comprehensive post-secondary institution. Twenty-five percent of the respondents were 18-19 year olds, 38.9% were 20-21, 20.2% were 22-24, and 15.8% were 25 years of age or older. Twenty-six percent of the participants lived in residence hall, 56.6% lived off-campus, 15.4% lived in fraternities or sororities and 1.5% lived in student married housing. The majority of the respondents were Caucasian (84.7%), 3.7% Asian-American, 3.7% African-American, 2.4% Hispanic American, and less than one percent Native-American.

Multiple regression was used to analyze the relationship between the predictor variables (breadth and depth of involvement, benefits of involvement, satisfaction, and interaction with others) and the outcome variable (satisfaction with overall academic experience). Analysis of the univariate statistics for the predictor variables and plots of the distribution of these variables revealed that the assumption of normality was met for all the variables. Plots of the predicted values of the outcome variable against the residuals also appear to conform to the assumptions of normality, linearity, and homoscedasticity. Pearson's correlation coefficients were analyzed between the predictor variables in order to check for statistical problems created by multicollinearity, which can occur when the zero-order correlations between any two predictor variables is greater than 0.90 (Tabachnik & Fidell, 1996). The correlation between academic benefits and interpersonal group benefits was  $r = 0.785$  ( $p < .001$ ). While this correlation coefficient is less than 0.90, Tabachnik and Fidell warn researchers that including any predictor variables with correlation coefficients greater

than  $r = 0.70$  may weaken the predictive strength of the resulting regression equation. Consequently, these two variables were dropped from the analysis.

TABLE 1

*Descriptive Statistics for Outcome and Predictor Variables*

Variables	N	Min.	Max.	M	SD
<i>Dependent (Outcome) Variable:</i>					
Satisfaction with Overall Academic Experience*	700	1	5	4.09	0.96
<i>Independent (Predictor) Variables:</i>					
1. Breadth of Recreational Sports Involvement**	688	0	6	2.32	1.30
2. Depth of Recreational Sports Involvement**	352	0	6	1.64	1.01
3. Physical Health and Well-Being Benefits***	691	8	32	27.42	4.38
4. Satisfaction with Recreational Sports Experience	*706	3	15	12.87	2.41
5. Combined Measure of Interaction with Others**	630	0	6	2.51	1.56
Note:					
*Measured on a five-point Likert scale ranging from 1='Very dissatisfied' to 5='Very satisfied'.					
**Nominal variables consisting of six questions with 'yes' or 'no' response options.					
***Consists of eight questions measured on a four-point Likert scale ranging from 'Don't Participate' to 'Benefit Much'.					

TABLE 2

*Intercorrelations between Criterion Variables Predicting Student Satisfaction with Overall Academic Experience*

Variables	1	2	3	4	5	6	7
1. Breadth of Recreational Sports Involvement	--						
2. Depth of Recreational Sports Involvement	.313	--					
3. Physical Health and Well-Being Benefits	.177	.101	--				
4. Academic Benefits	.077	.013	.571	--			
5. Interpersonal Group Benefits	.134	.061	.527	.785	--		
6. Satisfaction with Recreational Sports Experience	.067	.020	.465	.266	.308	--	
7. Combined Measure of Interaction with Others	.330	.394	.235	.160	.235	.182	--

The overall regression equation [ $y' = 0.079x_1(\text{Breadth of Recreational Sports Involvement}) - 0.084x_2(\text{Depth of Recreational Sports Involvement}) + 0.150x_3(\text{Physical Health and Well-Being Benefits}) + 0.447x_4(\text{Satisfaction with Recreational Sports Experience}) - 0.104x_5(\text{Combined Measure of Interaction with Others}) + 1.064$ ] was significant at the 0.05 level ( $F=26.939, p<0.001$ ). The overall  $R^2$  was 0.296 indicating that the model accounted for, or explained, 29.6% of the variance in students' satisfaction with their overall academic experience. Only students' satisfaction with their recreational sports experience ( $t=8.202, p<0.001$ ), and physical health and well-being benefits ( $t=2.691, p=0.007$ ) were significant predictor variables in the regression equation. The strongest significant predictor of student's satisfaction with their overall academic experience was satisfaction with recreational sports ( $b=.447$ ). The data was further cross-validated to check the stability of the model from sample to sample. The sample was randomly split in half ( $n=359$  in each sample) and the regression equation from the first sample was applied to the second sample in order to evaluate the amount of shrinkage of the estimates of the model. The difference between the two R-squared values represents the shrinkage of the estimates of the model and this value fell within the acceptable 0.00 to 0.10 range (Tabachnik & Fidell, 1996) indicating that the model was stable from sample to sample.

TABLE 3

*Regression Analysis Summary for Criterion Variables  
Predicting Student Satisfaction with Overall Academic Experience*

Variables	<u>B</u>	<u>SEB</u>	<u>b</u>	<u>t</u>	Sig.
Constant	1.064	.311		3.417	0.001
1. Breadth of Recreational Sports Involvement	0.055	0.037	0.079	1.492	0.137
2. Depth of Recreational Sports Involvement	-0.079	0.049	-0.084	-1.612	0.108
3. Physical Health and Well-Being Benefits	0.033	0.012	0.150	2.691	0.007
4. Satisfaction with Recreational Sports Experience	0.174	0.021	0.447	8.202	<0.001
5. Combined Measure of Interaction with Others	-0.062	0.033	-0.104	-1.915	0.056
Note: ( $R=.544, R^2=.296, \text{Adjusted } R^2=.285$ ) ( $F=26.939, p<.001$ )					



## Discussion

The purpose of this study was to examine if the quantity and quality of recreational sports (RS) involvement contributes to understanding students' satisfaction with their overall academic experience. The findings from this study indicated that the qualitative dimension of involvement contributed more to understanding students' satisfaction with their overall academic experience, than did either of the two quantitative measures. This suggests that mere participation or involvement in campus recreational sports is not enough and that the quality of involvement is more important in influencing students' satisfaction with their overall academic experience.

The findings from this study are supported by two of the most often referred to landmark studies incorporating campus recreational sports into university wide assessments of the undergraduate educational experience. The Harvard Assessment Seminars exploring teaching, learning, and student life concluded that "students involved in some out-of-class activities are far happier with their college experience" (Light, 1990, p.45). Furthermore, a study of 1,223 alumni from the University of Tennessee found that, "two variables – relationships with faculty and participation in intramurals – had the most positive correlations ... engaging in intramurals could predict ... satisfaction with educational experiences then and now" (Smith & Thomas, 1989, p.12). This should be of particular interest to recreational sports professionals and higher education administrators because satisfaction is "related to involvement and involvement is related to retention" (NIRSA, 1997, p.8).

Those "students who become adequately integrated into the social and academic systems of their (university) through participation in extracurricular activities, interactions with other students, and interactions with faculty develop or maintain strong commitments to attaining a college degree" (Christie & Dinham, 1991, p.412-413). The relationships students develop with other students through intramural sports participation are important in terms of student satisfaction (Astin, 1993). Frequent interaction with faculty is "strongly related to satisfaction with college than any other type of involvement or, indeed, any other student or institutional characteristic" (Astin, 1984, p. 304). The variable 'interaction with others' measured interaction with other students, faculty members, campus administrators, recreational sports staff personnel, individuals from a different ethnic background, and area residents during their recreational sports involvement. However, it proved to be a weak measure of the quality of students' involvement in recreational sports in this study contributing to its lack of effectiveness in predicting students' satisfaction with their overall academic experience. This should not deter recreational sports programs from providing increased opportunities for such interaction in order to increase students' satisfaction with their overall academic experience.

The findings of this study in general, and Astin's (1984) theory of involvement in particular, also have implications for parks and recreation faculty. Perhaps the most important application of the student involvement theory to teaching is that it

“encourages the instructor to focus less on content and teaching techniques and more on what students are actually doing – how motivated they are and how much time and energy they are devoting to the learning process. Instructors can be more effective if they focus on the intended outcomes of their pedagogical efforts: achieving maximum student involvement and learning.” (Astin, 1984, p.305). Faculty should focus on the degree to which their pedagogical approaches encourage student involvement. Faculty should stress various experiential learning opportunities such as internships, placements, becoming involved in student organizations, service learning, and other out-of-class learning opportunities.

### Conclusion

The main limitations of this study include the mono institutional sample and what turned out to be a conceptually (and statistically) weak measure of the quantity of student’s involvement in recreational sports which ultimately weakened the predictive strength of the regression equation. While not serious, future research studies should correct for these limitations in order to increase our understanding of the impact of recreational sports involvement on student’s satisfaction with their overall academic experience. Future research should use more in-depth measures of the quantity of students’ involvement such as the quality of effort scales from the College Student Experiences Questionnaire (CSEQ) (Pace, 1990) designed to measure recreation and club organization involvement. Future research should also consider using a Likert scale, as the CSEQ does, ranging from ‘very often’ to ‘never’ in order to obtain a more robust measure of both the breadth of students recreational sports involvement and the interactions students have with others while participating in recreational sports programs.

Outside of structured freshmen programs for first year students, “recreation may be the single common bond between students” (Bryant, Banta, & Bradley, 1995, p.158). Students who utilize recreational sports facilities, programs, and services persist at a higher rate than those that do not (Belch, Gebel, & Mass, 2001). Freshmen have also reported that their involvement in recreation programs and facilities greatly impacted their decision around whether to continue at the university (Bradley, Bryant, & Milbourne, 1994). Recall that the fifth tenet of involvement theory recognizes that “the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement” (Astin, 1984, p.307). The more students are involved and engrained in the social fabric of their institution the more satisfied they are likely to be with their overall academic experience. And, the more satisfied they are the likelier they are to persist, an important goal of higher education administrators in their retention efforts. Recreational sports administrators need to position, or reposition, their programs in order to focus on the impacts of their services and how these impacts contribute to broader institutional goals.

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