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DOES STUDENT ENGAGEMENT VARY AMONG COLLEGES WITHIN A
UNIVERSITY

by
Amrinder Kaur

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts in School Psychology
of
The Graduate School
at
Rowan University
(5/2/07)

Approved by _____
Advisor

Date Approved 5/2/07

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ABSTRACT

Amrinder Kaur

DOES STUDENT ENGAGEMENT VARY AMONG COLLEGES WITHIN A
UNIVERSITY

2006/07

Dr. Roberta Dihoff

Masters of Arts in School Psychology

The purpose of this study was to explore the relationship between student engagement and different colleges within a university. Research has asserted that student engagement is closely related to student learning and that student engagement varies from institution to institution depending on various factors. However, there has been minimal research on student engagement among colleges within the same university. A sample of 120 undergraduate college students (20 from each of the six colleges) was recruited from Rowan University to complete the National Survey of Student Engagement in four different areas: Level of academic challenge, Active and collaborative learning, Student-faculty interaction and Enriching educational experiences. Four one-way ANOVAs revealed that a significant relationship existed between the level of student engagement and the student's college. Specifically, significance for student engagement was found in the area of Educational enriching experiences.

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CHAPTER 1: INTRODUCTION

Need

Various approaches have been used to determine the quality of undergraduate education. Traditionally, measures such as financial resources, selectivity in admissions, education level of the faculty and institutional prestige were used to exemplify the level of education of an institution. However, overtime the validity of such “quality measures” has been criticized for not accurately reflecting the excellence of undergraduate education (Kuh, 2001; Pascarella, 2001). In recent years, institutions have shifted, changing the question of student learning from “How should we teach students?” to “How should we help students learn?” (Barr & Tagg, 1995). Therefore, the most popular approach used to measure the quality of undergraduate education is based on students’ educational experiences.

Research shows that the most effective way for institutions to retain its students is by creating learning communities that promote personal growth, faculty interaction, and institutional involvement. Simply, the greater the students’ involvement or integration in an institution is, the greater their attainment of knowledge, development of skills and overall undergraduate experience (Tinto, 1997). It is important that universities develop ways to engage its students because student engagement is positively related to grades and student learning. In addition, the amount of time and energy students devote to “educationally purposeful activities is the single best predictor of their learning and personal development.” (Astin, 1993). The institutions that can fully engage their

students can claim to be of higher quality when compared to colleges that fail to engage its students (Kuh, 2003).

Purpose

The purpose of this study was to explore the relationship between student engagement and different colleges within a university. As outlined by Chickering and Gamson (1987) in *Seven Principles of Good Practice for Undergraduate Education*, the degree to which students become engaged is influenced by “encouraging cooperation among students, encouraging use of active learning techniques, communicating high expectation and encouraging contact between students and faculty.” These interactions can vary not only among universities but also possibly among the colleges within a university. Subsequently, this can have an influence on student engagement. It was the purpose of this study to assess the nature of such a relationship, if any.

Hypothesis

It was hypothesized that there will be a relationship between student engagement and college. Depending on the students’ college, their level of engagement will vary in any one of the four areas of student engagement being assessed, Level of academic challenge, Active and collaborative learning, Student-Faculty interaction and Enriching educational experiences.

Theory/Background

Barr and Tagg (1995) suggested a “paradigm shift” to increase the quality of undergraduate education. They recommended that universities create learning centered campuses and expand student learning to the fullest by changing their overall focus from providing instruction to students, to assisting students in learning from one another.

However, creating such campus settings required knowing how students learn, identifying challenges to student learning and developing techniques that promote learning among students (Barr & Tagg, 1995).

Researchers looking to study how students' learn in a college environment used models developed by Tinto (1993) and Astin (1993) as their basis. Tinto's model suggested that the level of a student's success in academic and social integration within the college determined their decision to persist or withdraw from the college. Astin's model evaluated the effect of environmental experiences, such as faculty and student interaction, on overall student learning. He states that student involvement is what really determines the degree of student learning.

Both models suggested that when students are engaged in a college community, it is then that students will invest greater effort to learn (Jacoby, 2000). Tinto (1993) further stresses that both academic and social integration in a university, positively affects persistence to graduation.

Similar findings reported by Pace and Kuh further support the theory of student involvement, indicating "engagement is positively related to objective and subjective measures of gains in general abilities and critical thinking (Pace & Kuh, 2005)." The amount of effort and level of student engagement in university activities are the keys to an effective education.

Another aspect of student engagement theory that is explored by Pace, Kuh and Astin is institutional policies. Even though it is ultimately the student who determines the amount of energy, attention and interest they put into their school work, the institutional policies can also influence the levels of a student's engagement (Pace & Kuh, 2005). As

noted by Astin (1993), an institutional policy is only effective to the extent to which it promotes student engagement. It can be further extracted that in addition to institutional policies, faculty behavior and curriculum can also influence student learning and levels of engagement.

In review with the literature it is clear that universities have to learn to engage its students. It is important for universities and colleges to determine accurately activities that are associated with student learning. One of the nationally accredited surveys designed to assess the level of student engagement is called the National Survey of Student Engagement (NSSE) (Pace & Kuh, 2005). NSSE provides institutions with information on which activities their students engage in and areas that may need improvement. Thus, results from NSSE can help an institute design or revise their policies so that they encourage student engagement (Pace & Kuh, 2005).

Definition of Terms

1. Student involvement – the extent to which a student is a participant in university activities which can be socially or academically related.
2. Student engagement – the level of satisfaction a student has with their institution the extent to which a student feels committed to the institution. Also, the extent to which a student is actively involved in the institution by joining student organizations, conducting research with faculty or taking advantage of various programs provided by the institution.
3. NSSE – National Survey of Student Engagement is a survey that assesses the extent to which students are engaged in their institution and what they gain from their undergraduate experience.

4. Colleges – In this study, the word “college” refers to the different academic colleges within Rowan University: College of Business, College of Engineering, College of Liberal Arts & Sciences, College of Communication and College of Fine & Performing Arts.
5. Level of Academic Challenge (AC) – Index that measures time spent preparing for class, amount of reading and writing, deep learning and institutional expectations for academic performance.
6. Active and Collaborative Learning (ACL) – Index that measures extent of class participation, working collaboratively with other students inside and outside of class, tutoring and involvement with a community-based project.
7. Student-Faculty Interaction (SFI) – Index that measures extent of talking with faculty members and advisors, discussing ideas from classes with faculty members outside of class, getting prompt feedback on academic performance, and working with faculty on research projects.
8. Enriching Educational Experiences (EEE) – Index that measures extent of interaction with students of different racial or ethnic backgrounds or with different political opinions or values, participating in activities such as internships, community service, study abroad, co-curricular activities, and culminating senior experience.

Assumptions

Several assumptions substantiated the present study. One assumption was that the population being examined in this study was normally distributed and that it closely represented the entire university population. It was also assumed that participants would

be accurate and truthful in their response to the NSSE. It was further assumed that students in senior and junior levels have adequate experience within their college of study to accurately evaluate it.

Limitations

The present study was limited because of the relatively small sample of students. In addition, student engagement and colleges should be studied longitudinally, rather than cross-sectionally. Secondly, the study was limited in that self-report measures determined the students' engagement. It is possible that a student will not have enough experience with the institution to provide an accurate opinion of the institution. There can also be some discrepancy in the understanding of the questions. Thirdly, respondents can intentionally provide inaccurate information about their involvement with the institution.

Summary

In the chapters that follow, the information discussed will help formulate the research presenting argument that there is possibility of a relationship between student engagement and different colleges. Chapter II is a thorough review of relevant literature collected by the researcher on the topic. Chapter III describes the research design, methodological approach and data analysis plan for this study. Chapter IV contains the results of the research. Chapter V includes discussion of any conclusions that can be inferred from the results of this study and recommendations for future research.

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

This chapter presents a comprehensive review of relevant literature, starting with a general overview of the research. It then presents the general research regarding student engagement, followed by specific research regarding student engagement and student learning, what impact does college have on students, out-of-class experiences, impact of faculty, institutional differences and finally educational expenditures.

General Overview of Research

Over the last century there has been a growing concern about the increase in size of higher education institutions and their ability to create adequate learning environments. As summarized by Kezar (2006) in the 1920s, the institutions' large sizes and their over use of the lecture method were seen as a problem by many. In 1960s, criticism was raised about impersonal environments, "reliance on passive forms of learning, lack of faculty-students contact, and few supplemental learning experiences for students." In 1980s, similar criticism was mainly directed towards impersonal and passive learning environments (Kezar, 2006).

Current research suggests that impersonal or passive learning environments are less likely to foster learning. Further research also suggests the importance of student engagement in learning (Astin, 1993; Pace & Kuh, 2005; Pascarella, 2001). Due to these critiques and to aid institutions in creating adequate learning environments, research has

been focused on determining factors that can lead to increased student engagement (Kezar, 2006).

Student Engagement

Student engagement is defined “as the time and energy that students devote to educationally purposeful activities and the extent to which the institution gets students to participate in activities that lead to student success (Kezar & Kinzie, 2006).” The activities included in the student engagement concept are associated with learning, such as reading and writing, preparing for class, and interacting with instructors on various levels. (Kuh, 2001) Student engagement theory is derived from the work of Pace, Astin and Kuh and his colleagues (Pike; Smart; Kuh & Hayek, 2005). It is based on the premise that students “learn from what they do in college.” Student’s college experience depends on the amount of time and effort they put into studies and other educationally purpose activities. Kuh (2003) states that increase in student engagement leads to increased student learning.

The benchmarks in the student engagement theory can be explained through “Seven Principles for Good Practice in Undergraduate Education” formulated by Chickering and Gamson (1987). These principles include student-faculty contact, reciprocity and cooperation among students, use of active learning, prompt feedback, time on task, high expectations and respects for diverse talents and ways of learning. Along with this, institutional characteristics and environment also influence the level of student engagement (Chickering & Gamson, 1987).

Based on research conducted in the recent years one of the systematic tools developed for measuring student engagement is, National Survey of Student Engagement

(NSSE). The survey is used as a tool nation-wide by many institutions to understand their performance based on students' engagement level (Kuh, 2003). It measures the extent to which undergraduate students learn and achieve by determining how engaged the students' are in a particular institution. NSSE (pounced "nessie") based on the Seven Principles of Good Practice in Undergraduate Education emphasizes five national benchmarks for engagement: level of academic challenge, active and collaborative learning, student interactions with faculty members, enriching educational experiences, and a supportive campus environment (National Survey Student Engagement, 2001). Although, NSSE directly does not measure student learning, engagement is known to lead to an increase in student learning (Kuh, 2001)

Student Engagement and Student Learning

Research suggests that student engagement is linked positively to student learning (Carini; Kuh & Klein, 2006). There has been a growing interest in creating learning communities in higher education institutions. In learning communities students take courses together, work on projects together and participate in extracurricular activities that enhance their learning experience (Tinto, 2000). These learning communities encourage collaborative learning and directly involve students with the institution's programs and initiatives. Thus, leading to more engaged students. A study carried out under the watch of National Center for Teaching, Learning, and Assessment, explored the impact of learning communities on new students in three different institutional settings; University of Washington, LaGuardia Community College in New York City, and Seattle Central Community College. The results yielded that participation in learning communities enhances the quality of student learning. Also, the participants saw

themselves as more engaged students in their institutions, both academically and socially (Tinto, 2000).

The linkage of student engagement to student learning is a very simple one. That is, the more the students are involved in educationally productive activities in college the greater their learning experience. The act of being engaged adds to the foundation of skills and to having an academically productive and satisfying college life (Carini; Kuh & Klein, 2006). This notion is supported by a study conducted by Carini; Kuh & Klein (2006) testing the linkage between student engagement and student learning. The sample consisted of 1,058 students at 14 four-year colleges and universities that completed instruments in 2002. The instruments included NSSE, GRE and RAND tests, which are series of tests that measure performance and critical thinking. In addition, GPA and SAT scores of the participants were obtained. The findings showed “statistically significant positive correlations” between student engagements and scores on the RAND and GRE tests.

Moreover, the researchers found statistically significant positive “partial” correlations between student engagement and GPA. The study also stated that students who had low SAT scores seemed to benefit more from student engagement than students with high SAT scores (Carini; Kuh & Klein, 2006). The results of this study coincide with findings of other studies (Hughes & Pace, 2003) that student engagement is linked positively to desirable learning outcomes, such as critical thinking and grades.

What Impact Does College Have on Students

According to Pascarella and Terenzini (1991), research on how college affects students is usually based on one of two general approaches: developmental and college

impact. Both approaches are similar in that they both try to explain what happens to a student during college. Developmental approach suggests that development occurs during the college years; the period from age 16-17 to age 25-30 (Chickering, McDowell & Campagna, 1969). Developmental approach is influenced by psychological theory so it focuses more on internal development (Kuh, 1995).

Research conducted by Chickering, McDowell and Campagna (1969) on student development and institutional differences revealed that developmental changes occur while attending college. Furthermore, the study showed that similar changes occurred in students attending very different institutions. For example, development of autonomy occurred among students attending highly structured institutions with many regulations. However, development of autonomy also occurred among students attending less structured institutions with very few regulations. Some of the other developmental changes that take place during college are, “increased emotional awareness and expressiveness, increased esthetic sensitivities and interests, decrease concern for material success (Chickering, McDowell & Campagna, 1969).” These developmental changes occur regardless of what type of institution a student attends.

In contrast the college impact model focuses on changes that occur due to the institution’s environment and sociological conditions, rather than psychological. Researchers using this model try to explain the college outcomes that occur due to interactions between students and their college environments (Kuh, 1995). College impact model stresses that learning and personal development is a product of various institutional characteristics such as size and control, student characteristics such as sex and ethnicity and interactions with peers, faculty, staff and other activities (Kuh, 1993).

Research summary conducted by Pascarella and Terenzini (1991) reviews 2,600 studies using college impact model. They divide the college outcomes in two nine areas; “knowledge and subject matter competence, cognitive skills and intellectual growth, psychosocial changes, attitudes and values, moral development, educational attainment, career choice and development, economic benefits and quality of life after college (Pascarella & Terenzini, 1991).” As explained by the research on college impact model, development of these factors as a whole leads to “a sense of identity” and that is one of the most important outcomes of college. (Kuh, 1995)

Out-Of-Class Experiences

The curriculum is the main source for student learning. However, research reflects that students benefit greatly from out-of-class experiences. Participation in extracurricular activities, living on campus, and interaction with faculty and peers has been positively related to satisfaction and persistence (Astin, 1977; Tinto, 1997). The research on out-of-class experiences is based on the Involvement Theory which was conceptualized in 1984 by Alexander W. Astin, at the Graduate School of Education, University of California. As defined by Astin, “student involvement refers to the quantity and quality of the physical and psychological energy that students invest in the college experience.” According to the theory, the greater the student’s involvement in the institution, the greater will be the amount of student learning and development (Astin, 1999).

Several research studies have further supported the theory of student involvement. A particular study determining the association between out-of-class experiences and various college outcomes was carried out by George Kuh (1995). He interviewed senior students from twelve different institutions. These senior students were asked the same

five general questions about their decision to attend the particular college, any significant experiences, major highlights of their college years and if and how have they changed since freshmen year. The results reveal that students saw their out of class experiences as the “real world laboratory.” Furthermore, “out-of-class experiences presented students with personal and social challenges, encouraged them to develop more complicated views on personal, academic, and other matters, and provided opportunities for synthesizing and integrating material presented in the formal academic programs (Kuh, 1995).”

Kuh elaborated further and revealed that certain out-of-class-experiences were associated with changes in particular areas. For example, leadership and work experiences influenced practical competency, such as decision and time management skills. Involvement in academic activities was associated with cognitive development. Student-faculty interactions lead to feeling of confidence and self-worth, which in return contributed attainment of knowledge. (Kuh, 1995). Kuh believes that many skills such as ability to communicate, cooperate and interpersonal skills are not always address in academic settings. Therefore, the students have to participate in out-of-class activities, such as leadership roles, internships, and work experiences to develop such skills.

Impact of Faculty

The review of literature illustrated that faculty can aid in student academic achievement, intellectual and personal development and college satisfaction. The frequency of informal interaction between faculty and student has positive influence on students in higher education (Iverson, Pascarella & Terenzini, 1984). According to Hopkins (1993) “successful student consistently rated their teachers first as friends, second as helpers, and third as teachers.” He implied that students, who described their

teachers as friends, made the highest progress and showed a level of commitment to their work. Centra and Rock (1971) concluded from their study that students learn more if they feel that faculty are interested in the teaching, are easily accessible and show individual interest in the student.

However, there have been a select few studies that show somewhat mixed finding on the influence of faculty-student interaction. For example, as noted by Kuh and Hu (2001) a study found that a group of students (Artists) who reported high interaction with faculty also reported a less beneficial college experience compare to other students. Another study, noted that first year students' contact with the faculty was related to clarifying class assignments and did not have any intellectual basis (Kuh & Hu, 2001).

Nevertheless, the vast majority of research suggests a strong relationship between faculty-student interaction and student learning. A study led by Umbach and Wawrzynski (2005) explores the relationship between faculty practices and student engagement. The results show that when faculty members use active and collaborative learning techniques the students are more likely to engage in active and collaborative learning techniques. The faculty practices (for example; active learning, higher order cognitive activities) create an "environment that relates to student engagement behaviors, perceptions of the environment, and student self-reported gains." Umbach and Wawrzynski stress that if institutions recruit and train faculty to commit to these activities it can create a college environment that can impact student learning.

A more recent study investigating the impact of faculty-student informal relationships found that female students usually contacted their professors more than male students regarding their course work. The results further supported the existing

research, on the importance of faculty-student interaction and student learning (Halawah, 2006).

The most comprehensive study on this topic is conducted by Kuh and Hu (2001). They analyzed the data collected over several years through the College Student Experience questionnaire. The results show that faculty-student interaction increases during the four years of college. It also suggested that faculty make themselves more available for juniors and seniors because they find the interaction with them to be more rewarding. In addition, the results show a positive relationship between faculty-student interaction and on the amount of efforts students devoted to other educationally activities.

Although, formal faculty-student interaction is important in the development of academic skills, the informal faculty-student interaction is just as important. Kuh and Hu (2001) further state that one of the most important findings of their study is that “faculty-student interactions encourage students to devote greater effort to other educationally purposeful activities during college.”

Institutional Differences

As research in higher education advances, there has been a rise in the question about what role do institutional differences (ex: size, mission, policies and procedures) play in student learning (Pascarella & Terenzini, 1991; Umbach & Kuh, 2006; Kezar & Kinzie, 2006). Although, there has been conflicting findings on the topic, the base for research in institutional differences is based on the Organizational Theory.

As summarized in *Reframing Organizations*, (Bolman & Deal, 1991) an organization’s structures (policies and procedures, size and design) have a major affect on its operations. The theory stresses the importance of culture/mission for efficient

functioning of organizations. In institutions, the mission statements express and articulate the institution's culture (Kezar & Kinzie, 2006). Research shows that successful campuses tend to align their policies and programs with their mission statement. They "allocate resources and make strategic choices based on their mission statement (Kezar & Kinzie, 2006)."

As noted by Tierney (1988) campuses that lose sight of their mission, usually have "scattered" operations, subsequently, "draining resources and human talent." Thus, institutions differ in their policies and procedures due to their mission statement and in how the faculty, administration and staff reflect that mission (Kezar, 2006). To further test this, Kezar (2006), an associate professor at Rossier School of Education, University of Southern California, paired up with Kinzie (2006), an associate director at Indiana University Center for Postsecondary Research & National Survey of Student Engagement Institute for Effective Educational Practice. Their study looked at twenty different institutions to understand the relationship between institutional mission and student engagement. The findings demonstrated a set of relationship between the two, the policies and procedures for student engagement did differ based on unique institutional mission statement. In depth study showed that, more is not better. Instead focused and fewer programs prove to be more successful. Research suggests that institutions may want to focus on making programs that are aligned with the mission.

However, conflicting results were found by Pike, Kuh and Gonyea (2003). Their study did not reveal any relationship between institutional mission and student engagement. The researchers stated that other studies neglected to account for student background difference, which could have led to them to their significant findings.

In addition to mission, type and size are other main structural difference among institutions. A case study reviewing the relationship between student engagement and institutional type revealed that large and small campuses tend to use different policies or programs to achieve engagement. Large institutions try to use more structured activities and program to achieve engagement. Whereas, small institutions use values and philosophy to achieve engagement (Kezar, 2006). The difference in institution type were also shown in a study done by Umbach and Wawrzynski (2005). Their study suggested that liberal arts colleges are more likely to promote “effective educational practices” compare to other types of colleges. However, there is opposing evidence; a study conducted by Pike and Kuh (2005) on institutional type and engagement did not favor liberal arts colleges.

Research further shows, depending of an institutions mission, institutions that promote faculty devote more time on research have lower percentage of seniors who report high order thinking. In contrast, institutions with high percentage of faculty that devoted more time academically challenging behaviors had greater percentage of senior reporting higher levels of higher order thinking skills (Wawrzynski, 2004). In this respect, institutional policies are the most important factor (Kuh, Pace, & Vesper, 1997). To an extent, actions of faculty and staff, programs and institutional environment are influenced by institutional policies. Through institutional policies, universities and colleges can shape their academic, interpersonal, and extracurricular offerings in any direction (Pascarella & Terenzini, 2005).

Institutional environment is another factor that affects student learning. Study conducted by Wawrzynski (2004) shows that supportive campus environment helps

promote high expectation of learning. Chickering and Gamon (1987) stated that communicating high institutional expectations is very important. The results show in high expectation environments, students indicated that they were challenged academically, and that the institution provided support in helping them transcend academically and socially. Moreover, as demonstrated by Wawrzynski's study (2004), the institutions with faculty who are satisfied with their job are more likely to create an engaging and supportive environment for students. This environment is even more important for students of color (Sedlacek, 2004).

Educational Expenditures

Due to declining state funding in higher education, a clear understanding of the relationship between expenditures and outcomes is needed, so that universities can adequately use their limited sources (Pike, Smart; Kuh, & Hayek, 2005). Very few studies have been conducted on the topic thus far. Hayek (2001) used College Student Experience Questionnaire (CSEQ) and U.S. News and World Report variables to determine if expenditures impacted to student engagement. He found "strong bivariate relationships between quality of student effort and expenditures for scholarships, student services and institutional support." However, there was not a strong relationship between student engagement and research and public services expenditures. There was no relationship between instruction and academic support.

A similar study by Ryan (2005) yielded a negative relationship between student engagement and institutional support expenditures. Yet, both of these studies have been criticized in that they had a "convenience" sample. Ryan's (2005) study was also limited

by the fact that it was based on a small set of engagement measures and expenditure information.

Pike et al. (2005) carried out a study which expanded on Hayek's (2001) and Ryan's (2005) studies. It explored the relationship between higher education expenditures and student engagement using data from "nationally representative" college and universities. Additionally, the institutional data were based on "representative sample of student" and engagement measure (Pike et al., (2005). Four set of findings come into sight from this study. First, the relationship between student engagement and their expenditure patters is a complex one. It depends on the student year in school, institutional control and the type of engagement. Pike et al. (2005) found a few substantive relations between student engagement and three expenditure categories, research, public services and student services. This varied depending on student year in school and type of university (public or private). Second set of information extracted from this study is that "attending a doctoral-research university is negatively related to student engagement." Thirdly, the relationship between the socioeconomic status of the student body and engagement were opposite for public and private institutions. In private schools, the students who were highly engaged were students from wealthy families. In contrast, the most engaged student in public schools where students who were less wealthy. One explanation provided for this by Pike et al. (2005) is that, public student may attract less wealthy students because of their mission. The fourth and the most major result found was that, the institutional expenditures do not have a relationship of student engagement. As put by Pike et al. (2005) "apparently, whether students feel appreciated,

understood and nurtured is not something that a college or university can necessarily purchase with financial resources.”

Moreover, Pike et al. (2005) suggests that institutions have to be cautious about how financial resources can be combined “with faculty and staff time and facilities to create powerful, affirming learning environments with an emphasis on funding intervention that are likely to benefit students of differing abilities and aspirations. The results from this and a complementary research (Kuh et al., 2005) suggest that to create effective educational campus culture, it is important to provide not only moral but financial support to student-centered policies and programs.

Summary

The literature strongly supports that a quality undergraduate education is one that engages students in effective educational practices. Substantial amount of research is devoted to identifying factors that can vary student engagement from one institution to another. However, assessments among colleges within a university or at the major field level have yet to be conducted. Accordingly, this study explores the relationship among colleges within a university. This literature review provided the direction of methodology, which is discussed in Chapter III.

CHAPTER III: DESIGN

Participants

The participants of this study were undergraduate senior and junior level students at Rowan University. Rowan University is a medium sized state university, located in south New Jersey. The University enrolls about 10,000 students from the Mid-Atlantic States and 30 foreign countries. Rowan University offers over 42 undergraduate majors among six different colleges. The colleges include Business, Communication, Education, Liberal Arts & Sciences, Engineering, and Fine & Performing Arts. A total of 120 subjects participated in the study (56 males, 65 females), with 20 students from each of the six colleges.

Materials

The students took the National Survey of Student Engagement (NSSE). The NSSE measures the degree of student engagement. Specifically, NSSE evaluates student experiences in five major areas: (1) Level of academic challenge (AC); (2) Active and collaborative learning (ACL); (3) Student-faculty interaction (SFI); (4) Enriching educational experiences (EEE); and (5) Supportive campus environment (SCE). However, since this is focused on colleges within the one university, the students in all six colleges are exposed to the same campus environment, regardless of their major. The fifth area of NSSE, Supportive campus environment does not apply to the current study. Therefore, in this study only four major areas of NSSE- AC, ACL, SFI and EEE- were assessed. Additionally, the survey asks for background information such as their sex,

age, race/ethnicity, enrollment status, living arrangements, major and overall grade point average.

Reliability/Validity of Scales

NSSE is a nationally accredited survey from National Center for Higher Education Management Systems. The survey is currently administered by Indiana University for Postsecondary Research in cooperation with the Indiana University Center for Survey Research. Every year over 100 colleges/universities participate in the survey to determine the extent to which the students and institutions are engaging in learning activities. The institutions use the results from NSSE to identify and change aspects of their institution by developing programs that better foster student engagement. The survey is based on empirical research and was considered to be valid. A pilot study was completed in 1999 and a total of 68 colleges and universities participated. Since the survey is administered every year and consistent results have been obtained, the NSSE was considered a reliable tool.

Method

To ensure that the participants represented all six colleges and were randomly selected, the experimenter used the random number table to select courses from the Spring 2006 course catalog. A few senior and junior level courses were chosen from each college. This was done to eliminate any students who might be taking an intro level course in colleges other than their own. It was assumed that students in senior and junior level courses have had enough experience within their college to evaluate it accurately.

Once the courses were selected, the instructors of each course were contacted via email to seek permission to allow the survey to be administered during their class period.

If the instructor denied the request, then another course was selected. Student participation was voluntary. The experimenter distributed candy as an incentive to complete the survey. The participants were allowed to complete the survey without any time restrictions.

Independent Variable and Dependent Variables

The independent variable in this experiment was the college the student's major belonged to. The dependent variable was the degree of student's engagement in the university. A student's level of engagement was determined by the student's mean score in each of the four benchmarks of NSSE. It was hypothesized that the degree of student engagement will vary from college to college. Students' mean score to four areas of NSSE- AC, ACL, SFI and EEE- will be different depending on the student's college of study. The survey shows that students in different colleges are engaged in the university at different levels.

Analysis of Data

Four one way ANOVAs of variance were employed to statistically analyze the significance of differences in mean scores of four benchmarks of NSSE- AC, ACL, SFI and EEE- among the students of six different colleges at Rowan University. This designed enabled the researcher to assess whether or not the level of student engagement varies in any area among the six different colleges at Rowan University.

Summary

In this study, senior and junior level courses from six different colleges, Business, Communication, Education, Liberal Arts & Sciences, Engineering, and Fine & Performing Arts, at Rowan University were randomly selected. The students in these

courses completed the National Survey of Student Engagement. Four one way ANOVAs were used to determine the relationship between college type and the degree of student engagement. It was expected that the degree of student engagement would vary depending on the college type.

CHAPTER IV: RESULTS

Introduction

The focus of this study was to explore the relationship between student engagement and different colleges within a university. Students answered questions to NSSE in four different areas Level of academic challenge, Active and collaborative learning, Student-faculty interaction and Enriching educational experiences. It was hypothesized that the level of student engagement in these four areas will vary among the six colleges at Rowan University.

Results

Descriptive statistics illustrated the following data: Level of academic challenge ($M = 32.80$, $SD = 5.74$, $N = 120$); Active collaborative learning ($M = 18.25$, $SD = 4.09$, $N = 120$); Student-Faculty interaction ($M = 15.17$, $SD = 3.60$, $N = 120$); Enriching educational experience ($M = 31.93$, $SD = 5.30$, $N = 120$).

Four one way ANOVAs statistical analysis revealed the following data: Level of academic challenge $F(5, 114) = 2.021$, $p < .081$, Student-Faculty interaction $F(5, 114) = 2.081$, $p < .073$, Active collaborative learning $F(5, 114) = .819$, $p < .081$ and Enriching educational experience $F(5, 114) = 3.155$, $p > .011$. The alpha level for all statistical tests is .05, two tailed. Significance was found in the area of Enriching educational experience.

The statistical analysis of the hypothesis that the level of student engagement in four areas of NSSE; Level of academic challenge, Student-Faculty interaction, Active collaborative learning and Enriching educational experience; will vary among the six

colleges at Rowan University; College of Business, College of Education, College of Engineering, College of Communication, College of Fine & Performing Arts, and College of Liberal Arts & Sciences, revealed one significant finding. Thus, it proved the stated hypothesis to be correct. The results of one-way ANOVA displayed significance of differences in mean in the area of Enriching education experiences and college type $F(5, 114) = 4.258, p > .001$. The Tukey HSD post hoc further revealed that Enriching education experiences is significantly different among the College of Fine & Performing Arts, College of Communication and College of Liberal Arts & Sciences. When comparing College of Communication to College of Fine & Performing Arts and to College of Liberal Arts & Sciences the p -values were $p > .011$ and $p > .001$, respectively. As shown in Figure 4.1, the mean of Enriching educational experiences is the greatest for College of Communication ($M = 36$), then College of Fine & Performing Arts ($M = 31$) and the lowest for College of Liberal Arts and Sciences ($M = 28$). Thus, it proves the stated hypothesis correct. This further strengthens the hypothesis that level of student engagement varied among colleges within a university.

Although, the findings support the hypothesis, it should be noted that no significant differences were found in the other three areas of NSSE. As illustrated in figure 4.2, Level of academic challenge shows no significant difference in mean scored among the six colleges. Similarly, Figures 4.3 and 4.4 show no significant difference in mean scored for Active collaborative learning and Student-Faculty interaction.

Figure 4.1 Mean Scores of Enriching Educational Experiences

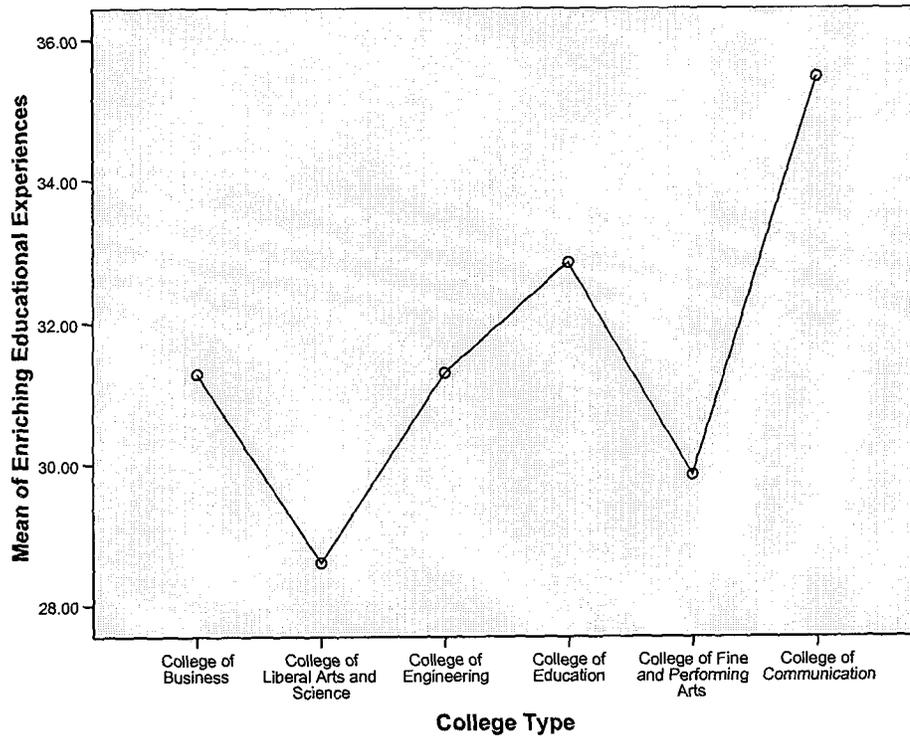


Figure 4.2 Mean Scores of Level of Academic Challenge

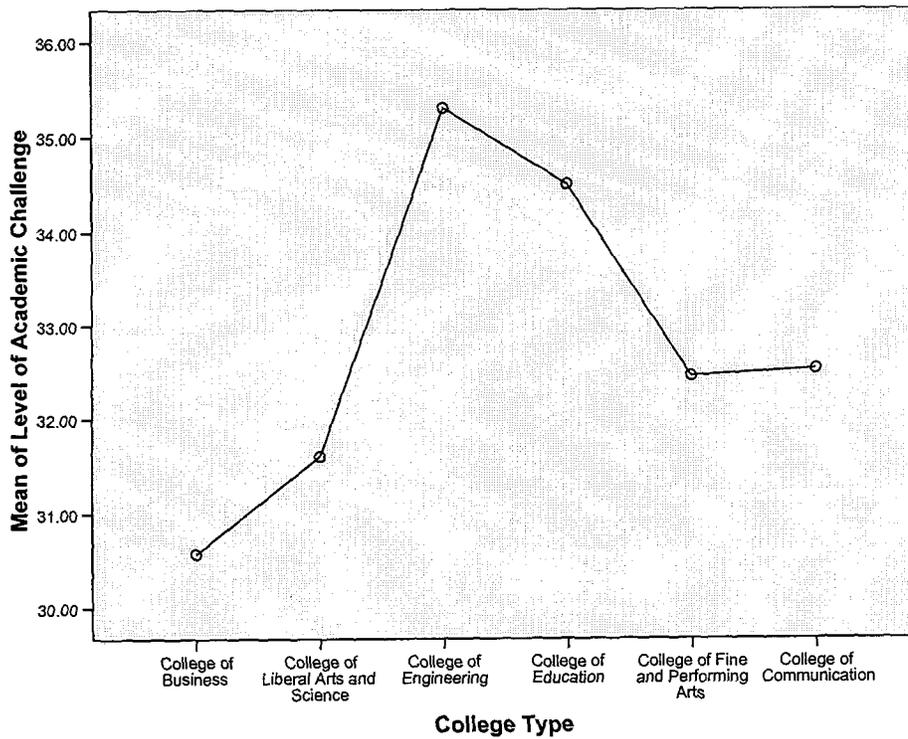


Figure 4.3 Mean Scores of Active Collaborative Learning

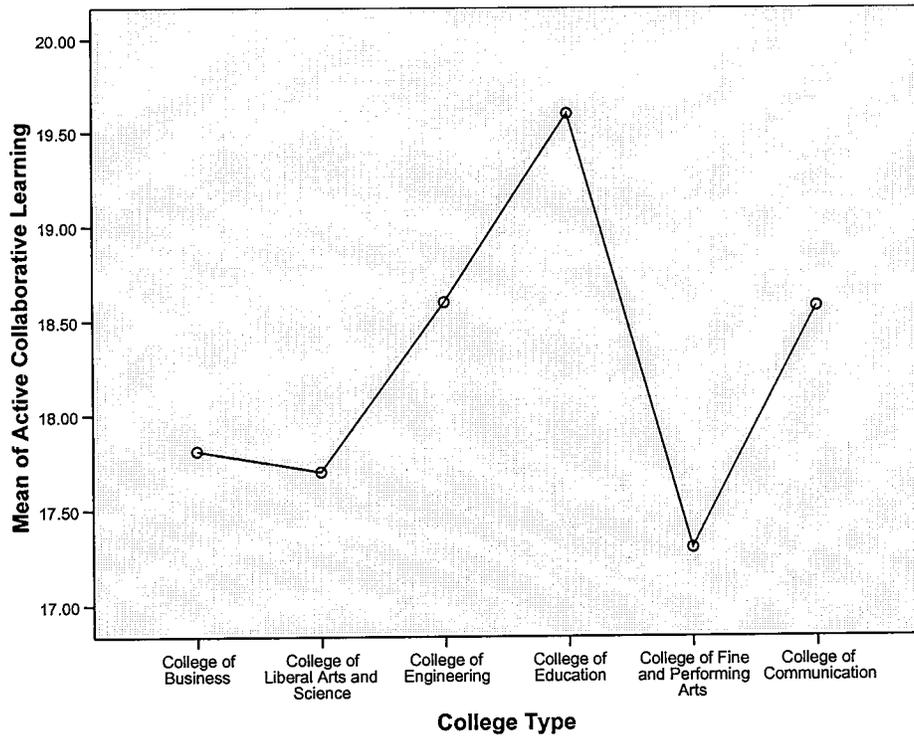
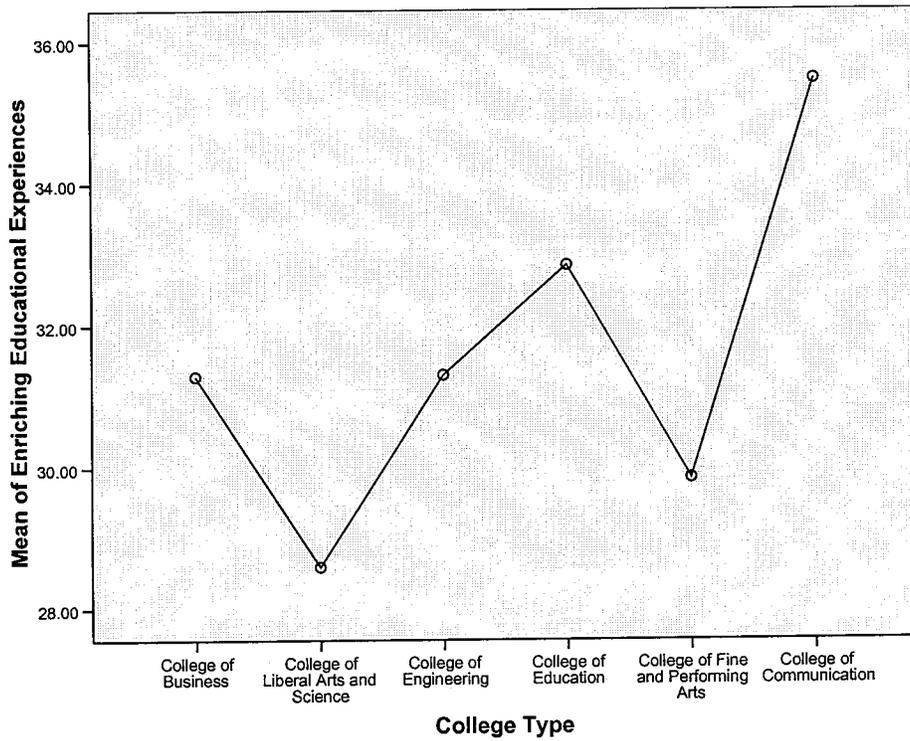


Figure 4.4 Mean Scores of Student-Faculty Interaction



Summary

In summary, four one way ANOVAs were conducted in this study. A significant difference was found in one area of NSSE while assessing student engagement. The mean score for Enriching educational experiences varied among three colleges, College of Liberal Arts & Sciences, College of Fine & Performing Arts and College of Communication. The mean score of students in the College of Communication was the greatest of all six colleges, and the mean score of students in the College of Fine & Performing Arts was the lowest of all six colleges. There were no significant differences among the six colleges in the following areas, Level of academic challenge, Active and collaborative learning and Student-Faculty interaction.

Chapter V: Discussion

Review of Results

Data analysis has shown a significant difference in the level of student engagement among the six colleges at Rowan University, thus supporting the hypothesis that the level of student engagement in any of the four areas of NSSE- Level of academic challenge, Student-Faculty interaction, Active collaborative learning and Enriching educational experience- will vary among the six colleges at Rowan University College of Business, College of Education, College of Engineering, College of Communication, College of Fine & Performing Arts, and College of Liberal Arts & Sciences. This finding further extends the literature of student engagement by adding the idea that student engagement not only varies from institution to institution but also among the colleges within an institution.

In support of the hypothesis, the four one way ANOVAs revealed a significant difference in level of student engagement. Specifically, the significance was visible in one of the four areas of student engagement, namely Enriching educational experiences. The Tukey Post hoc test further confirmed that EEE had a significant difference among three colleges college of Communication, college of Fine and Performing Arts and College of Liberal Arts & Sciences. Thus suggesting that, the extent to which students are engaged at Rowan University is affected by the college corresponding to their major. Furthermore, stating that the student in the College of Communication rate their EEE at a greater level than students in the College of Education and the College of Liberal Arts & Sciences. Given that, EEE takes into consideration the participation in activities such as

internships, community service, study abroad and co-curricular activities, it can be concluded that students in the College of Communication have taken part in these activities at a greater level than students in the College of Fine & Performing Arts and the College of Liberal Arts & Sciences.

Despite the fact that the hypothesis was proven significant, that significance was only found in the area of EEE. The other three areas of student engagement, Level of Academic Challenge, Active & Collaborative Learning and Student-Faculty Interaction, yielded no significance. The Level of Academic Challenge, measured time spent preparing for class, amount of reading and writing, deep learning, and institutional expectation for academic performance. Since no significant difference was found in AC, it can be concluded that there is no difference among the students of different colleges, as to how much time students spent preparing for class, reading and writing and engaging in deep learning. As shown in Figure 4.2, the students in college of engineering rated their courses the highest for academic challenge, followed by college of education. The students in college of business rated their courses to be the lowest in academic challenge. The mean scores of student in college of communication and college of fine and performing arts were very similar.

Similarly, ACL measured class participation, working collaboratively with other students inside and outside of class, tutoring, and involvement with community-based projects. Yet again, no significant difference was found. This implies that students in six colleges are participating in class, working collaboratively and are involved in community-based projects at a similar level. As shown in Figure 4.3, the students in college of education rated the highest for active collaborative learning, followed by

college of engineering. The students in college of fine and performing arts rated their lowest in active collaborative learning. The mean scores of student in college of business and college of liberal arts and sciences were very similar. Lastly, SFI measured the extent of talking with faculty members and advisors, discussing ideas from class with a faculty member outside of class, getting prompt feedback on academic performance, and working with faculty on research projects. Again, the results displayed no significant difference; this indicates that the degree to which students interact with faculty does not vary from among the six colleges at Rowan University. As shown in Figure 4.4, the students in college of communication, college of education and college of liberal arts and sciences, all had high scores in student-faculty interaction. The mean scores of students in college of business and college of engineering were the lowest.

Limitation

The results of this study should be interpreted after consideration of following limitations. The most apparent being the relatively small sample of students. In total 120 students participated in the study. However, when divided among their respective colleges, only 20 students from each college participated in the study. A sample of 20 students from each college is not adequate to evaluate the entire college. Each college at Rowan University has several majors; for example, the College of Liberal Arts & Sciences alone has over 20 academic departments with a varying amount of majors in each. A larger sample is required to represent adequately all the majors within each college. This limitation could play a major role while generalizing the data to a broader population.

Furthermore, level of student engagement among colleges should be studied longitudinally, rather than cross-sectionally. A student's level of engagement can differ throughout their college career, depending on several factors, such as their course work, enrollment status, residential status, age and personal commitments. In order to get accurate findings of student engagement a longitudinal study is recommended. In addition, the study was limited in that self-report measures determined the students' engagement. A student may not have enough experience with the institution to provide an accurate opinion of the institution. Even though only senior and junior students participated in this study, with the assumption that these students have more experience within their majors than freshmen or sophomore level students, there was no control factor for transfer seniors or juniors. Students who may have transferred to Rowan University from another institution may have skewed the data.

There can also be some discrepancy in the interpretation of the questions. For example, questions referring to "problem sets" may apply to students in mathematics however not necessarily to students in education and other programs. Thus, student engagement can be better assessed through interviews rather than questionnaires. An interview with students concerning their level of engagement in the institution allows for follow-up questions and necessary clarifications. Lastly, respondents can intentionally provide inaccurate information about their involvement with the institution, which can lead to inaccurately finding significance.

Conclusion

In summary, the findings of this study are congruent with the literature discussed in the literature review. However, this study further extends the field of student

engagement by exploring the relationship of student engagement and the colleges within a university. In supporting the hypothesis, the findings revealed that there is a significant difference in student engagement among the colleges within a university. Specifically, EEE had a significant difference among three colleges, college of Communication, college of Fine and Performing Arts and College of Liberal Arts & Sciences, which leads to the conclusion that students in the College of Communication have taken part in internships, community service, study abroad, and co-curricular activities at a greater level than students in the College of Fine & Performing Arts and the College of Liberal Arts & Sciences.

Implications and Further Research

It is very important that universities pay close attention to the level of student engagement because it is closely related to Student Learning. Although, NSSE directly does not measure student learning, engagement is known to lead to an increase in student learning (Kuh, 2001). Many institutional and environment characteristics influence the level of student engagement, including, faculty- student interaction, academic challenge and supportive campus environment. This study shows that environments differ among the colleges within an institution. Thus, to ensure that all of the students at an institution are engaged at the same level, universities not only have to focus on their goals as a whole but also make sure they address factors at each college level. The academic curriculum and policies of each college should be congruent with the institution's overall policies and be consistent among the rest of the colleges. The university administrators can utilize the results of this study to develop programs that foster learning environments at an equal level through out the institution.

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