

USING LEARNING STYLES TO AFFECT THE TRAINING OF RECREATIONAL SPORTS  
PARAPROFESSIONALS

by

NANCY CHRYSTAL-GREEN

(Under the direction of Diane L. Cooper)

ABSTRACT

The purposes of this study were to (a) determine if recreational sports paraprofessionals can affect the learning and development of college students by incorporating learning styles into student staff training and (b) determine if considering learning styles in the staff training process will improve job knowledge.

One particular paraprofessional staff of a Department of Recreational Sports at a doctoral extensive institution in the Southeastern United States served as this study's participants. The learning style of each participant was determined through the use of the revised Learning Style Inventory (Kolb, 1984). Also the participants were pre and post tested about knowledge of the job. Sixty of the 72 (96.8%) available paraprofessionals chose to participate. Additionally, 8 participants were interviewed following a protocol intended to illicit information about the value of staff training and what was learned.

Pre and post test results indicate an improvement in learning and an improvement in job knowledge. However there was not a clearly defined link between learning style and the section of training pertaining to a particular way of learning. Four themes emerged through the

interview process: reaction to learning style category; confidence instilled through training about the job; need for continual training; and impact of exposure to other ways of learning.

**INDEX WORDS:** Learning styles, Kolb, Recreational sports, College students, Paraprofessionals and student affairs, Student training

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NANCY CHRYSTAL-GREEN

B.A., McMaster University, Canada, 1993

M.A., Georgia Southern University, 1996

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NANCY CHRYSTAL-GREEN

Major Professor: Diane L. Cooper

Committee: Merrily S. Dunn  
Thomas Burke  
Jane A. Russell

Electronic Version Approved:

Maureen Grasso  
Dean of the Graduate School  
The University of Georgia  
May 2004

## DEDICATION

This dissertation is dedicated in honor of my husband, Gregg Green. The sacrifices you made for me are too numerous to mention here, but know that I am grateful for all that you have done for me. Your constant love, support and encouragement gave me the willpower to persevere. This was a journey that we embarked upon together. I would not have had it any other way. I look forward to the next chapter of life that we will write together.

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## CHAPTER 1

### INTRODUCTION

The history of recreational sports as an entity of the University community is relatively short. Recreational Sports departments are found in academic units, usually Physical Education, in intercollegiate athletics, in Business Services as an auxiliary, and in Student Affairs divisions. Because of its relative newness and varied reporting structures, Recreational Sports is often not as thoroughly researched and understood as older units. However, with the current focus on facilities improvements and retention efforts, as well as its popularity with a great variety of students, Recreational Sports is increasingly finding itself in the campus spotlight.

Until the late 1800's, sports that were recreational in nature, mostly in the form of intramurals, were considered to have little or no academic or educational value (Bennett, 2001). It was not until after 1902 that universities began to respond to the students' desire for wholesome exercise by supporting intramural sports leagues (Rudolph, 1962). By the 1950's, the majority of institutions had recognized the intrinsic educational value sports could offer students and the campus environment. Since that time, Recreational Sports programs have been expanded and facilities have been constructed around the country in response to student-led initiatives (Bennett, 2001). This expansion has caused Student Affairs administrators and Recreational Sports professionals to change their perceptions about the institutional roles and responsibilities they have in the process of educating students.

## Statement of Problem

According to the CAS Standards (Miller, 2001),

...recreational sports programming significantly impacts student life, development and learning as well as recruitment and retention...through participation in recreational sports, students are encouraged to develop critical thinking skills, create new problem-solving strategies, hone decision-making skills, enhance creativity, and more effectively synthesize and integrate this information into all aspects of their lives. (p. 143)

This statement indicates a direct relationship between the academic environment and other co-curricular activities. Unfortunately, perhaps because of its brief history, recreational sports departments have not adequately researched how to best connect academic learning and learning acquired through participation in recreational sports. Nor has the academic field compared either the psychosocial or cognitive development students gain from recreational sports involvement to involvement in other co-curricular experiences. This is due in part to the difficulty in showing direct ties from one activity to the next. However, in a time of declining budgets, increased calls for accountability, and the continuing call for validation of student learning in the co-curriculum, studies that begin this exploration are very much needed.

Student work experiences are one type of learning that occurs outside the classroom. Students are afforded the opportunity to learn about work environments. They increase their job skills and learn how to work with diverse groups of people. Most importantly, they learn about themselves. In many ways, the training that students are exposed to in preparation for this work replicates a classroom environment. It is a place where recreational sports professionals can better measure and understand one set of experiences in the work environment. Staff training takes place over a set period of time, with a predetermined curriculum and learning objectives, and the opportunity exists to test job knowledge and skills acquired at the end of the training period.

Recreational Sports departments rely heavily on student staff. In fact, it is not uncommon for student employees to outnumber administrative staff by a ratio of 10:1 or more (Weese & McElary, 1988). These student employees are instrumental to the development and supervision of programs, facilities and even other student employees. Therefore, the area of student employment is essential to the successful operation of a collegiate Recreational Sports program. Training and preparation are critical factors in maximizing the level of customer care and effectiveness in service delivery. Thus, administrative staff must structure training to promote the greatest amount of learning for all student employees.

#### Purpose of the Study

This study is an example of how Recreational Sports departments, through student participation in programs and monitoring of facilities, can intentionally support and supplement student learning. By intentionally considering how student staff members learn and process information, both students and departments will benefit. Students are given an opportunity for personal development and growth, while Recreational Sports departments ultimately produce better trained student employees. Three main issues require investigation to develop a comprehensive view of what literature currently exists surrounding this question and where further research is needed; use of paraprofessionals within student affairs, paraprofessional staff training and the learning styles of college students.

#### Research Questions

The key research questions (RQ) of this study are:

RQ 1: How can recreational sports professionals affect the learning and development of college students by incorporating learning styles in various programs, including staff training?

RQ 2: Will considering learning styles in training improve job knowledge?

## Operational Definitions

There are a number of terms used throughout this study that need clarification. The discussion that follows relies on consistent understanding and use of these terms.

### *Paraprofessional Staff*

An increasing number of undergraduate students are employed in positions of significant responsibility on the college campus. Because of the reliance on student employees there has been greater focus on both the value of these workers and their training. As defined by Ender (1984), paraprofessionals "are undergraduate students who have been selected and trained to offer services or programs to their peers. These services are intentionally designed to assist in the adjustment, satisfaction, and/or persistence of students as applied to the educational experience." (p.9).

### *Recreational Sports*

In institutions of higher education, the functional unit responsible for offering the campus community recreational opportunities is frequently called the Department of Recreational Sports, however other names include Recreational Services, Campus Recreation and University Recreation. In addition to different operating titles, the departments vary in reporting structure and services they offer. Most departments report to Student Affairs divisions, others are housed in academic units or Auxiliary Services, and still others are a part of intercollegiate athletics. Regardless of the programs and services, where the department reports, or what the unit is called, demonstrating effective learning for students is paramount to the mission of any college or university.

### *Learning Styles*

In the context of this study, a learning style is defined as the way one grasps and makes meaning of information, or how one best acquires knowledge. Understanding that students use different techniques to learn is essential to providing a supportive and challenging environment and to achieve a high level of response. This study assumes that learning occurs through a variety of experiences and is linked to the environment.

### Limitations

It is important to consider the context in which this study was conducted. This study occurred at a large, research intensive institution in the southeastern United States. The Recreational Sports Department used in this study relies heavily on its paraprofessional staff to operate facilities and programs. It is one of the largest employers of students on campus. While there is a significant amount of employee retention, the Department frequently hires new students. Due to the number of new hires and the amount of responsibility these employees have in the daily operations of the Department, effective training is crucial to maintain quality programs and facilities.

Retaining paraprofessional staff is critical to any Recreational Sports department. Paraprofessional staff training for student employees of this Recreational Sports Department includes the training of new and returning staff members. Returning employees are a limitation to this study because they will be somewhat knowledgeable about the job and their roles regardless of attending staff training based on previous experience with work in the Department. It is important not to assume that all paraprofessionals had the same knowledge level at the beginning of training. Many returning students began work after the previous academic year's training sessions, so a student could be classified as a returner but be participating in his or her

first structured training session offered by the Department. Also, many of the newly hired paraprofessional staff are familiar with the facility and its programs and services because they either frequent the building or are friends of current employees. Another confounding element that is caused by returning paraprofessionals is the concept of a performance ceiling in the testing process. Because returning staff would have previous knowledge about the job, which may translate into high pretest scores, there is not much room to gauge the true impact of the training experience. A returning student may score high on the pretest with very little room remaining to show learning acquired through training on the posttest. Hence the student hits a performance ceiling, which does not allow for an accurate depiction of learning due to the training experience.

It is important to note that this study involves the training of one particular functional unit within a Student Affairs division. In this case, training has traditionally occurred over a short period of time, usually part of one day, or has had to be considerate of the operating hours of the department. Therefore, training is usually focused on content for job performance with minimal “get to know you” activities that would lead to team building. It was important to the researcher that the paraprofessional staff not feel overwhelmed and frustrated by being exposed to a vastly different training experience than what they had previously experienced. Therefore, this methodology maintained a similar length of time for the experience. This type of training design is not ideal for other Student Affairs functional units who traditionally train paraprofessionals for much longer periods of time. Therefore, the results of this study need to be read with this specific training design in mind and may not be generalized fully to training methods in other functional units.

Also, this study occurred as part of an actual training program. It was not a simulation. Therefore, the researcher was limited due to some logistical issues. For example, the length of the modules, the amount of time dedicated to training, and the fact that the facility was operational during training precluded some paraprofessional involvement. Also, the content of training was limited by what needed to be shared with the paraprofessional staff immediately. For example, the protocol used by the Department to respond to emergencies had been changed and therefore that needed to be worked into the training experience. The researcher was unable to determine all of the content shared during the training experience, This did complicate the process because some topics are more conducive to being taught in various learning style formats.

The method used to collect data also had a number of limitations. There were four learning modules used to impart information to participants. All four modules were held at the same time so the participants rotated through them. The researcher facilitated the process in one of the modules and relied on other professional staff from the Department to facilitate the other three. The facilitators had numerous planning meetings to ensure that the information shared with paraprofessionals was represented correctly on the answer key for the Job Knowledge Test. However, changes needed to be made to the answer key because facilitators changed their responses to certain questions during the learning modules when in discussion with the paraprofessionals. Also, this design did not allow for an evaluation of treatment effects long term. The post-test occurred the day of training to decrease the influence that on-the-job learning might have had. Ideally a follow-up test could have been given to determine whether or not the treatment effects would endure over time, but given that this study focused on learning occurring

in training, testing at a later date would have drastically increased the amount of confounding variables.

The relationship the researcher had with the participants might also be a limitation with the qualitative results. While the researcher was not the direct supervisor of any of the participants, the majority of the participants had come into contact with the researcher before the study through normal job interactions. There was a sense of the researcher being in a position of authority as a member of the professional staff, and this might have contributed to a type of dual relationship between the researcher and the participants. This relationship could have influenced the interviewing procedure in one of two ways. Either the participants were overly free to give opinions about the training experience that they would not have shared with a stranger, or they felt obligated to speak positively of the process and of outcomes that were, perhaps, not as significant. To limit this, the researcher spoke to each participant about the importance of honest feedback and that nothing would be taken as a personal slight.

Perhaps of most significance is the limitation of the testing procedure. Based on the evidence discussed in Chapter 2, it can be unfair to evaluate students by only using one testing method. However, the researcher chose to use only one type of question, fill in the blank, on the Job Knowledge test. Difficulties in scoring and the time involved in alternative testing procedures were contributing factors to this decision. Many experiential educators, Kolb (1993) included would argue that this type of testing procedure is favored by one type of learning style. Therefore, the testing process may not have been the method of choice by all the participants and may have affected scores.

## Significance

The Student Learning Imperative (1994) indicates that Student Affairs professionals have the "responsibility of fostering learning and personal development" (p.2) therefore contributing to the academic mission of the institution. There are numerous examples to demonstrate how this responsibility can be fulfilled. First of all, if students are given the opportunity to determine their learning styles they can be educated as to the best modes of instruction for them and how to challenge themselves to augment their learning through the other styles. A number of researchers have already found a connection between learning style and the counseling process (Griggs, 1991, Grimes, 1995, Raschick & Maypole, 1998), concluding that counselors, whether professionals or paraprofessionals, will be much more successful if they cater interventions to the style adopted by the student. Other research (Dunn & Stevenson, 1997, Forney, 1994, Kolb, 1984, Pinto et al., 1994) has found that certain types of learners select specific career fields based on their learning style interests and by the dominant teaching pattern used in instruction. Perhaps this self-selection is true in the case of how students engage in co-curricular activities as well.

Secondly, use of learning styles can be beneficial to the way Student Affairs professionals reinforce the value of multiple modes of learning on campus. This may be a link, or a bridge builder, between Academic Affairs and Student Affairs. Testing measures for learning styles will need to be given and interpreted. Students will also need guidance and advice as they come into contact with different approaches to learning. From a pedagogical perspective, creative approaches to instruction will need to be developed, and specific, measurable, learning outcomes will need to be created. These tasks are ideal for Student Affairs involvement. Student Affairs professionals can ensure that affective skills are measured as well. As O'Banion (1998), indicates, "in a new learning college students will need to examine and experiment with their

learning styles. Students will need special support as they navigate their journey through new territory, advice on choices, and encouragement to forge ahead" (p.2). Also, learning styles can be used as the common element for both in- and out-of-classroom learning opportunities, especially through the use of paraprofessionals. Students can be learning in one mode in the classroom and be able to have concrete, or hands-on, experiences within student affairs departments to supplement classroom learning. This is an example of how practicum and internship students could learn in intentionally designed, purposeful workplaces.

Thirdly, Student Affairs can provide working and training environments that challenge and support a diverse group of individuals. Identifying the learning styles of paraprofessionals can simplify the training process of student employees for professional staff because it will give direction on how to share information. Also learning style identification will improve their job satisfaction and retention by matching the delivery to the style making the students feel more comfortable in the learning environment. Student affairs professionals will always challenge students to develop and to think critically, but with the knowledge of the students learning style in hand, these challenges can be made at the appropriate time and in the appropriate fashion.

### Summary

Picture two student employees responsible for the daily operations of a student recreation center. One can cite the employee manual verbatim and is conscientious about enforcing rules and policy, but does not interact well with the student employees whom he is managing. The other could not explain a policy to a participant if asked, but somehow promotes a safe atmosphere and is very popular with her peers. Both attended the same training sessions where policy, customer service and leadership were covered. Without trying to clone students, how can the professional staff ensure student employees are able to perform job functions with the same

level of skill and promote a positive work environment for themselves and others? Professional staff needs to train paraprofessionals in ways that are supportive of learning style, taking it into consideration when structuring learning modules. In order to gain a more complete picture of the theoretical constructs supporting this research project, a review of the literature is necessary.

## CHAPTER 2

### REVIEW OF THE LITERATURE

Over the last two decades higher education has revised many of the ways it does business. With an increased emphasis on consumerism, public interest in the quality of undergraduate education, and a focus on fiscal responsibility has pushed institutions to evaluate their effectiveness. The concept of learning has been one of the primary outcomes of this environment. Learning has become the focus of both academic and student affairs. Many educators call for the “entire academic community to work together to place more of an emphasis on student learning” (Kellogg, 1999, p.2). This is certainly true in the case of student affairs as recent publications demonstrate. For example, according to the Student Learning Imperative (ACPA, 1994), “students benefit from many and varied experiences during college and learning and personal development are cumulative, mutually shaping processes that occur over an extended period of time in many different settings” (p.2). While student affairs practitioners argue that students learn through involvement in cocurricular activities, it can be difficult for academic colleagues to accept or understand this concept. Kuh (1996) calls for a change in the culture of learning from separatist to seamless. “In a seamless learning environment, students will have opportunities for learning both in the classroom and out-of-the classroom...” (Kellogg, 1999, p.2). However, the challenge for student affairs practitioners, and higher education in general, is to increase both collaboration and cooperation between academic and student affairs. With this collaboration, intentionally designing seamless learning environments can positively effect the cognitive and affective development of students.

### Using Paraprofessional Staff

According to Allen (2001), "we know that the more engaged students are with their education, the greater their chances of succeeding in higher education and the greater the impact of that education on them in developing leadership, self-confidence and self-esteem, appreciation for the college experience, and other valued qualities." (p. 1). Students taking the initiative to become involved in their education must remember that the process needs to occur in all aspects of their lives, not just in the classroom or library. Student affairs divisions can have an impact by providing opportunities for students to become involved and engaged in their environment, thereby affecting learning. Since many forms of engagement focus on the social aspects of college living, participation with a group of peers in college-based activities, including intramural sports, (Allen 2001), should be respected for its impact on development.

The concept of engagement also can provide a bridge between student affairs and academic affairs. For example, both academic and student affairs can become more intentional about the process of involvement, thereby creating more efficient and greater learning and development. Allen (2001) cautions that student engagement should be intentionally promoted, but "balance between academic and other forms of personal and social development" (p.2) must be taught. Faculty and staff must involve themselves with students to guide these experiences.

It is argued that recreational facilities have become one of colleges' best recruiting tools and that participation in campus recreation programs gives students a reason to persist on campus. According to Kovac and Beck (1997), "recreational sports has received increased attention on college campuses as issues of recruitment, retention and student satisfaction have emerged as institutional priorities"(p.10). They cite Astin (1978) to indicate that involved students achieve better grades, persist in college and are more satisfied in their college

experiences. In their study they found that students report being generally satisfied with their recreational sports experiences, felt the availability of recreation facilities and programs was an important factor in deciding to attend and continue at an institution and perceived that participation in recreational activities provided individual benefits in terms of fitness, feeling of physical well-being, sense of accomplishment, stress reduction and physical strength. Primarily through participation in open recreation activities and supporting services, recreational sports produced the highest levels of student participation and satisfaction in all aspects of campus life (Kovac & Beck, 1997). This research certainly supports the notion that recreational sports provide students with opportunities to become involved, engaged and connected to their environment.

Using students as paraprofessionals fits well with the idea of positively engaging students in their environment. As defined by Ender (1984), paraprofessionals "are undergraduate students who have been selected and trained to offer services or programs to their peers. These services are intentionally designed to assist in the adjustment, satisfaction, and/or persistence of students as applied to the educational experience." (p.9). Results of a study performed by Carns, Carns, and Wright (1993) indicate a growing trend toward the use of undergraduate paraprofessionals in student development activities and that paraprofessionals play a significant role in the lives of individual students. This growth is due to a number of factors. Campuses can increase services at reduced costs and paraprofessionals can provide information, explain institutional and program policies, and perform clerical tasks, thus freeing up time for professionals (Ender, 1984). College campuses, especially student affairs divisions have benefited greatly from the use of paraprofessionals, however, the paraprofessionals receive benefit as well. Students in these types

of roles feel that these experiences have enhanced their self-worth and interpersonal skill development (Carns et al., 1993).

While the use of paraprofessionals in counseling and guidance activities is wide-spread, Winston, Ullom, and Werring (1984) state that the college residence hall was the first student affairs unit to use students as paraprofessionals to maintain order and serve as liaison between administration and students. Winston et al. (1984), list seven roles paraprofessionals fulfill in housing departments; modeling student behavior, as a peer helper, as an information and referral agent, a socializer, a leader and organizer, a clerical worker and limit setter and as a conflict mediator. While no studies were found specifically involving recreational sports paraprofessionals, these undergraduate students serve in a similar capacity as housing students, just in different contexts. For instance, recreational sports paraprofessionals set limits for their peers by enforcing and explaining departmental policies and are frequently engaged as conflict mediators and risk managers whether on the intramural field, in the weight room, or on a weekend outdoor recreation trip. For these reasons, recreational sports student employees who are responsible for programming events and supervising peers should be considered paraprofessionals. To support this argument, a study was done at a mid-western institution that compared work tasks of recreational sports, housing and union student employees (Grayson & Miller, 2001). Ninety-four work tasks were identified as those being shared by the three staffs. Of the identified tasks, students indicated 33 as being linked to acquiring teaming outcomes and leadership skills, which again emphasizes the purpose of engaging students in opportunities to learn and develop.

Gaskins (1996) surveyed recreational sports student employees and uncovered a number of areas that reinforce the notion that these students should be considered paraprofessionals. The

area of student employment is essential to the success" operation of a collegiate recreational sports program. Administrators rely heavily on these individuals to perform a multitude of diverse functions. It is not uncommon for student employees to outnumber professional staff by a ration of 10:1 or more (Weese & McElary, 1988). Thus training and preparation are critical factors in maximizing the level of customer care and effectiveness in service delivery. The CAS Standards clearly indicate that student employees must be carefully selected, trained, supervised and evaluated. When their knowledge and skills are not adequate for particular situations they must refer students or others in need of assistance to qualified professional staff and that compensation for paraprofessional staff must be fair (Miller, 2001).

According to West, Wells, Stinson, Weis, Garner and Haake (1992) colleges and universities frequently allocate almost half of the recreational sports budget to student employees. Professional staffs have made serious commitments to improving the level of service provided to their internal customers, their student employees (Keizer, 1997). These students are often responsible for handling conflicts and emergencies, making independent judgments, supervising peers, overseeing programs and relating to patrons. These roles and job responsibilities are very similar to those outlined by Winston et al. (1984) mentioned above. Gaskins also stated that, "despite the importance of student employees to collegiate recreational sports, very little research has been conducted on the subject" (p.45). Although student employees/paraprofessionals are critical for in maximizing the level of customer care and effectiveness in service delivery in campus recreation programs, further research into both the benefits to the participants, the institution and the paraprofessionals is needed.

## Training Paraprofessionals

Research indicates that adequate and purposeful training of paraprofessionals is imperative (Ender 1984, Winston et al. 1984, Murray, Snider, & Midkiff, Jr. 1999, Grayson & Miller, 2001). Training must include both pre-service and in-service activities and programs to affect the ability of the students to learn their jobs and to see improvements in job performance. Winston et al. (1984) suggest that training programs should include: understanding the role of a peer helper; the goals and philosophies of the program; the concept of role modeling; understanding of student development theory; interpersonal and human relations skills; goal setting; knowledge of campus services; and referral techniques and strategies. While this suggestion was made particularly for resident assistant training, it is applicable to recreational sports training as well. Recreational sports professionals from comprehensive programs must discuss these topics intentionally with their paraprofessional staff during training sessions and regularly follow-up throughout the year to ensure students are appropriately trained and that they have learned what was intended.

Murray et al. (1999) performed a study exploring "the relationship between resident assistant training and improvement of job performance" (p.744). They believed that, following a training period, significant improvements would be measurable in knowledge about the specific job. The results indicated "even short term training interventions can bring about favorable outcomes in behavior on the job ... direct instruction appears to be an effective and efficient way of promoting mastery of new material on a cognitive level" (p.746). Most importantly, however, the authors believe their results should be of interest to all student affairs practitioners who engage in the training of paraprofessionals, that the application of the knowledge gained in training should be a concern. It is obvious that intentionally training paraprofessionals is key to

their job performance and job satisfaction. It also benefits the student affairs department by offering participants quality interactions with paraprofessionals.

### Learning Styles of College Students

Evaluating learning styles of college students is a recent phenomenon. This could be attributed to what O'Banion (1998) labels "the learning revolution". O'Banion claims that a revolution is taking place in higher education that "places learning first in every policy, program, and practice in the institution by overhauling the traditional architecture of higher education... freeing faculty and students to concentrate on learning" (p. 1). Perhaps the definition of learning is being expanded and, because of this, there is an interest in investigating how students learn since previously held assumptions have been proven not to be efficient for every student. O'Banion believes that under this new learning college model students will need to examine and experiment with their learning styles (1998).

It seems as though faculty have determined that such an investigation into student learning styles is appropriate and important to classroom instruction. Pinto, Geiger and Boyle (1994), state that there are over three hundred research papers relating to various aspects of learning style preferences. "As a result, educators are better able to develop and tailor educational programs to specific audiences based on their preferred methods for acquiring knowledge" (p. 113). A study performed in 1997 by Dunn and Stevenson reiterates this point. They found that when students were shown how to study by capitalizing on their identified learning style preference they achieved higher grades than students in the control group, suggesting that homework prescriptions based on learning styles affect grades positively. They go on to state that, "because of the diversity of the current student population (and this diversity

is increasing) teachers can not expect to see one particular learning style, nor will one single teaching style be effective" (p.335).

According to Dunn and Dunn (as cited in Dunn & Stevenson, 1997) "a learning style is the way each individual begins to concentrate on, process, internalize, and remember new and difficult academic information or skills" (p.333). While it is possible for students to master information in the "wrong" style for them, they do so more efficiently when they capitalize on their learning-style strengths. Griggs (1991) believes that the challenge of our schools today is to assess the learning style characteristics of each student and to provide teaching and interventions that is compatible with those characteristics. O'Banion (1998) agrees when by calling for institutions to offer every course in at least five different modes of delivery to ensure students can match a delivery system to their learning style.

There are a number of theories and methods for assessing the learning styles of college students. Perhaps one of the most recognized and comprehensive is the one developed by David A. Kolb (1984). Kolb's research, based on the work of Dewey, Lewin and Piaget into experiential learning and cognitive development, is a way of highlighting the different approaches to learning and the different stages that are necessary within the learning process (Garner, 2000). Kolb also acknowledges the influence of Jung's psychological theory on his work (Evans, Forney, & Guido-DiBrito, 1998). There are three significant parts to Kolb's theory of experiential learning that need to be addressed, (1) the cycle of learning he advocates, (2) the two polar opposite dimensions he outlines and, (3) the four individual learning styles he has identified. According to Kolb (1984), development consists of three stages: acquisition of basic learning, or cognition; specialization, indicating the development of a specific style of learning;

and integration where nondominant learning styles are recognized and used. Each of these three stages fits into the three parts of his theory mentioned above.

Kolb (1984) defined learning as “the process whereby knowledge is created through the transformation of experience” (p.38) positing a four-stage learning cycle of four different methods of learning: concrete experience, reflective observation, abstract conceptualization and active experimentation. According to Pinto et al. (1994), learning is regarded within this framework as a circular process in which the learner requires different abilities at different stages. The learner begins at concrete experience that leads to some degree into reflective observation. Reflective observation then leads the learner to develop some abstract conceptualization of the experience that result in active experimentation. The learner's experiences will begin the cycle over again. Raschick & Maypole (1998) explain that, according to Kolb, for complete learning to take place students must travel through all four stages. This does not happen automatically, and without supervision and challenges students will not move beyond a particular stage into other parts of the learning cycle. Evans, Forney, Guido-DiBritio (1998) claim that it is essential for personal development that one completes the learning cycle. They believe that development in the mode of concrete experience increases ones' affective complexity (feelings), development in reflective observation increases perceptual complexity (observations), development in abstract conceptualization increases symbolic complexity (thoughts), and development in active experimentation increases behavioral complexity (actions). Integrative development, or the ability to adapt by using nondominant modes, is considered by Kolb to be important not only for personal fulfillment but also for cultural development.

The second part of Kolb's theory deals with two polar opposite dimensions. Kolb conceptualized learning as requiring a grasping dimension of concrete versus abstract and a transforming dimension of active versus reflective (as cited in Forney, 1994). These two dimensions are seen as continuums with the active versus reflective dimension representing inductive and deductive thinking (Kolb, 1984). Kolb (1984) indicated "experience, personality differences, and environmental factors help individuals develop strengths and weaknesses ... over time, an individual must find a learning style to balance being reflective versus active and concrete versus abstract".

One of the ways to test where students fall on these two continuums is to use the Learning Styles Inventory (Kolb 1993). The SLI was developed to assess and measure individuals' learning styles. It is a widely used and simply administered 12-question questionnaire where each question asks the student to indicate the best of four possible answers describing how they learn best and act in certain situations (Raschick & Maypole, 1998). The answers represent four particular learning styles that are combinations of the four learning stages. Although everyone utilizes each of the four learning styles to some extent, Kolb asserts that each individual has a preferred learning style (1984). The LSI looks at the learning cycle and the two opposite dimensions as a graph of four quadrants. Once the instrument is completed, individuals can plot their answers on the graph thereby finding the quadrant in which they fit, or the learning style most representative of their answers.

The four learning styles, as mentioned above, are combinations of the four stages within the learning cycle. According to Kolb (1984), Convergors, a combination of abstract conceptualization and active experimentation, have a preference for technical tasks over

social/interpersonal contexts and have strengths in problem solving, decision making, the practical application of ideas, and identifying the single best answer where there is one.

Divergers, a combination of concrete experience and reflective observation, are feeling oriented people who have strengths in imaginative ability, an awareness of meaning and values, and generating and analyzing alternatives. Assimilators, a combination of abstract conceptualization and reflective observation, emphasize ideas rather than people and have strengths in inductive reasoning, creative theoretical modes, and integrating disparate observations. Accommodators, a combination of concrete experience and active experimentation, are action oriented, at ease with people, inclined to solve problems by trial and error, and have strengths in carrying out plans, openness to new experiences, and adapting to changing circumstances.

Kolb (1984) reported that Convergents are frequently found in the physical sciences and Engineering. Divergers in the humanities and liberal arts, Assimilators in the basic sciences and mathematics, and Accommodators in practical fields such as business. He reported a positive relationship between student-discipline learning style congruence and academic performance, social adaptation, and career commitment. This finding is important in terms of its potential applicability to student affairs. Learning style information can aid in understanding and enhancing students' attitudes and performance in the classroom (Forney, 1994). If this is true, then the argument can be made that learning style information can enhance attitudes and performance outside the classroom and in staff training programs as well.

These learning styles, or preferences, emerge as individual strengths and weaknesses influence a learner's approach to learning situations. These preferences are expected to remain relatively stable as they are influenced by individual personal characteristics (Kolb, 1984).

However, there exists some discrepancies in this claim. Garner (2000) believes the environment plays a large role in influencing how student learn, disputing Kolb's contention that learning styles can be attributed solely to the learners themselves. However, he does believe that "Kolb is a tool to encourage self-development of an individual within an academic group. This development comes about as a product of knowledge of different perspectives and stage of the learning process " (p.347).

Perhaps the question that needs to be asked is why use learning styles in the investigation of how best to affect the learning of recreational sports paraprofessionals? Research has been done to suggest that investigating learning styles may be the most appropriate way to affect student learning. Forney's 1994 study profiled the characteristics of student affairs master's students. She determined that "learning style differences rather than anti-intellectualism might explain the more limited academic achievements of these students" (p.337). The majority of Forney's subjects were accommodators who prefer feeling (concrete experience) and doing (active experimentation) which fits with the hands-on field of student affairs. Her findings indicate that preparation for students need to link academic and experiential aspects of the student affairs discipline, which is more consistent with the learning style of an accommodator. Forney calls for further research about learning styles in the field to understand person-environment fit and issues related to job performance and satisfaction. Both of these topics are directly applicable to research question being asked throughout this paper.

Studies done by Grimes (1995) on learning styles of diverse student groups and by Pinto et al., (1994) on whether learning styles change over the course of a student's college career support the contention that investigating individual learning styles has merit as an intervention to

affect learning. Grimes (1995) evaluated athletes, minority students and students with disabilities to determine if these at-risk groups demonstrate differences in learning to see if instructional approaches could be modified. She offered research that indicated making accommodations based on students' learning style preferences could improve skills, achievement, attitudes, and retention, that continuing traditional instruction with these students will have little positive influence on learning. However, it is only when learning styles are evaluated that faculty and staff members have a prescription to deliver instruction and learning opportunities to match the students' most efficient learning techniques.

Pinto et al. (1994), make similar recommendations. The authors believe that their study offers some concrete suggestions to educators, that they need to be aware of the vast array of student learning styles present on college campuses and that they need to be aware that specific teaching approaches may have a profound impact on the manner that many students will attempt to acquire information. Instructors need to employ various teaching techniques in order to engage actively all students at some point in the learning process. Evans, et al., (1998) call for efforts to be made in higher education that provide varied methods of instruction and evaluation so as to challenge nondominant aspects of their preferred styles. The more opportunities presented to integrate the four styles, the greater the level of learning flexibility. These opportunities should be presented outside the classroom as well, and probably can exist more readily across the spectrum.

Using techniques that reflect all four learning cycle components has the potential to form some connection for each participant, as well as to introduce some challenging elements for each. Linking this to students working in student affairs can be relatively straightforward. Not all students will process or understand learning opportunities in the same manner. Therefore,

students should not be subjected to the same activities, events, training programs, and interventions in the same manner. However, to know what will work best with each student, their learning styles need to be determined.

In a time when student affairs divisions are being charged with responsibility for students' holistic development, it is imperative that recreational sports departments identify specific educational and developmental outcomes, which support their contribution to student learning. Noeldner (2001) performed a study to determine if evidence existed that recreational sports involvement affects student learning and personal development along Chickering and Reisser's (1993) vectors. She found that evidence did exist and that "purposefully designed programs may impact the development toward intended outcomes" (p.3). Noeldner emphasized that there is a lack of research that indicates that involvement in campus recreation programs fosters achievement of specific educational outcomes. It was therefore necessary for recreational sports professionals "to identify the particular personal development and learning objectives they deem significant as a result of participation in intramural sports or other recreational activities" (p.3). In addition, these same developmental outcomes can be used purposefully to structure programs and services, which can then be evaluated and assessed based on the established intent and objectives.

The third area of research that has been performed has to do with linking recreational sports to the educational mission of institutions. This topic occasionally uses student employees as a means to demonstrate learning and educational opportunity. Belch, Gebel, and Maas (2001) indicate that for years collegiate recreational sport administrators have maintained that student participation in recreational sport and fitness programs contributes to the learning, development, and persistence of college students. However, they are also quick to point out that these

contentions lack substance due to limited research. Because of this, they claim, "the contribution of recreational sports programs to the core educational mission of institutions of higher education has been misunderstood and undervalued." (p.255). Nesbitt (1998) suggests that recreational sports departments develop programs to be more conducive to social-emotional development to enhance the college careers of our students. He claims that this would justify the financial needs of recreational sports programs and support the educational mission of institutions to develop students holistically. Even the CAS Standards (2001) indicate that one of the tenets of recreational sports mission statements is to be a "medium through which students can learn and practice leadership, management, program planning and interpersonal skills" (p. 145).

Schuh (2001) performed a study that links educational purpose to the outcomes, by interviewing a number of recreational sports student officials. The study was to determine if intramural officiating contributed to student growth and development. He stated that to date, "research on the topic appears to be non-existent." (p.51). The students found their experiences to be very important in their growth, development and learning. They began their work as an official for economic reasons or to stay close to sports, they reported that they developed a variety of skills from this experience, including improving their communication skills, becoming more self-confident and self-reliant, working better as a member of a team, and understanding how to handle difficult situations more effectively. The officials discussed how much they learned in their training programs and how this experience transferred to the classroom. One student described how he takes a leadership role in his classes now because of his improved self-confidence. This study can be used also to demonstrate how intramural sports programs contribute to the educational mission of the campus. The benefit of this research is that as campuses hold various programs and services accountable for their contribution to student

learning. This reinforces how valuable students find their officiating experience from a growth, development and learning perspective (Schuh, 2001).

The article by Schuh outlines a number of issues applicable to both determining learning styles of students and paraprofessional staff training. For instance, the students discussed how staff training utilized a number of modes to deliver the skills necessary to succeed as an official. One student remarked that he learned more on the court practicing his mechanics and positioning than he did in the classroom discussing them. Another official indicated he studied his rulebook because he learned the rules by reading about them (2001). These are examples of how the recreational sports staff, either consciously or subconsciously, catered to different ways of learning. This also indicates that training needs to be comprehensive; that conflict resolution skills become important when dealing with players, for example.

It is important to recognize that any educational function which student affairs departments perform can be rendered more accessible to a diverse student clientele if learning styles are addressed. The educational function could include training certainly.

According to Evans, et al., (1998) undergraduate staff training represents an area where learning style information can be useful. Frequently administrative staff conduct training sessions with the assumption that everyone has the same style of learning. There is often no connection being made between the lectured information and on the job experience. There is a tendency is to teach the nuts and bolts without allowing for the exploration of abstract concepts. This “reinforces the stereotype of student affairs professionals being doers more than thinkers” (Winston & McCaffrey, 1983). Evans, et al., (1998) call for student affairs professionals to provide work environments that both challenge and support a diverse group of individuals stating that these opportunities are paramount to attracting and retaining a diverse staff.

Learning style information can assist us in providing support by demonstrating our understanding, fostering feelings of connectedness, and building on individual strengths.

“Learning style information can assist us in providing challenge by supplying developmental mismatches to aid in overcoming weaknesses and by helping individuals to value differences in others” (Evans et al., p.223).

### Chapter Summary

This study is intended to address an existing gap in the literature regarding student learning in the cocurriculum and the ability of Recreational Sports to impact that learning. The Student Learning Imperative (ACPA, 1994) clearly calls for educators to design intentional learning opportunities. Paraprofessional staff training is an obvious learning opportunity because students are engaged in the process. However, little has been discussed about this subject.

Learning styles are important to understand how best to train paraprofessional staff due to stress placed on the positive attributes of each individual student and by structuring the learning environment to be inclusive. This allows students to be accepted for how they learn and encourage understanding of how to challenge their own personal growth and their ability to work effectively with others.

## CHAPTER 3

### METHODOLOGY

This research study utilized a mixed method design involving both quantitative and qualitative methodologies. There are benefits and limitations in using either of these methods separately. It was expected that by using a mixed method the study would have a greater level of statistical power and legitimacy. More importantly however, it was hoped that the end result, from employing a mixed method design, would be a more complete study where the voices of the participants were used to explain statistical results.

#### Quantitative Method

##### *Participants*

The study took place at a research intensive institution in the southeastern United States with approximately 30,000 students. One particular paraprofessional staff of the Department of Recreational Sports was identified because of its size and availability to the researcher. A convenience sample of 72 students comprising a mix of males and females, sophomores through graduate students, various ethnicities, and both returning and new employees was used. Fifty-six students chose to participate in all parts of the study. The number of participants exceeded what was required to achieve statistical power.

All sampled students were given the option to participate in this study, however, since this study occurred during staff training for the fall semester of 2003, regardless of the choice to participate the students were required to attend staff training. Therefore, the paraprofessional

staff members who chose not to participate were still exposed to the study through their involvement in the mandatory staff training.

### *Instrumentation*

Each participant received an employee packet during the summer of 2003 that included the revised Learning-Style Inventory (LSI) (Kolb, 1993), the pretest of the Job Knowledge Test (Appendix A), a welcome back letter by professional staff, a letter of introduction to the study (Appendix B), and a consent form (Appendix C).

**Learning Style Inventory.** The LSI was originally developed to measure a predominate learning style and to “indicate the extent to which one emphasizes action over reflection and abstractness over concreteness when responding to a learning situation (Veres, 1991). The LSI is a 12-statement inventory that asks users to rank order four potential endings to the statements according to how well each one fits how he/she learns, 4 representing how the individual learns best and 1 representing the sentence ending that seems least like the way he/she learns. For example, “I learn best when” is a sample statement. The four options to choose as a response are; (a) I rely on my observations, (b) I rely on my feelings, (c) I can try things out for myself, or (d) I rely on my ideas. The responses are indicative of Kolb’s four learning modes: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). The LSI is scored by adding the sentence completion scores together to determine a raw score for the four subscales scores. The difference between AE and RO determines the propensity to either do or watch and the difference between AC and CE indicates the propensity to either think or feel. These differences can be plotted on a graph with each quadrant representing Divergers (CE and RO), Assimilators (RO and AC), Convergents (AC and AE) and Accommodators (AE and CE).

The LSI was revised in 1985 in response to criticism concerning reliability, validity, construction and scoring (Veres, 1991). The most recent version of the LSI (Kolb 1993) indicates test-retest indices ranging from .92 to .97. Internal consistency reliability (coefficient alpha) of the latest LSI has been measured in the range of .52 to .71 (Veres, 1991). Veres found that LSI takers were unlikely to change learning style classification from one administration of the LSI to another (kappa coefficients were .81 from time 1 to time 2).

It is interesting to note that critics of the original LSI found through their own research experiment that the revised LSI was sufficiently psychometrically sound to be useful to researchers, educators and practitioners (Veres, 1991). In this study the LSI was used as a means to investigate whether an intentionally designed training program would have an impact on job knowledge.

**Job Knowledge Test.** The Job Knowledge Test (see Appendix A) was designed by the researcher in conjunction with the administrative staff member responsible for the training of this particular paraprofessional staff. This test measured the acquisition of content knowledge as a result of staff training. The test included thirty fill in the blank questions that required participants to respond to scenario-type questions, policy questions and general knowledge questions. The variety of the questions required varying degrees of reflection as well as responses to memorized material. The thirty questions were designed to refer to one of the four subscales. Fifteen of the questions were intended to measure knowledge acquired through the abstract conceptualization module, 5 through the concrete experience module, 5 through the reflective observation module and 5 through the active experimentation module. Participants were asked to take the same Job Knowledge Test twice, once before staff training occurred, and once the day of staff training. The control group took the second test before training occurred.

Therefore, for the sake of the study, those in the control group were effectively non-participants. The experimental group took the second test as the last exercise of training. For the experimental group, taking the test the day of training meant that on the job learning would not skew the results. Both the control and experimental groups took the Job Knowledge Test twice. Time 1 was in the month of July. Time 2 for the control group was in the morning of the training day, before training began. Time 2 for the experimental group was in the afternoon of training, after training occurred. Therefore the control group was considered throughout the data analysis as the non-treatment group, even though they actually received the same training (treatment) as the experimental group. The use of the term “control” is not intended to be misleading. This group is necessary to the study as it serves as a comparison to the experimental group and could be called the “comparison” group or “alternative” group. However, the researcher decided that “control” is a common term representing the group not receiving the treatment and to which to compare results.

Both the researcher and a third party scored the Job Knowledge Test. The researcher developed an answer key to score the Job Knowledge Test for consistent scoring of the more subjective responses. The responses were labeled either correct or incorrect and one point was assigned for each correct response. The correct answers were added together to give the participant a final performance score out of a possible thirty points.

### *Procedure*

During mid July 2003, 72 undergraduate student employees from the Department of Recreational Sports of a large, doctoral extensive institution in the southeastern United States were mailed their Fall 2003 employee packet. Included in the packet was a Fall semester work availability schedule, a staff training schedule of events, a pretest staff training Job Knowledge

Test that evaluated content knowledge, a consent form, and the LSI. The paraprofessional staff were asked to return the information by the end of the first week in August 2003 so the researcher could score the LSI before training occurred. Participation in the research study was optional, however all employees were required to participate in staff training. Sixty-two staff members arrived for training, 56 of which chose to participate in the study.

**Grouping.** A stratified random sampling method was used to increase the possibility that the sample would be representative of the population from which the participants came (Huck, 2000). The researcher separated participants into two groups, returning and new staff members. These participants were randomly selected for the control and the experimental group so there was an equal number of returning and new staff members in each. The researcher then considered the learning styles of the participants in each of the two groups. For example, the researcher intended to have a similar number of Divergers in the two groups. Therefore, some of the participants were switched to even out the number of participants of each of the four learning styles. The result was to be two groups that looked relatively similar according to learning styles and length of employment. Also, the control group had to include any non-participants of the study. It is significant to note that even though the control group received training through the same method of as the experimental group for practical purposes, the control group did not receive the treatment because the Job Knowledge Test was administered to them before training occurred. The control group's responses to the second Job Knowledge Test were not influenced by the training experience.

**Design of Staff Training.** Staff training occurred in mid-August, immediately prior to the beginning of the Fall 2003 school year. Training was scheduled to last four hours. All participants received an intentionally designed staff training program based on the four learning

styles outlined by Kolb (1984) that consider time to reflect (watching), small group discussion (thinking), active participation (doing) and practical application (feeling). It was important to involve all four learning styles in the training design because, as Evans, et al., (1998) state “in constructing short-term learning experiences such as a one-shot program, providing connections for all learning styles is important so that learning can occur relatively quickly” (p.223).

There were four topics, or modules, included in staff training so that each learning style was used as a means of delivering the content of a module. The participants in the experimental group were exposed to one module that supported their preferred learning style and three modules that challenged them to learn through a nondominant style. This allowed the researcher to compare how participants scored on the sections testing the content related to their dominant style versus their nondominant style. For example, it was hypothesized that reflective observers would score better than the other three styles in the module delivered through a watching style.

Smith & Kolb (as cited in Evans, et al., 1998) provided examples of preferred learning situations for those with strengths in each of the four components of the learning cycle. For example, those with strengths in concrete experience would value methods such as games, role plays, peer discussion and feedback, and personalized counseling; students strong in reflective observation would value lectures, observing, seeing different perspectives, and tests of their knowledge; individuals who favor abstract conceptualization would value theory readings, working alone, and well-organized presentations of ideas; and those inclined toward active experimentation would value opportunities to practice with feedback, small group discussions, and individualized learning activities. Therefore, these learning delivery opportunities were used throughout staff training to ensure that participants were exposed to both the preferred and

secondary methods of learning thus promoting the contention that learning occurs best when exposed to both a supportive and challenging environment.

The first learning module, geared for active experimentation (doing) that both Accommodators and Convergents prefer, was held in the volleyball arena where participants were asked to set up both badminton and volleyball nets. The facilitator discussed issues of setting up facilities while participants were involved in the task.

The second module designed with concrete experience (feeling) in mind, asked participants in small groups how they would respond to specifically designed scenarios that required a response about how they would feel in these situations. Accommodators and Divergers should have preferred this type of module.

The third module took reflective observation (watching) into account. The participants had to watch the facilitator complete a series of tasks centered on performing their duties at the front desk of the facility. Very little interaction occurred beyond watching. Divergers and Assimilators should have responded well to this type of module.

The fourth module was a lecture format that allowed participants time to think about the material being given. The material came from the training manual and discussed policies and procedures within the facility. This module was designed to take abstract conceptualization (thinking) into account and should have been preferred by Convergents and Assimilators.

#### *Data Analysis*

Nonparametric statistics were required to analyze the data for this study. The term “nonparametric” is a label for test procedures that involve ranked data (Huck, 2000). The use of nonparametrics was necessary because the sample sizes of the experimental and control groups

were both small and they differed in number (Huck, 2000). Therefore assumptions of normality and homogeneity of variance within the population were violated.

There are a number of nonparametric statistics available. In this study both Research Question 1 and Research Question 2 was investigated by using the Mann-Whitney U Test. This test determines whether or not two population distributions are identical (Weinberg & Abromowitz, 2002). The Mann-Whitney U Test is the nonparametric analogue to the two independent samples t test for differences in means.

The researcher determined the difference in the posttest and pretest scores on the Job Knowledge Test. Initially the two comparison groups were lumped together so that each participant was ranked to reflect his/her standing within the combined group. After the ranks were assigned, the researcher reconstituted the two groups (Huck, 2000). Once the participants were separated, the sum of the ranks was determined for the two groups. The null hypothesis would assume that the sum of the ranks for one group is similar to the sum of the ranks for the second group (Huck, 2000). The sums of the ranks value for the two groups were placed in a formula that produced a calculated value U (Weinberg & Abromowitz, 2002). Based on the value of U, the researcher determined a p value indicating how likely the two groups differed. Small values of p indicated that the null hypothesis was unlikely to be true (Huck, 2000). The alpha level was set at .05 for all statistics performed.

In addition to the Mann-Whitney U Test, independent samples t tests were used in both research questions to support the findings from the nonparametric statistics.

## Qualitative Method

### *Participants*

From both the control group and the experimental group, four students were randomly selected from their learning style category to participate in a one-hour interview. There were a total of eight participants with two representatives from each of the four learning styles. Seven men and one woman participated in the interviews. Of the eight participants, two were new staff members, four had just been promoted to managerial positions, and two had been managerial staff members for more than four semesters.

### *Instrumentation*

In the case of qualitative research, the researcher plays the role of the instrument because it is through the researcher's unique lens that the data is filtered. However, in this study an interview guide (see Appendix D) was developed to ensure the limited interview time is used to appropriately address specific topics. The value of an interview guide is to give the interviewer freedom to build a conversation around a predetermined subject (Patton, 2002). The guide helped to make sure the researcher had each participant respond to the same questions. This aids the process of analyzing the data (Patton, 2002). In this case the interview guide was intended to ask participants about their feelings about the value of staff training, how they learned the information presented, what learning modules were most comfortable to them and why. These interviews answered important questions concerning the need of training, whether or not paraprofessional staff develop either cognitively or affectively through the training design, and if, in the opinion of the participants, varied delivery styles enhanced learning.

### *Procedure*

Those participating in the interview portion of the study were asked to spend an hour with the interviewer responding to predetermined questions and probes regarding their experiences during staff training and their opinions regarding their own learning. The interviews were all held within one month of the training so as to gather the most accurate responses possible. Also, the participants were asked if they could be contacted should follow up questions become necessary.

### *Data Analysis*

The interviews were transcribed and analyzed using content analysis. As Patton (2002) states, “content analysis refers to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (p. 453). These “core consistencies” were identified by searching for themes and patterns through an open coding system that allowed for discrete concepts to be recognized (Merriam, 2002). As the data was sorted by response to each of the interview questions themes, representative of the voices of participants, emerged in topical form (Patton, 2002). These themes running through all of the interviews were documented and analyzed. Also member checks, where the subject read through the transcript, were used to confirm accuracy of the transcription process.

### *Subjectivity Statement*

It is important to note that I have self-identified according to the Learning Style Inventory (Kolb, 1993) as an Accommodator. Therefore, I take in information usually through feeling and I make meaning of the information by doing. I am most comfortable in learning environments that allow me opportunities to practice, involve games, feedback and peer discussion.

Accommodators are good at implementing plans, are risk takers, are action oriented and frequently do activity for the sake of being busy (Kolb, 1984).

I am interested in examining individual differences in how people view and relate to their world. Reality is much more complex and meaning making is bounded by context, society and situations. I am trying to understand, in this study, how students make meaning of information to which they have been exposed and the value of that exposure to the individual and to the group. I want to know if all participants gained something from their experience, having some sense of equal access to this particular learning opportunity, or are some students marginalized through the staff training process. This is why it is important that the training experience and the testing process involve all four learning styles. It is important to me not to privilege one set of learners over the others.

I value the inherent benefit in exposing oneself to new and various experiences. I view these as learning opportunities and am therefore a proponent of experiential learning. The tenets of challenge, support and choice so often espoused by experiential theorists have true meaning for me. My goal is to understand the cross points of learning style theory, student development and experiential learning. Through these three lenses I hope eventually to affect a change in how Student Affairs functional units, including Recreational Sports, view the paraprofessional training process.

## CHAPTER 4

### RESULTS

This chapter details both the quantitative and qualitative results of this study using data collected by the Job Knowledge Test, the Learning Style Inventory (LSI) (Kolb, 1993) and participant interviews. Quantitative data responding to each of the research questions are presented first, followed by significant responses and themes found in the qualitative data.

#### Results of Quantitative Data Analysis

Of the 72 paraprofessionals who received the packet of information during the summer of 2003, 60 (96.8%) chose to participate. However 4 participants were absent from the training and did not complete the second Job Knowledge Test. These four participants were all assigned to the control group, so the end result was a total of 30 (53.6%) participants in the experimental group and 26 (46.4%) participants in the control group.

Participants varied in gender, age, class standing, major and semesters employed. Twenty-seven (48.2%) of participants were male, 29 (51.8%) female. Ages ranged from 19 to 28 years old, Mean = 21.5. Eighteen of the participants were 21 years old and 18 of the participants were 22 years old. The majority of the participants are fourth year students (33, 58.9%) with no first year students in the sample. Participants self identified in a variety of majors representative of all the colleges on campus. Only four participants self identified in majors related to exercise science. Participants also were asked how many semesters they had held a position with the Department of Recreational Sports. Answers varied from 0 to 8 with a mean of 2.62. Seventeen (34.4%) students indicated they were new employees.

Participants had a variety of learning styles. According to their LSI scores, 20 (35.7%) of participants were Accommodators, 8 (14.3%) were Divergers, 12 (21.4%) were Assimilators, and 16 (28.6%) were Convergents. The frequency and percentages of learning styles found within the experimental and control groups is reported in Table 1. It was found that the control and experimental group were very similar according to the learning style subgroups.

Table 1

*Frequency of Learning Styles Found in Groups*

Group		Frequency	Percentage
Control	Accommodator	9	34.6
	Diverger	4	15.4
	Assimilator	5	19.2
	Converger	8	30.8
	Total	26	
Experimental	Accommodator	11	36.7
	Diverger	4	13.3
	Assimilator	7	23.3
	Converger	8	26.7
	Total	30	

### *Research Question 1*

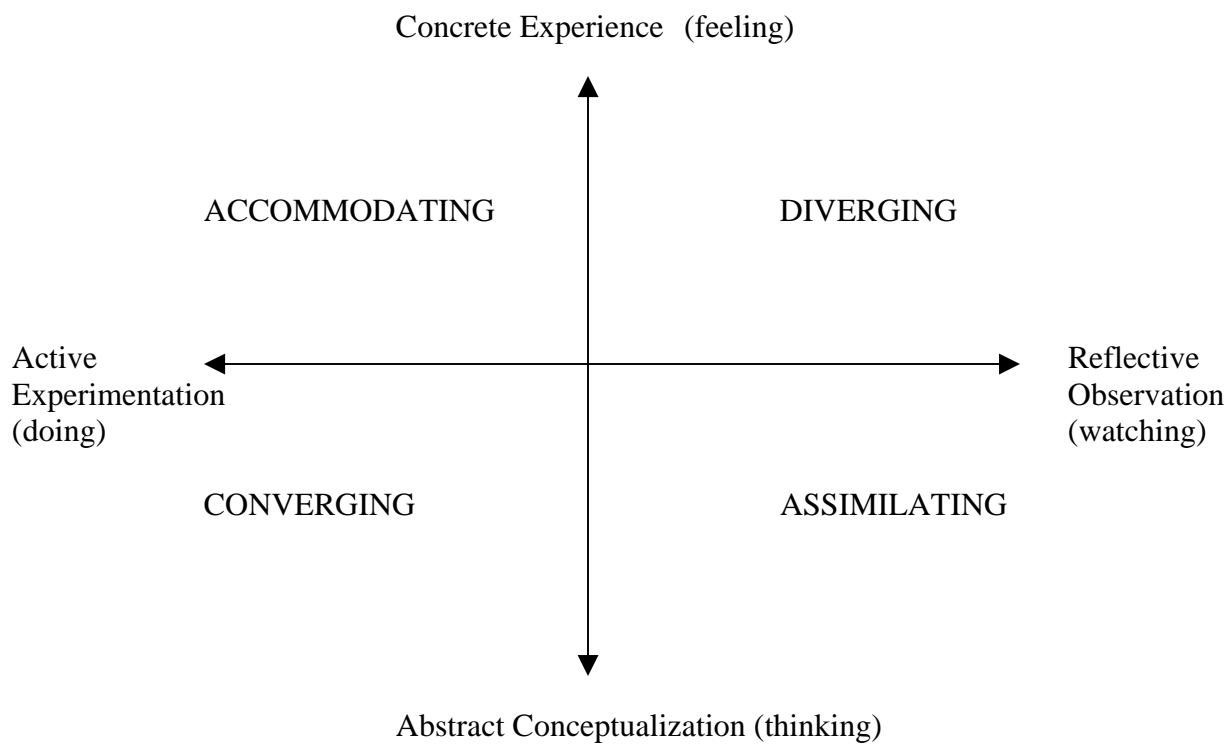
The first research question asked how Recreational Sports professionals could affect the learning and development of college students by incorporating learning styles into paraprofessional staff training. It was hypothesized that the training experience would affect the learning of the participants. First of all, there was no significant difference found between the control ( $M = 12.15$ ) and experimental ( $M = 12.93$ ) groups based on scores from the pretest data (Mann-Whitney  $U = 362.00$ ,  $p < .05$ ). Mann-Whitney U Test was used to compare the difference in learning, pre- and post training, for the participants in the control and experimental groups. For the test data, there was a significant difference found between the pre and posttest scores of the two groups with the mean rank of the experimental group ( $M = 38.83$ ) higher than that of the control group ( $M = 16.58$ ) (Mann-Whitney  $U = 80.00$ ,  $p < .05$ ). Thus, it seemed reasonable to believe that those trained would perform better in terms of job knowledge than those not trained.

### *Research Question 2*

The second research question asked whether considering learning styles into paraprofessional training would improve job knowledge. Tests were run between pairs of groups for each of the learning modules, those that should have preferred the module and those that should not have, to evaluate if one group performed differently than the other on a particular part of the Job Knowledge Test. See Diagram 1 for a description of preferences of learning based on learning style. For example, for the concrete experience module, Divergers and Accommodators should prefer the learning style addressed in that module.

Figure 1

*Learning Module Preferences Based on Learning Style (Adapted from Kolb, 1993)*



Therefore the performance of Divergers and Accommodators on the pre and posttests was compared to that of the Convergents and Assimilators. No significant results were found for any of the four modules. Independent samples t tests performed on the pairs of groups for the four modules reiterated this finding.

The groups were further delineated based on their preferences for the learning module. Each one of the two styles that preferred a certain learning module was examined individually. For example, as mentioned above, Divergers and Accommodators should have preferred the concrete experience module. Each of these learners was treated separately in this second stage of Research Question 2. Therefore, 8 smaller preference categories existed. To evaluate the learning from the concrete experience module, Accommodators were considered one group while the other three learning styles were the second group. Then, Divergers were considered one group while the other three learning styles comprised the second group again considering learning from the concrete experience module. This delineation occurred for the four modules between those preferring that module. Thus the 8 smaller preference categories. Of those 8 only two categories were found to have significant differences. Within the concrete experience module, Accommodators were found to have performed better pre-posttest ( $M = .636$ ,  $SD = 1.567$ ) than the other three learning styles ( $M = 1.68$ ,  $SD = 1.376$ , Mann-Whitney  $U = 56.50$ ,  $p < .05$ ). Also, within the active experimentation module, Accommodators were found to have performed better pre-posttest ( $M = -.181$ ,  $SD = 1.168$ ) than the other three learning styles ( $M = .895$ ,  $SD = 1.29$ , Mann-Whitney  $U = 47.00$ ,  $p < .05$ ). None of the other six sub groups based on preference had any significant differences. T tests were used to confirm these findings.

## Results of Qualitative Data Analysis

A one-hour qualitative interview was conducted with a randomly selected representative of each of the learning styles from both the control and experimental groups. All eight participants were asked questions from the same interview protocol (see Appendix D). There were 7 males and 1 female interviewed. Two were new employees and 6 were returning staff. Five had managerial responsibilities. Louisa, an Accommodator, Eddie, a Converger, Paublo, a Diverger, and Glen, an Assimilator were from the experimental group while John, an Accommodator, Nick, a Converger, Horace, a Diverger, and Conrad, an Assimilator were from the control group.

### *Research Question 1*

There were a number of questions from the interview protocol that answered the question of how recreational sports professionals can affect the learning and development of college students by utilizing a staff training program that incorporates learning styles. To report these findings, the data will be presented by discussing the questions from the interview protocol that investigated Research Question 1.

**What did you learn from training?** There were varied responses to this question. Some participants indicated they learned some information while others stated they learned nothing at all. Eddie, a Converger, stated that he “learned quite a bit... I mean I have only been working here for three months so a lot of the information in terms of people in this department that I should know and emergency procedures and that kind of stuff that was all really good information to have.” While Nick, an Assimilator, represents the majority of the interviewees when he stated “as for my job, I kind of knew, because I have been here so long, but um, no not really. I didn’t learn anything totally new.”

This open-ended question was intended to allow for responses indicative of learning other than information specific to job function, however, even with probing, it elicited little information. Paublo, a Diverger was the only one to respond that he learned something unrelated to the actual job. He stated, "I learned like different types of ways people think from you."

**What was the value of this training experience?** There were widely varying responses to this question. A couple responded that the value of training lay in finding out their learning style (Nick, an Assimilator, Eddie, a Converger). Some felt that training was positive, but that it mostly reiterated what was either obvious or had previously been learned. (John, an Accommodator, Louisa, an Accommodator, Conrad, an Assimilator).

John, an Accommodator, saw the value of training as being involved and active. He stated, "to actual do something. That would be the main thing. And like, I know that people have different learning styles and everything, but on the job, like a lot of people, like since this is such a practical job then I think it would benefit everybody."

One of the widely held opinions stated in this response was that most of the skills required to perform the job were learned while working, not actually in training (John, an Accommodator, Louisa, an Accommodator, Paublo, a Diverger). The following exchange about the training experience between Paublo and the researcher demonstrated this:

I think it was very helpful going through each of the stations for the new people. It was a good, definitely a better idea that what we have done...just talk about it and learn on the fly how to do it.

**Have you noticed its been valuable?**

It is valuable, but granted its still the best training is just to be there the first day and see what you have to do.

**Has knowing your learning style been beneficial to you?** All of the participants claimed that knowing their learning style has been beneficial. Most of them felt that their learning style designation described them accurately and that they felt justified in how they approached learning. Many of them thought about the benefits of being able to adapt to other ways of learning. The comments made by Louisa, an Accommodator, represented the responses to this question.

I think if nothing else it might bring to attention for people okay this is what she said I was, lets see if this is what I really enjoy. And if people had never heard that before, it might make them realize oh my gosh I do actually learn better like that it would be better for me to try to do this and my study habits or whatever. Because when I got to that point I was like, hum, this is what [the researcher] said I was and I learn like this.

I felt like it was pretty much on, but I think that I am the kind of person too that likes to adapt even more so, and so, it just depends on the situation and I think I have learned that in beginning I was a whole lot more like the learning style you gave me, but I have learned that you gave me, but I have learned that

it doesn't always work that way so I have tried to adapt to others ways.

### *Research Question 2*

The second research question was intended to determine if incorporating learning styles into paraprofessional training would improve job knowledge. Those interviewed were asked a number of questions to investigate the hypothesis that learners would perform better in modules of their preference.

**What module of training did you like best and why?** The responses to this question indicated that only two of the four modules were considered the best. However, the responses varied somewhat as to why the two modules were better than the others. The two Accommodators and the two Convergents preferred the active experimentation module, the set-up station. Louisa, an Accommodator stated, "the fact that [facilitator of active experimentation module] actually having set up the volleyball was good because it was hands on, like somebody could tell me all day long how to do something, but if I can touch it and try it, then I learn it better".

The two Divergers and the two Assimilators preferred the concrete experience module where scenarios were used to discuss learning through internalizing responses to situations. However, they preferred that module for different reasons. The responses to this question from Horace, a Diverger, and Conrad, an Assimilator are indicative of the value these paraprofessionals saw in this module.

I liked the check out things [the concrete experience module]  
just cause we get to know real scenarios and how you would handle  
it if it would happen.

**How did [the facilitator]...how did that work? Did he give you a bunch of scenarios and you guys talked through them, or did you do it as a group?**

Um...he gave us situations and I guess that was kind of the how you feel session down there, but I think it was important because if someone doesn't have their ID and you are trying to enforce the rules and they get upset with you there are feelings there. And that's in the heat of the moment that is hard to know what you are going to do. The right thing to do is to follow the rules, but the easy thing to do is to cave into an angry person so you don't have to deal with them... Get like actually sitting and talking about that is going to be a more effective training tool than just saying make them use their ID because then that's not going to work. Make them think about how they are going to react in a real life situation. (Horace, a Diverger)

The one I remember most vividly was downstairs in equipment checkout. That is the one that stands out the most where [the facilitator] was um, telling us something. I think the scenarios were a pretty good way of learning. (Conrad, an Assimilator)

**What module did you like least? Why?** The participants had a more varied response to this question than the last. Pablo, a Diverger, believed there was value from all the modules, "they all helped. Certain people got helped at each station." However, the other paraprofessionals did not have difficulty identifying a least liked module. Louisa, an

Accommodator, did not enjoy the reflective observation module because she believed there “was too much information to be done that fast”. Nick agreed with Louisa when he stated “we were just sitting there looking at stuff and [the facilitator] just said this is that and that is this”. Both John, an Accommodator, and Eddie a Converger, did not like the concrete experience station because “it didn’t seem like [the facilitator] was actually trying to teach us anything.” (John, an Accommodator). Also, Eddie felt negatively towards a lecture format, the abstract conceptualization module, because “if there are no immediate consequences or immediate...no one is going to pay attention to a lecture”.

**How does knowing your learning style help you with your job?** Responses to this question varied widely. While all of the of the participants felt there would be some benefit, they differed on what the benefit would be. The following quotes provide insight into this variance:

Oh absolutely. Um...because even though most of our job is doing, like setting up a volleyball net, or whatever. I mean there are certain things that you can tell a person that is new or whoever, you can tell them and it doesn’t always sink in and then a lot of that has to do with how learn. Until they have actually done it then they don’t know how to do it.

(Eddie, a Converger)

I can see how it, like, it can, like working with others, it can be helpful or pose a problem. I saw it yesterday in the building manager meeting. One of our building managers is incredibly stubborn, just going off, and I couldn’t believe it. How can you

not see other people's ideas. Like, its beyond me. To not even just listen. I can see how this, especially in our meetings.

(Paublo, a Diverger)

Yeah. Um...I mean to me it's a pretty simple matter.

Everybody's got their own unique style and studying that and corresponding what you do with it is going to help I think.

Kind of a no-brainer to me. It would be a help for...someone like [his supervisor] to know his staff and get a read how people learn best and could help him just, not just in training, but with daily things that happen here. A big part of being a manager is not just telling people how to do something, it is managing their personalities and keeping people, you know, focused and happy in their job and if you know what pleases them the most that makes it a lot easier. (Horace, a Diverger)

Probably more so for the new people. Like if the trainers knew what type of learner they were and applied it to their training it would be a lot better for the new people. (Nick, an Assimilator)

Yeah I can. We were talking about something similar in one of my marketing classes. We did like a personality analysis or whatever. I think it is important to understand the way

somebody learns something and take advantage of that. Because they are going to learn it better if you understand the way they interpret information and keep that in mind. (Conrad, an Assimilator)

Yeah especially if they gave feedback on how it could help them because even though you know someone is a watcher as far as learning style you won't necessarily know how they need to watch or see. You don't know if they actually need to watch an example or watch somebody actually just discussing it with somebody else. And so, I think just knowing it can actually mostly help if the person gives feedback.

(John, an Accomodator, about knowing the learning styles of your peers).

**What have you learned from training that has helped you perform your job better?**

While the responses to this question were different, all 8 participants felt that the format, intentionally designed to involve learning styles, was more effective than other types of training to which they had been exposed. Only one participant felt that training does not impact his performance. "You know me. I am just going to do the same exact things I have always done. I will be stubborn about that. I can't really remember that much". (Paublo, a Diverger)

The following quotes indicate the general opinions about this particular training and its affect on job performance:

We don't even have a training system set up and very often people just show up and say this is my first building manager shift I have no idea what I am doing. Yeah. Especially I have

done it every semester since I have become a building manager and even I don't know everything. We have the manuals, but no one is gonna want to sit down and read a manual just full of little details. (John, an Accomodator).

Yeah. I mean, I definitely...if we are asked to do something I always want to know why? Why are we doing it? Why is this person not doing it? Why should we be doing it? I don't know. If someone asks me to do something I usually like to know the whole thing behind it. I don't usually just run out and do it and not question...and then, um...I guess...I don't know...

(Glen, a Converger)

Yeah. Because I think before we just always sat in the classroom so getting them out there and getting some hands on experience or some kind of going through scenarios we didn't do that before. And it definitely almost required you to take more of an active part in what's going on than just sitting and listening where you might tune it out. You are definitely going to pay more attention if you know you might get called out to do something. (Horace, a Diverger)

### *Themes*

The 8 interviews were analyzed for commonalities. The data indicated four major themes: reaction to their learning style category; confidence instilled through training about the job; need for continual training; and impact of exposure to other ways of learning.

**Theme 1: Reaction to the learning style category.** All 8 participants felt their learning style category was an accurate depiction of the way they learn.

Yeah. I was fell right in between accommodator and converger.

To me that seems pretty accurate. (Eddie, a Converger)

Oh yeah. Definitely it made sense. (Horace, a Diverger)

It was interesting to find out what I was or tend to be. Because I didn't think I was that at all until I started thinking about it and watching how I learn. (Paublo, a Diverger)

For John, an Accomodator, it justified how he learns. He states:

Yes. I think the biggest thing is actually that it doesn't make me feel bad about being like that anymore. Sometimes, like, I felt bad about having to take things apart and do that. Cause especially people around me who aren't like that it frustrated them. The instructions are right there. Yeah but you aren't going to understand it if you just follow instructions. And so,

that is always how I have done it. It just works better for me and I learn it on a more permanent basis.

**Theme 2: Confidence about the job instilled through training.** The second theme found in the data dealt with feelings of confidence that the training provided the paraprofessional staff in regards to their job responsibilities and the choices they have to make in situations. The following comments illustrated this:

I think just knowing...like being more competent...like not having another co-worker, but people in charge tell me that this is what you are supposed to do. Probably that more than anything. That and the fact of going into the volleyball arena and actually having to set everything up. And that is just where I have actually had to set stuff up now. And that has helped me know that the badminton is set up the right way. So, um, but I guess more so that it is not coming from another co-worker who might be wrong too or has their own way of doing it, but that there was someone in authority over us that can show us that we tell the patrons the right thing and that we handle situations as we should. (Louisa, an Accomodator)

I think I learned a couple of new things, but most of it was reinforcement of what I am supposed to know and just taught me again how I should handle situations and what my

responsibilities are and what other people responsibilities are. (Glen, a Converger)

**Theme 3: Need for continual training.** The third theme found in the data spoke to the need for frequent opportunities for knowledge about the job to be reiterated and reinforced. The 8 participants commented on the need to be reminded of how to perform job tasks. The theme is illustrated in the following quotes:

I think over time some of the things that you don't see from day to day kind of slip to the back of your mind and you just bring them to the front and you become aware of them again and it helps to be reminded. I think just meeting and talking about the issues that have come up or whatever and more people have been falling behind or slacking. Just bringing to everybody's attention that we do expect a certain level of performance or whatever, we need to pay more attention to this. The frequency would help. (Conrad, Assimilator)

I think we just need trainings a couple of times because certain people just miss things. Like its come up recently someone said they were set up and they said they didn't know they had to wash towels and something like that is one of the main, one of the main descriptions of the job. (Glen, a Converger)

**Theme 4: Impact of being exposed to other ways of learning.** The fourth theme found within the data involved the reaction the participants had to being exposed to learning styles,

more specifically, that there are different ways to learn. The participants spoke about this theme both internally, how they learn versus others, and externally, how this applies to a job or classroom setting. The following quotes demonstrated these two perspectives:

I liked the lecture where we found about the different learning styles and how people learn. That was my favorite part because it seems applicable not only for the job that now that I am a manager trying to train other people to do their job, but because I want to be a teacher. It was very applicable and interesting. Um...I would just say that I have always viewed teachers from my learning perspective and if they didn't teach to my learning perspective then I didn't learn as much and I didn't find them as interesting. When in actuality they are probably just teaching they way they like to learn the best so I guess as a teacher I would try to mix it up so I try to hit each kid at least some point in the semester how they learn best how they view learning and how they like to learn. (Eddie, a Converger).

But just because that person is a Converger and I am a Converger doesn't mean I shouldn't try and at least somewhat be another style just to fit the situation because I mean life's not simple. You can't expect everything to go in the path that it's going

and everyone to act the same. You gotta have some sort of difference in people or it just wouldn't work as well. (Glen, a Converger)

A big part of being a manager is not just telling people how to do something, it is managing their personalities and keeping people, you know, focused and happy in their job and if you know what pleases them the most that makes it a lot easier.

And...you know when I was teaching... after several weeks...

I had a hundred kids, but everyone of them I could tell you how they best learn because you just see it if you use a variety of techniques it comes out in a repeated pattern. (Horace, a Diverger)

Well yeah, I am pretty sure there are people like me that didn't know like different types...I mean I know they can learn different ways, but I guess the titles for them or the traits are for each person. So I guess, I don't know, it is pretty valuable for them to know that. Probably more so for the new people. Like if the trainers knew what type of learner they were and applied it to their training it would be a lot better for the new people.

(Nick, an Assimilator)

### Chapter Summary

With the data from the 56 participants analyses were conducted using the Mann-Whitney U Test. There was a significant difference found in terms of job knowledge, however no

significant results were found when comparing the outcomes of the four learning modules in regards to learning preferences except for the two categories where Accommodators were separated from the other learning styles. From those 56 participants, 8 were selected for one-hour qualitative interviews. The interview data spoke to the questions being researched and four themes were identified: reaction to learning style category, confidence about the job instilled through training, need for continual training, and impact of being exposed to other ways of learning. A discussion of the results follows in Chapter 5.

## CHAPTER 5

### CONCLUSION

This chapter includes an overall summary of the study, a summary of significant research findings, and a discussion of the meaning of those findings. Implications for current professional practice are presented to aid practitioners in the quest to affect the learning of students. Finally, implications for further research are shared.

#### Summary of the Study

The purpose of this study was to identify whether staff training could be a means by which Recreational Sports professionals could affect the learning and development of college students as well as to investigate the impact on job performance of a training program that accounted for learning styles. With these purposes in mind, two research questions were tested.

This study was intended to make a significant contribution to the literature surrounding the body of research on the value of Recreational Sports to the learning community and as well as research on paraprofessional staff in Student Affairs. Specifically, a major goal of this research was to demonstrate the essential role paraprofessional staff have in the daily operations of Departments of Recreational Sports and, therefore argue that their training needs to be learning-centered and intentionally designed.

In August of 2003, a group of 56 Recreational Sports paraprofessionals participated in a training program intentionally designed with Kolb's Learning Styles (Kolb, 1984) as the basis for the four learning modules. The participants received the pretest of the Job Knowledge Test developed by the researcher, the Learning Style Inventory (Kolb, 1993), letters of introduction

and consent forms. This particular training program replaced the training this staff otherwise would have experienced.

Data analyses consisted of descriptive statistics and the comparison of mean ranks. Independent samples t test was used to reiterate the findings from the nonparametric statistics. Also interviews from a sample of the participants were analyzed using content analysis and the subsequent themes that emerged were documented.

#### Summary of Significant Findings

There were two findings that were found to be of statistical significance. First, the results of the study indicated that paraprofessional staff training does have an impact on the learning and development of college students. Secondly, when considering the learning styles of the paraprofessionals, one particular learner, Accommodators, performed significantly better on the Job Knowledge Test in their preferred mode of learning than did the other three learning styles. However, because of the small number of subjects used in this particular comparison there is a risk of Type I error where there actually was not a difference between Accommodators and the other learning styles.

When reviewing the qualitative data, four themes were found to be significant. These themes were the participants' reaction to their learning style, confidence instilled through training, the need for continual training, and the impact of being exposed to other ways of learning. These themes speak to the research questions asked throughout this study and coincide with the quantitative data. Therefore the discussion of the findings will weave both qualitative and quantitative data together for both research questions.

## Discussion of Findings

### *Research Question 1*

The first research question investigated the affect of a staff training program that incorporated learning styles on student learning and development. Based on the results of the quantitative data analysis of this study, this staff training did positively affect student learning. What is interesting about this finding is that the qualitative data did not necessarily support this contention. The participants of this study had a difficult time articulating the impact of the training experience on their learning. Even though the pre-post test results indicated an improvement in learning, the participants spoke about the fact that they learn most of their responsibilities on the job rather than as a result of training. According to those interviewed, the value of training had to do more with reestablishing relationships with peers instead of knowledge acquisition. This could have something to do with the timing of training. Training occurred the same day that the facility opened for the fall semester and coincided with the start of a new work schedule. These paraprofessionals basically went straight from training to work. There was little time for the participants to reflect on what they had learned in training and differentiate those experiences from what was learned while on the job. For returning employees, it would be difficult to articulate what knowledge was acquired strictly during the training process because they have put most of their skills and knowledge to practice for a significant length of time.

It is important to note, however, that even though the participants generally spoke about the training experience as one that had no impact on their learning, there were clearly two themes that disputed this. According to the interviewees, the training process affected their level of confidence about performing their job and all spoke of the value in continuing the training

process throughout the year. It seems as though paraprofessionals see the value in staff training experiences from a relationship-building standpoint and as a means to reiterate what they already think they know. They do not see training, at least a one-day event before the beginning of the semester, as the most important time to learn their job. However, they do see value in on-going exposure to training experiences. Therefore, paraprofessional training should begin before the semester and continue throughout the year to intentionally link the training process together. The students are asking for this series of training sessions by saying that it empowers them, instills confidence, and has an impact on how well they both know, and perform, their job.

According to Chickering and Reisser (1993), it is imperative to the identity development of college students to establish a foundation based on interpersonal, physical and intellectual competence. Chickering and Reisser (1993) state “a sense of competence stems from the confidence that one can cope with what comes and achieve goals successfully” (p.53). The participants spoke about the confidence training gave them in their decision-making capabilities. They felt that, through the training process, they learned that they made the right decisions on the job when faced with specific situations.

In addition to the students’ desire to know that they perform their job the way that they should, they are able to speak to the importance of continued training. This shows awareness of their own inadequacies regarding job knowledge and a desire to improve. The participants learned that there was more to learn. This is important in the effort to continually train paraprofessionals, especially returning staff. It is imperative to maintain this high level of interest in learning more. It also seems that this theme indicates that students that they will need to think critically and problem solve continually while on the job.

Perhaps part of the disconnect between the quantitative and qualitative data can be explained by a student's ability, or inability, to reflect on his or her learning. For the majority of their academic career, learning for students is most often demonstrated by getting the right answer on a test. This could explain the difference and scores on the pre and post tests and the ease in which the researcher was quantitatively able to measure learning. However, learning which is based on personal experiences and self-reflection, what the qualitative part of this study was trying to measure, is something few college students have experience articulating. Unless they have been exposed to classes that emphasize writing, critical thinking and problem solving skills, students may not have acquired the ability to speak about learning in a more abstract form.

#### *Research Question 2*

This research question investigated whether or not incorporating learning styles into paraprofessional training would improve job knowledge. In this case, there was no difference between pairs of groups that either preferred or did not prefer a particular learning module, except in the second delineation where Accommodators performed better than the other three learning style categories in their preferred learning modules, that of concrete experience and active experimentation. The meaningful significance of this particular finding should be considered carefully due to an increase risk of Type I error and an increase chance of bias due to the researcher's proclivity towards learning modules preferred by Accommodators. According to the LSI (Kolb, 1993) the researcher is an Accommodator, so it is difficult to know if the learning module geared towards Accommodators was more effective than the others, or if the training in general was more welcoming to Accommodators. Also, the length of the Job Knowledge Test, which was predicated by the length and content of training, and its sensitivity may not have allowed for enough data to be collected to indicate a learning preference.

Again, as found in the results of research question 1, the quantitative and qualitative data refuted one another. Interviewees clearly articulated a preference for one of the learning modules, but test scores did not translate this preference into learning. It is interesting to note which learners preferred what modules. Accommodators and Convergers both preferred the active experimentation module. Active experimentation is on the processing dimension, indicating how one makes information meaningful (Kolb, 1984). Perhaps this means that being active becomes the dominant learning style for them, or if they have the opportunity to choose between how they take in information or make meaning of it, it is the action of meaning making that dominates their preferences.

However, all four of the Divergers and Assimilators preferred the concrete experience module. Concrete experience is a proclivity for Divergers, but Assimilators, according to Kolb (1984) do not readily identify with this type of learning. Concrete experience is on the grasping dimension, indicating how one takes in information (Kolb, 1984). Therefore, this finding could indicate that, for Divergers, how they grasp information is more significant than how they make meaning of it. Or that, since they had time to reflect, the concrete experience module resonated more with them. Both Assimilators indicated a preference for a mode of learning that, according to Kolb (1984) they should not prefer.

There could be a number of ways to explain this. Perhaps this indicates that Assimilators are more prone to respond to learning through the grasping dimension versus the processing dimension. It is also possible that the two learning modules that should have been preferred by Assimilators were not presented in training as well as the others and therefore were not as impactful. However, it may simply be that Assimilators defined the concrete experience differently than what was intended. When asked what module he preferred, Conrad (an

Assimilator) states “the one that stands out the most where [the facilitator] was telling us something. I think the scenarios were a pretty good way of learning”. In this particular module the facilitator used scenarios to discuss situations and past experiences with the intention of having the participants feel the issues those scenarios raised. Assimilators may have used those same scenarios as an example of abstract conceptualization and thought about what that information means to them. Therefore, it would make sense that the Assimilators would prefer the learning module, which in their opinion, would allow for a sharing of ideas and an analysis of situations.

It is entirely possible that the way students think about learning in a job situation is based on their past experiences. Learning could have much to do with the delivery of information when it comes to job training. For many of these students they may have little experience in a work environment that encourages them to think about issues and analyze what to do in certain situations. If past job training experiences simply asked them to read a manual and showed them how to operate equipment, then a training that challenged them to critically think and asked for their input may be a significant departure.

Another example of the impact learning styles has on job knowledge was articulated by the interviewees’ responses to questions concerning the impact of knowing learning styles on job knowledge. All of those interviewed spoke of the benefits of knowing their personal learning style as well as the learning styles of their peers. They indicated that this knowledge would help them work better with others and would help those responsible for training others ensure an advantageous training environment. Two of the themes found in the data reinforced the value participants placed on knowing about learning styles. Those two themes are: reaction to the learning style category, and impact of being exposed to other ways of learning. Those

interviewed all agreed that their style was an accurate depiction of how they learned. Pablo (a Diverger) spoke about “watching” how he learns, which reiterated his preferences. Also, those interviewed saw value in understanding all categories of learning styles because of its application to learning in difficult situations and teaching others. This indicated that the interviewees were thoughtful enough to understand that they have the power to choose which learning style to employ in a given situation. Kolb (1984) explains the need for learners to be flexible in the choice of learning style because no two learning environments are alike. Also, this indicated that the participants understood the need to be adaptable both in their approach to learning and in how they share information with others.

#### Implications for Practice

There are several implications this study has for academic affairs, student affairs, and recreational sports.

##### *Academics*

There seems to be a sense of a discord between faculty and students. Schroeder (1993) speaks of the frustration felt by the faculty concerning current students’ lack of preparation and lack of motivation in the classroom. Schroeder (1993) believes that the majority of the faculty is comfortable with the traditional lecture system as the learning process. He further states that there is a mismatch between the needs of the students and the teaching delivery of the faculty and that it is the responsibility of the faculty to “expand the repertoire of learning activities...to increase both [faculty] satisfaction and our students’ learning” (p.27). There is a general problem with the collective definition of learning on campus. This may not be currently felt because faculty expect to deliver learning one way (lecture) and students expect to receive it in that method. The confluence occurs when suddenly expectations shift. Given the current

emphasis on undergraduate instruction and engaged learning in this country, that shift is fast approaching.

The interviewees in this study struggled to verbalize the connection between learning styles and their staff training and subsequent job performance. However, even without prompting, some were able to speak about the impact of learning styles in the classroom. For example, Glen (a Converger) spoke about how his professors only present ideas in a lecture format and that that is the way he would prefer to have ideas presented to him. According to Kolb (1984), Convergents have a preference for a well-organized presentation of ideas that could occur through a lecture. However, John (an Accommodator) spoke about he struggled in his religion class because the “teacher just stands up there and just talks all the time”. John claimed that he needed an opportunity “to break down the material and talk to my friends about how it all works”. The comments made by John about learning styles in the classroom reiterate what Kolb (1984) says about Accommodators. Accommodators need to work through ideas by trial and error and they prefer to process information through small group discussion. This implies that the faculty need to become more aware of their choice of teaching style, and how it may marginalize certain learners. Their willingness to make small changes in the classroom may have a huge impact on their students’ motivation to learn. Administrators should be aware of what these learning style differences may mean from an enrollment standpoint. For example, if John’s religion class has 100 students in it, it would clearly benefit John, and other learners like him, to offer smaller discussion groups for student interaction. Breaking large lecture classes down into smaller discussion groups could greatly impact student learning by catering to a particular learner who is not comfortable in a large lecture hall. It will also impact how courses

are staffed, how classes are assigned space, and the numbers of students enrolling in innovatively formatted classes.

Additionally, this faculty/student mismatch and the comments made by the interviewees speaks directly to the adaptability of students to their learning environments. John, in the above paragraph, gives an example of how he is able to manipulate the information he receives to his advantage. The ultimate result of knowing about learning styles is the ability to be flexible with a repertoire of learning skills to have the ability to match skill with environment (Kolb, 1984). Students' success could very well hinge on their ability to adapt their style to that of the environment and that of the professors. Certainly there are varying degrees of adaptability level. Therefore, students need to practice how to adapt academic material to make it personally meaningful and faculty need to offer such opportunities and be cognizant of speaking in these terms. This includes both teaching and testing through a variety of learning modes.

### *Student Affairs*

As previously mentioned, the Student Learning Imperative (1994) indicates that student affairs professionals have the "responsibility of fostering learning and personal development" (p.2). This means anything from connecting both in and out-of-class experiences to finding ways for the voices of students to be heard across campus. This study has a number of implications for this type of action. The paraprofessional experience is an opportunity to link to the academic environment. Student affairs professionals can work with faculty to build engaged learning experiences that occur out of the classroom into the syllabus and the curriculum. For example, a sociology professor teaching a class on group dynamics could greatly benefit from working with a Recreational Sports professional by exposing the students to a ropes course for a practical application of what they are learning in the classroom. This experience would cater to both the

doing and the reflecting components of the learning cycle (Kolb, 1984), components that may not be used often in a traditional lecture formatted curriculum. Such an experience would provide learners an opportunity to improve modes of learning that, for some, are less utilized. Kolb (1984) believes that challenging oneself to learn through less comfortable methods is critical to effective learning.

Also, it is an excellent opportunity to promote, what Baxter Magolda (1999) calls, active learning where students begin to take responsibility for their learning and educators are conscious of the learning goals of students (1999). Student affairs has the ability to intentionally design the paraprofessional experience by increasing the responsibility the students have for their own learning, connecting practical application to theory, and by communicating to faculty the learning skills that seem to be lacking. Paraprofessional training is one example of how this can happen. The participants in this study were able to speak about their increased sense of empowerment through the training process and the responsibility they felt to teach others and further their knowledge about the job through in-service training.

This extends learning beyond the classroom and helps students translate from one experience to another. Students tend to compartmentalize courses, often not making connections between fall semester classes and spring semester classes. This same compartmentalization happens between their academic experience and their work experience. Helping students see a broader curriculum and allowing for opportunities to connect all learning experiences by challenging students to learn through a variety of styles might reinforce the notion that learning occurs all the time. Certainly continual in-service training is an example of this on-going process.

Also, by creating intentional environments where learning is the focus, Student Affairs can contribute to the overall learning climate of campus. Education should be a part of the mission in paraprofessional training. Training, in the Student Affairs environment, is so much more than being shown how to turn the lights on. It should be about professionalism, ethics, handling crises, self-awareness and so many more intangible skills that separate campus employment from off-campus jobs. Part of the benefit of a job on campus should be the concept of a value-added notion of education in what students do. It is not simply a job, but a learning opportunity centered in student employment.

### *Recreational Sports*

Due to the extent of the reliance on paraprofessionals, recreational sports can make a difference in the learning and development of students. Based on the results of this study, the training of these students makes a difference in knowledge acquisition and those interviewed were able to verbalize the value of training to their confidence and improved interaction with their peers through gaining knowledge about different learning styles. It would not be difficult for recreational sports professionals to create intentional environments to further the learning of their paraprofessionals. However, they need to start by defining their role on campus as an educator. Using educator as a title substantiates the connection to the mission of colleges and universities to educate students. Recreational sports have a captive audience in its paraprofessionals. These students enjoy their jobs and being a part of this environment. Professionals should take advantage of this chance for students to apply what they are learning in the classroom to their work environment as well as applying knowledge in their work environment to the classroom. Whitt and Miller (2000) state that the most important thing

educators can do to “enhance learning is to get students to think more often about what they are doing” (p. 60). Recreational Sports professionals can do this with minimal difficulty.

#### Limitations

This study needs to be performed again with a more strictly enforced methodology. The researcher is not convinced that the results would be the same if the learning modules and the testing questions were at all times under the control of the researcher. For example, four different people taught the four learning modules at the same time due to time constraints. The researcher was unable to be present at all four modules to ensure the material was being presented appropriately, that the tenets of a specific learning style were adhered to and the presented information was accurate. The researcher attempted to train the facilitators about how to present the learning modules, but the researcher would have been more confident in the accuracy of the data had the researcher performed all the learning modules herself.

Also, there needs to be an opportunity to test the participants through their method of choice not by the rigidity of a short answer questionnaire. If this study were to be duplicated it would behoove the researcher to investigate multiple testing methods to represent the preferences of the four learning styles.

Further, because the participants knew the researcher, it is difficult to determine if responses were made to be supportive of the obvious interests the researcher had, or if they were made because of the freedom they felt to give opinions they would not give to an impartial party. This certainly confounds the collected data. The way to address this limitation is for the researcher to have access to an unrelated paraprofessional staff. Unfortunately this would complicate data collection, especially if a mixed method design is employed, but if time and cost are not issues it may be a better choice of subjects.

Finally, there is an additional note about the implications of this study to research in student affairs. Whitt and Miller (2000) argue for both quantitative and qualitative methodologies when studying students because “the usefulness of the research is likely to improve if students are allowed to describe their learning in their own words” (p.54). This study employed a mixed design by weaving together the results from both quantitative and qualitative methodologies. While this employed a complicated and time-consuming research design, it also used a design that provided a large amount of useful data. Had this research used only one method rather than two, the picture would have been far from complete. The differences found in the results gave additional information needed to formulate implications and theories about learning styles and their use on campus. Effectively, these differences helped shape the next questions that emerged from this research and begin to paint a clear picture for future research directions.

#### Need for Future Research

Clearly the final step in any research project is an evaluation of what directions potential research can go. This study was an opportunity to begin the investigation into how to incorporate the language of learning into Recreational Sports. And there are many directions to go from here.

A number of the participants spoke about the amount of learning that occurs while on the job. No one would argue that on the job learning is not significant. It would be interesting to investigate the differences in pre and post testing had the participants only been new paraprofessionals. Finding a sample size appropriate for statistical power made only of new staff is difficult because retention among Recreational Sports paraprofessionals is generally high, but methodology could be changed to include only new staff.

Also, there could be an investigation into the learning styles of Recreational Sports participants. Does one type of learner seem to gravitate towards a specific type of recreational experience? If so, can practitioners have an impact on their experiences in programs if participants learning preferences are taken into account? Or is there a mix of learning styles, like this study indicates, of different types of learners involved in different recreational experiences? If so, are professionals reaching all participants and meeting varying needs as effectively as they could? One of the ways this might be tested is to extend this methodology beyond Recreational Sports and look at paraprofessional training in other Student Affairs units that employ a large number of students, such as Residence Life or Student Activities.

This study could be duplicated to investigate how personality type can influence job performance and personal development. The tenets of learning theories and personality type theories have similarities. For example, the Myers-Briggs Personality Type theory speaks to one's preferences in relation to the environment and challenges people to become comfortable with their nondominant personality types. This is similar to Kolb's contention that learning style is a preference, but to be an effective learner all styles must be developed to some extent. Could there be a relationship between learning style and personality type in the context of the paraprofessional experience? What relationship, if any, does the interaction of the learning style and personality type of the instructor or trainer have on the paraprofessional training experience?

One of the confounding variables in this study was the fact that the researcher was an Accommodator and it was only Accommodators that performed better than their counterparts in the learning modules they preferred. This could be an interesting area to investigate further. Did the Accommodators in the study perform better because the researcher identified with that type of learning? If the researcher identified as preferring another style of learning would that have

made a difference? Further, it would be interesting to investigate if there exists any bias towards who is hired. Do Accommodators hire significantly more Accommodators, for example? Or are the students that are retained for a length of time in a position of a similar learning style as the supervisor? Are certain learning styles preferred for certain types of jobs in Recreational Sports? For example, are Accommodators more likely to be chosen to staff the weight room, while Divergers are chosen to manage the intramural events?

Finally, this study was intended to be a method to bridge Recreational Sports to other Student Affairs functional units and to the academic environment. By utilizing paraprofessional staff members across the campus there could be a number of investigations performed to demonstrate the learning that occurs out of the classroom and the value of intentionally designing learning environments focusing on the needs of the paraprofessionals.

#### Chapter Summary

Paraprofessional staff members of a college recreational sports department were studied to determine if a training program incorporating learning styles would influence student learning and development and improve work performance. Results indicated that this type of training does positively affect learning and that students have an increased sense of competence and a greater understanding of their peers.

Implications of this study in higher education include informing faculty and student affairs professionals about the need for students to be both supported and challenged through various teaching methods and styles of learning. Also, student affairs needs to take advantage of the learning that occurs in paraprofessional training programs to give students the opportunity to be responsible for their own learning and connecting their knowledge to various environments.

Areas for future research include an investigation into the learning styles of recreational sports participants, similarities of using personality type in paraprofessional training to influence learning and development, and if there is any relationship between the professional's learning style and the quality of the training program to all types of learners.

Remember the two students from the introduction? One learned the job through reading the staff manual, but is not particularly adept with his peers. The other was popular with other staff members and the patrons, but she was not able to explain policies and procedures. Hopefully, through this training experience, these students were able to improve on their more inadequate job skills because of their exposure to the information they needed using a method that made sense to them. By taking differences like this into account, professional staff can train their students more effectively. By training students more effectively, there are greater opportunities for student learning and development to occur.

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APPENDIX A  
JOB KNOWLEDGE TEST

Name: \_\_\_\_\_

**Informal Recreation Staff Quiz**

Demographic Information:

Age: \_\_\_\_\_ Gender: \_\_\_\_\_ Class Standing: \_\_\_\_\_  
\_\_\_\_\_

Semesters Employed at Rec Sports (count summer as one semester, if new enter "0"): \_\_\_\_\_  
\_\_\_\_\_

**Please complete the answers as fully as possible. Use the other side of the paper if you need additional space! Your responses will be kept confidential. Let me know if you have any questions. It is the same test as the one you filled out before. It is intended to show improvement because of training. Thanks!**

**Nancy Chrystal-Green      706-542-5060      [ncg@uga.edu](mailto:ncg@uga.edu)**

1. Explain the dress code you are required to follow when at work.
  
2. Who is the Director of the Department of Recreational Sports:  
Who is the Associate Director of the Department of Recreational Sports:  
Who is the Business Manager of the Department of Recreational Sports:
  
3. What do you do when your radio beeps every 30 seconds?
  
4. Explain the substitution policy.
  
5. What is the policy about using your cell phone at work?

6. There is an intercom located at the admissions desk. What is it used for?
  
7. When are dependents allowed in the building?
  
8. How much do guest passes cost and what is the responsibility of the sponsor (member bringing the guest)?
  
9. What happens when a patron's hand image is not working? What are your options if you are working at admissions?
  
10. How do you transfer a call?
  
11. List the locations to which the set-up crew is responsible for taking towels?
  
12. Explain the procedure for washing and drying the towels.
  
13. What do you do if someone asks you for a tour of the Ramsey Center?
  
14. What should the set-up crew have with them at all times?
  
15. What is the number one responsibility of the set-up crew?

16. What must a patron have with him/her to check out a piece of equipment?
17. What methods of payment are acceptable for any pro shop item?
18. Who receives a towel card? Where and how are they used?
19. Explain the procedure for taking a racquetball reservation from a patron.
20. If the Bulldawg person is shown a valid ID from a patron what should he/she do?
21. You are working the Admissions Desk and a patron tells you someone has passed out during an aerobics class. What steps do you take to provide care?
22. List all student staff that are required to be CPRO certified?
23. When do we escort an injured patron to the Health Center?
24. What do you do with a severely bleeding individual while you are waiting for assistance from the building manager? (Building managers – answer this question as if you are not certified to provide care)
25. In the event someone has had a life-threatening emergency, after EMS leaves the building, what are post situation procedures?
26. You are working at the Admissions Desk and the fire alarm sounds. What are your responsibilities?

27. You are at the Admissions Desk and a tornado watch is issued. What are your responsibilities?
  
28. You are at Equipment Check-out. Someone calls to tell you there is a bomb in a locker. What do you do?
  
29. During a tornado warning who is responsible for monitoring the women's locker room?  
The men's locker room?
  
30. When is it okay to re-enter the building after a fire alarm?

## APPENDIX B

## LETTER OF INTRODUCTION TO THE STUDY

July 10, 2003

Dear Informal Rec. Staff:

Hey! [Professional staff] has indicated to you that he has agreed to have you all, if you are willing, work with me on my dissertation research. I am studying the affects of intentionally designing staff training to take into account learning style. I am extremely excited about it because I think it will impact how Recreational Sports departments treat their student employees and because, with your help, I will be one step closer to graduating!

What does this mean for you? If you choose to participate you need to:

- 1) sign and return one copy of the consent form
- 2) answer and return the Learning Style Inventory
- 3) answer and return the Informal Rec. Staff Quiz

All of this should take you approximately 30 minutes do complete. I have included an addressed return envelope to send back the consent form, the Inventory and the Quiz. Everyone must return his or her availability form so as to be included on the fall work schedule.

Staff training is going to run a little differently than it has in years past. On Sunday, August 17<sup>th</sup> at 11:00am we will start. You will be divided into two groups, control and experimental. Both groups will receive the same type and length of training. Those of you who choose not to participate will automatically be placed in the control group. Your participation in not required for employment, but your presence at staff training is.

Again, all of you must return your fall availability form and those participating in the study will return the availability form, the consent form, the Learning Style Inventory, and the Staff Quiz.

I really want to thank you for your participation in advance. I know that you get asked to do lots of crazy things and I truly appreciate your willingness to spend time on this research project. It really will make a difference to our student employees and those across the country. If you have any questions at all please come see me, call me (706) 542-5060, or email me at [ncg@uga.edu](mailto:ncg@uga.edu). Otherwise, I will see all of you on Sunday, August 17<sup>th</sup> at 11am in the Ramsey Center.

Sincerely,

Nancy Chrystal-Green

## APPENDIX C

## CONSENT FORM

**Informed Consent**

I \_\_\_\_\_ agree to take part in a research study titled “The Use of Learning Styles to Affect the Training of Recreational Sports Paraprofessionals” which is being conducted by Nancy Chrystal-Green, a doctoral student in the Department of Counseling and Human Development Services, University of Georgia, who can be reached at **706-316-3919** or via email at **ncg@.uga.edu**. The research is being conducted under the direction of Dr. Diane L. Cooper, Associate Professor, Department of Counseling and Human Development Services, University of Georgia, who may be reached at **542-1812** or via email at **dlcooper@coe.uga.edu**.

I do not have to take part in this study. I can stop taking part at any time without giving any reason, and without penalty. I understand that declining participation has no bearing on my employment status. In the event that I choose not to participate I will discard the questionnaire. I understand not to put my name on the questionnaire or the test. I can ask to have information related to me returned to me, removed from the research records, or destroyed.

The purpose of the study is to explore whether or not developing a training program that caters to the differences in styles of learning will improve the job performance of student employees. I will not benefit directly from this research. However, my participation in this study may advance the available literature on training student employees and on the impact evaluating learning styles may have on student learning.

If I volunteer for this study, I will be asked to do the following things:

1. I will read and sign the consent form. (Be sure to ask any questions if you have any.)
2. I will complete a short questionnaire the Learning Styles Inventory (Kolb, 1984), taking approximately 10 minutes to fill out.
3. I will complete the Staff Quiz. Once before job training, and once during. This will take approximately 30 minutes combined.
4. I am willing to participate, if selected, for a follow-up interview of no longer than one hour in length. Interviews will be conducted starting two weeks after staff training. I understand that I may choose not to participate in said interview, if asked, with no personal repercussions.

I understand that I may elect not to answer any question without having to explain why and that the researcher will ensure the confidentiality of my responses and learning style. No discomforts or stresses are expected. No risks are expected to any participant. The results of this participation will be kept confidential.

The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by telephone at: **706-316-3919**.

My signature below indicates that the researcher has answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

\_\_\_\_\_  
Signature of Researcher  
**ncg@uga.edu**

\_\_\_\_\_  
Date  
**706-316-3919**

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

Additional questions or problems regarding your rights as a research participant should be addressed to Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens Georgia, 30602-7411; Telephone (706) 542-3199; e-mail address [IRB@uga.edu](mailto:IRB@uga.edu).

APPENDIX D  
INTERVIEW PROTOCOL

1. What was the value of this training experience to you?
2. What did you learning from training?
3. What do you remember from training that has helped you perform your job better?
4. What did you like best about training?
5. What did you like least about training?
6. What would you change about training?
7. How could training have impacted your learning about the job better?
8. Has knowing your learning style been beneficial to you? How so? Why not?
9. Did you notice different reactions from your peers towards the learning modules as you participated in them?