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## INTERACTIVE BEHAVIORS BETWEEN STUDENTS AND INSTRUCTORS IN THE OUTDOORS

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Research investigating the instructional process has been conducted in many settings but is still a young science (Rink, 1985). The relationships between variables that affect the teachinglearning process and student achievement have been studied in contemporary educational research. Few, if any, studies have focused on the interactive behaviors of instructors and students in the outdoor environment. Investigation of this type may provide insight to how we, as professionals, can maximize effective teaching of skills and knowledge. Duncan and Biddle (1974) developed a model to categorize the areas observed in pedagogy, which provides a useful framework for discussion of relationships between variables in the teaching-learning process. These variables are:

- 1. Presage variables: characteristics of teachers that may be examined for their effects on the teaching process (e.g., formative experiences, personality).
- Context variables: conditions to which the teacher must adjust (e.g., characteristics of the environment, attitudes of students, subject matter, skill level of students, objectives).
- 3. Process variables: concerns the actual activities of the classroom teaching—what teachers and students do (e.g., time on task, student response to the teacher, teacher behavior such as feedback).
- 4. Product variables: concern the outcomes of teaching or the changes that come about in students as a result of their involvement in class activities with teachers and other students.

Flanders developed a system for observation of student-teacher interaction patterns. The Flanders Interaction Analysis System (1965) was used throughout the 1970s in process-toprocess educational research to determine direct and indirect influence of teachers on students. Cheffers (1972) felt there were three limitations with FIAS for the study of physical education: 1) FIAS was concerned only with verbal interactions and did not include nonverbal communication; 2) Flanders viewed the teacher as the sole teaching agent in a classroom; and 3) the Flanders system only allowed for coding class structure when the entire class functioned as a unit. Non verbal interactions, other teaching agents, class structure and elaboration of student responses designed to describe physical activity settings are incorporated in the Cheffers Adaptation of the Flanders Interaction Analysis System (CAFIAS) (1972). Cheffers system seems to be appropriate for observation in outdoor settings because of the many similarities in variables, objectives and methods between outdoor instructors and physical education teachers.

Some overall conclusions that have been drawn from the process-process research concerning the learning environment created by teachers as it relates to student achievement are: 1) time on task or student involvement (conceptually or motorically) is critical to achievement; 2) working at an appropriate level of difficulty raises achievement; 3) strong management skills are an important condition for teacher effectiveness and include the ability to know what is going on and to target behavior appropriately, the ability to give specific feedback, and the ability to handle several things at

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one time; and 4) direct instruction leads to achievement.

#### METHOD

Three case studies were conducted in which instructors were videotaped at different times during the first week of a 35 day outdoor leadership course. Data were analyzed using CAFIAS by coding both verbal and nonverbal interactions. The dominant behavior was recorded every three seconds, and the tallies were then transferred to a matrix. A variety of interpretations were made from the matrices. The following behaviors were analyzed in this study: total instructor-student interactions across six lessons; total instructor contributions; total student contributions; the amount of confusion or silence; instructor responses to student behavior in both direct and indirect ways; the amount of time instructors spent in expanding student ideas; the amount of time spent in constant behavior versus transitional behaviors and student responses to instructors.

#### RESULTS

Many interesting observations were made that provided feedback for the instructors. The behaviors of all three instructors were considered to be those of skilled teachers, especially in the area of task behaviors, positive feedback, and content orientation. There were variances in the amount of time spent in the expansion of student ideas and in times of silence or confusion. These are all factors that positively affect student achievement.

#### DISCUSSION

This study provides a base from which other, more thorough investigations can be made. The system of observation provided detail about the teaching process in an outdoor setting, which could be a useful research or

training tool. The method could be easily used for student leader training, challenge course instructors, and with various student populations. Additional research would allow outdoor investigators to focus on teaching to show the effectiveness of their abilities in a unique learning environment. There are several behaviors that instructors can use to enhance the learning experience (Rink, 1985). While not the focus of this study, they may provide some guidance for outdoor instructors and leaders in order to improve their effectiveness. First, it is important to set a tone or to provide parameters of acceptable behavior. Consistent reinforcement of unacceptable performance is also important. Maintenance of a leadership role, knowledge and understanding of students and effective use of time (little dead time) are other factors. A neutral climate tends to be most effective in terms of the emotional climate created for student success. Finally, students need to be held accountable for their efforts and need to be kept on task.

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