A Systematic Observation Study of the Teaching Behaviors of an Expert Basketball Coach

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A systematic observation analysis was performed on Fresno State men’s basketball coach Jerry Tarkanian over the course of an entire season. Based on Tharp and Gallimore’s (1976) work and recent research on expert coaches’ training techniques (Côté et al., 1995; Durand-Bush, 1996), the Revised Coaching Behavior Recording Form was created to observe and record Tarkanian’s teaching behaviors and verbal cues. Results showed that tactical instructions was the most frequently occurring variable, representing 29% of the coded behaviors. This behavior was 13% higher than the second highest variable, hustles (16%). Following these two categories were technical instruction (13.9%), praise/encouragement (13.6%), general instructions (12%), scolds (6%), and six other categories with percentages less than 3%. This means that almost one-third of Coach Tarkanian’s practice behaviors relate to teaching offensive and defensive strategies to his team. This differs from the practice sessions of beginner- and intermediate-level coaches, who often focus on teaching fundamental skills to their athletes. A complete description of all 12 categories are provided along with implications for coaches of all levels.

According to Darst, Mancini, and Zakrjse (1983), “systematic observation allows a trained person following stated guidelines and procedures to observe, record, and analyze interactions with the assurance that others viewing the same sequence of events would agree with his [or her] recorded data” (p. 6). Van der Mars (1989) noted that while systematic or direct observation has historically been used in a wide range of domains, such as anthropology and psychology, it was not introduced to the study of classroom teaching until the 1960s. Shortly thereafter, systematic observation techniques were used in physical education and

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sport settings to help uncover what coaches and their athletes were doing (Van der Mars, 1989). This method of data acquisition has been used by several researchers who have studied coaches of all levels (i.e., Horn, 1985; Lacy & Darst, 1985; Lacy & Goldston, 1990; Langsdorf, 1979; Smith & Smoll, 1990; Smith, Smoll, & Curtis, 1978, 1979; Smith, Smoll, & Hunt, 1977; Smith, Zane, Smoll, & Coppel, 1983; Tharp & Gallimore, 1976).

Quite possibly the greatest coach (teacher) of all time was college basketball’s John Wooden, who led his team to an unprecedented 10 Division 1 basketball championships in a 12-year period in the 1960s and 1970s. His success inspired researchers Tharp and Gallimore (1976) to conduct a systematic observation study: “It was our good fortune to study the last and finest of John Wooden’s seasons [1974–75] at the University of California at Los Angeles, and to preserve a record of the methods of the most successful coach-teacher in the history of college athletics” (p. 75). This noteworthy research was among the first to report observational data of coaching behaviors through the use of the Coaching Behavior Recording Form (Darst, Zakrajske, & Mancini, 1989). Since that time, “systems have been designed specifically for observing athletic roles or recording behaviors in either competitive sports or physical education” (Darst et al., 1989, p. 327).

The 11 category observation system utilized to assess Wooden’s coaching methods was derived from Tharp and Gallimore’s (1976) clinical research and included the following categories: instructions, hustles, modeling–positive, modeling–negative, praises, scolds, nonverbal rewards, nonverbal punishment, scold/reinstruction, other, and uncodable. Tharp and Gallimore (1976) collected their data by sitting in the front row of bleachers at Wooden’s practices, allowing them to see everything and hear at least almost all of his verbal exchanges. One important finding was that while some successful coaches “see their roles mostly as group facilitators or emotional managers, or even administrators, Wooden’s system of basketball requires teaching and learning, everything from complex set-offense options to how to pull your socks on right” (p. 75). Another interesting finding was that about half (50.3%) of Wooden’s behaviors were coded in the instruction category, which was defined as verbal statements about what to do or how to do it. Most of Wooden’s verbal cues related to the basic fundamental skills of basketball play. Wooden seldom used positive statements in coaching, although his negative statements were consistently followed by instructions, and he rarely used physical or negative punishment, such as push-ups or running laps.

Based on Tharp and Gallimore’s (1976) work, Langsdorf (1979) conducted a similar descriptive study and observed the behaviors of Frank Kush, the former head football coach at Arizona State University. Darst, Zakrajske, and Mancini (1989) noted that Langsdorf’s category system was almost the same as Tharp and Gallimore’s, except two more descriptive categories were added to expand the means for summarizing and interpreting the data by viewing different segments of the practice. An important conclusion from Langsdorf’s study was that 36% of Kush’s behaviors were coded in the instruction category. Hustles, scold/reinstructions, and praise were the next three highest-occurring behaviors.

Probably the most well-known behavior observation scale for observing coaches comes from the work of Smith, Smoll, and their colleagues. The Coaching Behavior Assessment System (CBAS) was first used to examine the behaviors of little league baseball coaches during practices and games and to create a training program for these coaches based on the results (Smith, Smoll, & Curtis, 1978,
1979; Smith, Smoll, & Hunt, 1977). Consisting of 12 categories, the CBAS deals with two major classes of coaches’ behaviors: reactive and spontaneous. The former included the coaches’ immediate responses to the player or team mistakes, effort, or misbehaviors. In the latter, the coaches’ spontaneous behaviors were not a response to an observable preceding event; rather, they dealt with either relevant or irrelevant behaviors exhibited during the game.

Results indicated the importance of the coach in the overall growth and development of young athletes. Two observed behavioral dimensions from the CBAS, supportiveness and instructiveness, were positively related to players’ attitudes towards their coach, sport, and teammates. These studies also revealed that trained and untrained coaches differed in both overt and player-perceived behaviors. Trained coaches communicated more effectively than untrained coaches and, more importantly, were evaluated more positively by players and saw them acquire significant increases in self-esteem from the previous year. There were some differences between the aforementioned research and Tharp and Gallimore’s (1976) work, especially those related to the frequency of positive and punitive communication and feedback to players. Smith, Smoll, and colleagues found that youth coaches’ behaviors included praise and encouragement significantly more than those identified in the Wooden study. No reasons were given to explain this difference, although it has been suggested that it might relate to the competitive level and maturity of the athletes, the nature of the sports, or coaches’ individual characteristics (Smith, Zane, Smoll, & Coppel, 1983).

Smith, Smoll, and colleagues have continued to use adapted versions of the CBAS to study a variety of youth sport coaches in different areas, such as coaches’ effect on athletes’ enjoyment (Smith, Zane, Smoll, & Coppel, 1983) and self-esteem (Smith & Smoll, 1990). Other researchers have also begun to use the CBAS. For example, Horn (1985) used the system to explore the relationship between coaches’ and female junior high school players’ perceptions of competence and expectations for future athletic success. Horn’s research differed from Smith and Smoll’s because it addressed the coach’s feedback on individual team members rather than the team as a whole and used teammates’ ratings of player ability.

Another effective systematic observation instrument for observing coaches during practices was developed by Lacy and colleagues (Lacy & Darst, 1985; Lacy & Goldston, 1990). Created from Tharp and Gallimore’s (1976) work, the Arizona State University Observation Instrument (ASUOI) includes 11 specific categories of coaching behavior, seven of which are directly related to the instructional process (Lacy & Darst, 1989). In the first study, Lacy and Darst analyzed the coaching behaviors of 10 winning high school head football coaches. Results indicated that technical instruction occurred three times more frequently than any other form of communication, including praise. In the second study, Lacy and Goldston examined 10 high school basketball coaches. Similar results were found; almost half of the interactions between coaches and athletes during practices appeared to be instructional. Furthermore, both of these studies indicated a relationship between positive verbal feedback and coaching success.

While the previous studies all addressed novice and intermediate coaches, some bodies of research exist on experts. In particular, retrospective profiles of successful coaches have provided valuable information on different areas of coaching, such as strategies, coaching philosophies, or future recommendations (Kimiecik & Gould, 1987; Mechkoff & Kozar, 1983; Walton, 1992; Wooden, 1988; Wrisberg,
For example, Kimiecik and Gould interviewed James "Doc" Counsilman, the dean of American swim coaches. Some of Counsilman's recommendations centered on the sport psychologist's role and the most effective means for disseminating coaching information. In a similar study, Wrisberg interviewed Pat Head Summit, who at the young age of 38 had already coached three NCAA championships and a gold-medal-winning American Olympic basketball team. The interview focused on coaching style, such as how to prepare athletes for a game, how to conduct practices, and how to interact with players. Finally, important information was also presented in two books, in which a number of highly successful coaches from team and individual sports were profiled (Mechikoff & Kozar, 1983; Walton, 1992). In sum, the research in this section provided information on the characteristics and different types of knowledge possessed by elite coaches. However, the methods used for data collection were suspect, as they were not consistent with all coaches.

Côté, Salmela, Trudel, Baria, and Russell's (1995) empirical research produced a theoretical model for explaining which factors were most important for coaches. Côté et al. interviewed 17 expert Canadian high-performance gymnastic coaches using open-ended interviews designed to explore the structure of their coaching knowledge. An inductive analysis of the data resulted in a coaching model consisting of three central components (competition, organization, and training) and three peripheral ones, including coaches' characteristics, gymnasts' personal characteristics, and contextual factors. In particular, the authors found that gymnastics coaches dealt with the following areas in training: intervention style (frequency and type of feedback), technical skills, mental skills, and simulation.

Côté et al.'s (1995) research inspired other empirical examinations of expert coaches that addressed different areas of the coaching model (i.e., Bloom, Durand-Bush, & Salmela, 1997; Durand-Bush, 1996). For example, Bloom, Durand-Bush, and Salmela interviewed expert Canadian team sport coaches on competition. This research provided an in-depth look at what coaches do for both themselves and their athletes before and after competition. In a similar study using sound qualitative techniques, Durand-Bush interviewed expert coaches and identified the different areas of coaches' knowledge within training. In particular, technical, tactical, physical, and mental training were identified as four equally important areas of the training process.

The present investigation involved the modification of a systematic observation scale that was designed to observe the teaching practices of a successful college basketball coach. Although previous studies that have employed systematic observation tools, such as the CBAS and ASUOI, have produced important findings on the behaviors of novice and intermediate coaches, these instruments have been challenged for their lack of cognitive assessment (Abraham & Collins, 1998). These instruments have also been used infrequently to examine expert coaches.

Recent studies on the knowledge of expert coaches' training techniques have indicated the importance of technical and tactical training practices (Côté, Salmela, Trudel, Baria, & Russell, 1995; Durand-Bush, 1996). Stream, Senecal, Howlett, and Burgess (1997) also examined coaches' thinking processes and revealed that as coaches became more experienced and accomplished, they tended to engage in more critical thinking about strategy compared to novice coaches. Since many previous systematic observation studies of coaches have indicated the importance of the instructional category, the present study expanded this area to include a
separate category for tactical, technical, and general training. In sum, the purpose of the present study was to observe and record the teaching behaviors and verbal cues of basketball coach Jerry Tarkanian throughout the course of a Division 1 college basketball season using a 12-category coding system.

Method

Participant
Jerry Tarkanian, head basketball coach of a Division 1 men’s program, agreed to participate in this study. At the time, Tarkanian had been coaching Division 1 men’s basketball for 26 years and had accumulated a 667-145 win/loss record. This record placed Coach Tarkanian second in most career wins of all Division 1 men’s basketball coaches. Coach Tarkanian was unaware of the behaviors being coded during the study.

Data Collection Instrument
Based on Tharp and Gallimore’s (1976) work and recent research on expert coaches’ training techniques (Côté, Salmela, Baria, Trudel, & Russell, 1995; Durand-Bush, 1996), the Revised Coaching Behavior Recording Form was created to observe Coach Tarkanian throughout the course of the 1996–97 regular season, which begins in early November and concludes at the end of February. Four alterations were made to Tharp and Gallimore’s original set of categories: technical instruction, tactical instruction, general instruction, and humor.

Pretest. Two researchers performed three 2-hr observations before the formal coding portion of the study. The pretest was designed to check for three factors: if the category list was complete, if the interobserver agreement between the two researchers met an average criteria approaching 85% (Siedentop, 1976), and if 3 hr was the correct amount of time to observe the coach, since that was the regular length of his practices. First, the pretest sessions revealed that two additional categories to the original list of 10 were required. General instructions was added to code the coach’s instructions, which were not technical or tactical in nature. This included repeating drills, player substitutions, water breaks, injury stoppages, and instructions to assistants. A category called humor was also added to account for Coach Tarkanian’s comments that caused players to smile or laugh. Thus, these two changes brought the total number of categories used in the current study to 12.

Second, the pretest was designed to assess the observer tendency to code statements into similar categories. A correlation was performed with each category for both observers to see if Observer 1’s tendency to score X number of statements in each category coincided with Observer 2’s tendency to record a similar number into the same category over the three pretest sessions. The two observers met after each session and discussed any discrepancies. The only major concern was how the researchers would determine when some of the coach’s verbal cues were finished. Thus, it was decided to verbally express the word cut when the observers felt a particularly long statement was concluded.

The third and final purpose of the pretest was to determine whether all 3 hr of Coach Tarkanian’s practice would be recorded. The researchers initially remained for the entire practice. They found that fatigue set in during the third hour and
decreased observer accuracy. After observing 3 hr of an additional practice and speaking with different members of the coaching staff, it was decided that only the first 2 hr of practice would be coded. In a typical practice session, the last hour was less structured, whereby the players would scrimmage or work in small groups with the assistant coaches.

**Behavior Categories.** The Revised Coaching Behavior Recording Form that was used in the current study consisted of 12 categories, 10 of them common coaching categories, 1 related to humor, and 1 for uncodable behaviors. The behavior categories were defined as follows:

1. Technical instruction: The skill-based dimension that encompasses the pedagogical aspects of coaching and often involves correcting individual skills.
2. Tactical instruction: Teaching the cognitive strategies used by coaches to outsmart their opponents (e.g., teaching plays and offensive and defensive formations).
3. General instruction: Verbal statements outside the guidelines of technical or tactical instruction. These include repeating drills, player substitutions, water breaks, injury stoppages, and instructions to assistants.
4. Hustles: Verbal statements that activate, intensify, or energize the athletes. These statements do not necessarily contain any positive or negative aspects.
5. Praise/encouragement: Verbal statements that are positive and encouraging. These include statements about players’ effort and performance.
6. Scolds: Verbal statements of displeasure and anger.
7. Nonverbal punishment: Nonverbal acts that include scowls and gestures of despair.
8. Criticism/reinstruction: Verbal statements that relay players’ inappropriate acts or behaviors. Statements that explain the correct act or behavior sought by the coach immediately follow.
9. Modeling: A demonstration of how or how not to perform.
10. Nonverbal rewards: Nonverbal compliments or encouragement (e.g., smiles, nods, pats).
11. Humor: Verbal statements that include jokes or contain content designed to relax the players and make them smile or laugh.
12. Uncodable: Behaviors that could not be clearly heard or seen.

In addition, there was a blank space left at the bottom of the coding form, labeled *Comments.* This allowed the researchers to note any unusual occurrences, happenings, or trends at each practice. For example, it was noted that the coach’s scolds were rarely personal, that his tactical plays related to the upcoming opponent, and that the intensity of practice was affected by upcoming opponents and the number of days between games. After each session, the two observers would tabulate their results and transfer the information from the comments section onto a separate page. This helped the research team acquire a better understanding about the nature and structure of practices. For example, we learned that when Coach Tarkanian arrived at practice he would generally observe for a few minutes and then say, “Let’s get started” or “Let’s bring it in,” or he would instruct the players to form a huddle at half court and talk to them about previous or future practice and game situations. In fact, at a few important times during the season, the observers noted the intensity of the coach’s behavior toward the team reached a higher level.
Recording Procedure

Each time a specified behavior was observed, it was recorded on the coding sheet. Every codable behavior that the coach exhibited during practice was recorded. The two observers stationed themselves in an unobtrusive setting at courtside and sat independently of each other. Data were gathered from practice sessions only, and observations were conducted throughout the entire length of the 1996–97 regular season. Observers were allowed to sit anywhere and move around to better hear the coach’s comments. Practice sessions were conducted at two different settings: the campus gymnasium and downtown arena. Both facilities provided the observers with optimal visual and auditory capacities. Only 2.8% of the teaching behaviors and verbal cues were uncodable (due to distractions). Although the three assistant coaches occasionally gave directions to the team, only Coach Tarkanian’s actions were recorded and analyzed.

Checks for interobserver agreement were made at the end of each month to ensure the accuracy of the two observers. Interrater reliability was assessed using a Pearson’s correlation to determine if, when Observer 1’s tendency to code a number of statements into a category increased, Observer 2 would also increase the same behavior. Due to the lack of a priori methods relating to the number of observations coded per minute or any other predetermined coding method, the Pearson’s correlation method was performed (see Table 1).

<table>
<thead>
<tr>
<th>Category</th>
<th>Observer 1</th>
<th>Observer 2</th>
<th>r</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Technical instruction</td>
<td>28.5</td>
<td>27.7</td>
<td>.68</td>
</tr>
<tr>
<td>Tactical instruction</td>
<td>57.9</td>
<td>60.6</td>
<td>.90</td>
</tr>
<tr>
<td>General instruction</td>
<td>22.9</td>
<td>25.3</td>
<td>.83</td>
</tr>
<tr>
<td>Hustles</td>
<td>32.1</td>
<td>33.8</td>
<td>.95</td>
</tr>
<tr>
<td>Praise/encouragement</td>
<td>29.1</td>
<td>26.3</td>
<td>.94</td>
</tr>
<tr>
<td>Scolds</td>
<td>12.9</td>
<td>12.7</td>
<td>.74</td>
</tr>
<tr>
<td>Nonverbal punishment</td>
<td>1.1</td>
<td>1.7</td>
<td>.78</td>
</tr>
<tr>
<td>Criticism/reinstruction</td>
<td>1.7</td>
<td>5.0</td>
<td>.82</td>
</tr>
<tr>
<td>Modeling</td>
<td>4.5</td>
<td>4.5</td>
<td>.82</td>
</tr>
<tr>
<td>Nonverbal reward</td>
<td>0.8</td>
<td>0.4</td>
<td>.69</td>
</tr>
<tr>
<td>Humor</td>
<td>2.0</td>
<td>2.0</td>
<td>.85</td>
</tr>
<tr>
<td>Uncodable</td>
<td>5.9</td>
<td>5.6</td>
<td>.79</td>
</tr>
</tbody>
</table>

*Note.* The means reflect the average number of responses recorded per observer in each category over 10 observation sessions. The Pearson’s correlation coefficient reflects the degree to which one observer tended to rate similar numbers of statements in the same category as the other observer.
Data Analysis

Data were analyzed by dividing the mean total number of statements from both observers for each category by the mean total number of statements for all categories. The quotient was multiplied by 100 to calculate the mean percentage of occurrence for that type of statement (category) over the 10 observation sessions.

One final method of analysis was used. Coach Tarkanian and his longest-serving assistant coach were each interviewed separately after the season. The purpose of the exit interview was to see if their perceptions of what Tarkanian was actually doing during practices matched our results. The first set of questions prompted them to discuss the general structure or format of practices and indicate whether this season’s practices were any different than usual. Thereafter, they were each shown the five most frequently occurring variables from this study, along with an operational definition of each. They were asked to rank order the five most frequently occurring variables according to their perceptions of what occurs at Tarkanian’s practices. We then asked Coach Tarkanian and his assistant for their thoughts, opinions, and feelings about tactical training. Finally, they were given the opportunity to ask us about any segment of our study.

Both individuals commented that Coach Tarkanian’s 3-hr practices are approximately 30–60 min longer than those for most Division I basketball teams. When they were asked to rank the top five categories, each put tactical instructions first, followed by hustle, praise/encouragement, technical instructions, and general instructions. An interesting observation from the assistant coach related to the structural differences between offensive and defensive practice time. The assistant coach felt that Tarkanian was more tactical during the defensive portion of the practices, which accounts for the majority of the coach’s practices. Also, offensive work was viewed as less tactical by the assistant coach since the philosophy was to keep players’ minds free and let them play instinctively. One final comment was the individuals’ agreement on the frequency of the hustle category. They recognized this as a trademark of Coach Tarkanian, wherein he often gives positive feedback to his players during practices.

Results

Results of the statistical analysis are shown in Table 2. The categories are listed in order, from the most to the least frequently occurring behavior. Results show the final percentage ranking of each variable since there were no differences between the first and second hour of practice. The results are also displayed in a bar graph to help illustrate the differences between categories (see Figure 1).

The importance of tactical instruction is apparent, as it involved 29% (almost one-third) of the coded behaviors during practices. In this study, the strategies taught by Coach Tarkanian dealt primarily with set offenses or defenses, often depending on the team’s next opponent.

Four of the other categories represented a large portion of the coded behaviors. Hustles was the second-highest category, representing 16% of the coded behaviors. The coach used these statements to help motivate and energize his athletes. Technical instruction (13.9%) and praise/encouragement (13.6%) were the third- and fourth-highest categories, respectively. Technical instructions represented the pedagogical aspect of coaching, such as working on the athletes’ shooting or
Table 2  Category Rankings and Percentiles From Systematic Observation Analysis

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Category</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tactical instructions</td>
<td>29.0</td>
</tr>
<tr>
<td>2</td>
<td>Hustles</td>
<td>16.0</td>
</tr>
<tr>
<td>3</td>
<td>Technical instructions</td>
<td>13.9</td>
</tr>
<tr>
<td>4</td>
<td>Praise/encouragement</td>
<td>13.6</td>
</tr>
<tr>
<td>5</td>
<td>General instructions</td>
<td>12.0</td>
</tr>
<tr>
<td>6</td>
<td>Scolds</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Uncodable</td>
<td>2.8</td>
</tr>
<tr>
<td>8</td>
<td>Modeling</td>
<td>2.2</td>
</tr>
<tr>
<td>9</td>
<td>Criticism/reinstruction</td>
<td>1.6</td>
</tr>
<tr>
<td>10</td>
<td>Humor</td>
<td>1.0</td>
</tr>
<tr>
<td>11</td>
<td>Nonverbal punishments</td>
<td>0.6</td>
</tr>
<tr>
<td>12</td>
<td>Nonverbal rewards</td>
<td>0.3</td>
</tr>
</tbody>
</table>

*Note. Percentiles were obtained by taking the percentage of statements averaged across two observers, then dividing by a combined average number of total statements (202.5) over 10 observation periods.*

dribbling techniques or offering advice on footwork or hand positioning. Praise/encouragement represented positive comments that were designed to reward players for good effort or technique. The fifth highest-occurring variable, general instructions (12%), involved instructions that were not specifically tactical or technical in nature, such as allowing the players to take a water break, dealing with injuries, or substituting players for specific drills. Finally, scolds represented 6% of the coded behaviors.

Six remaining categories were recorded. Not including uncodable (2.8%), the sum of the five remaining codable categories accounted for only 5.7% of Coach Tarkanian’s behaviors. Thus, modeling, criticism/reinstruction, humor, nonverbal punishment, and nonverbal rewards were not a common occurrence at Tarkanian’s practices.

Aside from the results noted above, a few other areas of the data were checked, including whether there were any differences between the first and second hour of Coach Tarkanian’s practices, whether there were differences in his practices from the beginning to the end of the season, and whether the Comments section contained any pertinent information. For the first two areas, no differences were noted. Similarly, a close examination of the observers’ comments did not reveal any information that might have affected the validity or reliability of our results.

**Discussion**

An important factor of the current study was the modification of the instruction category that was used during previous systematic observation studies of expert team sport coaches (i.e., Langsdorf, 1979; Tharp & Gallimore, 1976). In the present
Figure 1 — Percentage of average total number of statements (202.5) per category from the systematic observation analysis.
study, instruction was broken down to include tactical, technical, and general instructions. The rationale for this modification came from recent empirical research on expert coaches (Côté, Salmela, Trudel, Baria, & Russell, 1995; Durand-Bush, 1996). In particular, Côté and colleagues created a coaching model for conceptualizing the knowledge of expert coaches; they identified training as one of three major areas of coaching. In a more direct study of training, Durand-Bush listed technical, tactical, physical, and mental aspects as equally important areas of this topic. Despite the identification of the training variable in these recent studies, up to this point there had not been an analysis on the frequency of the different types of training techniques used by coaches. The primary purpose of this study was to address the gap in the literature by looking at the training practices of an expert men's college basketball coach.

Probably the most revealing finding from the current study was Coach Tarkanian's emphasis on tactical training. Not only was this the most frequently occurring variable, it was also 13% higher than the second-highest category, hustles. The fact that it occurred so frequently and represented almost one-third of Tarkanian's behaviors demonstrates the significance of this category.

Although there have not been other studies on expert coaches using a similar coding scale, research on beginner- and intermediate-level coaches reveals some interesting differences. For example, Smith, Smoll, and colleagues (Smith, Smoll, & Curtis, 1978, 1979; Smith, Zane, Smoll, & Coppel, 1983) found that youth sport basketball and baseball coaches most frequently exhibited praise or encouragement, as well as general technical instructions focusing on the correct techniques of their sport. Another comparison of results can be made between intermediate-level coaches. In their analysis of successful high school basketball and football coaches, Lacy and associates (Lacy & Darst, 1985; Lacy & Goldston, 1990) found that technical instructions represented almost half of the coaches' behaviors, with forms of encouragement the next highest behavior. In sum, although none of the previous studies had a separate category for tactical instructions, the fact that it was never mentioned causes one to speculate that that this form of coaching behavior rarely, if ever, occurred for the beginner or intermediate coaches. It is also possible that this issue relates to what was coded, although tactical instructions unlikely make up a large percentage of these coaches' teaching behaviors or verbal cues.

It is important to analyze why tactical instructions represented such a large part of Coach Tarkanian's behaviors. Perhaps expert coaches expect their players to already have a sound fundamental basis of the necessary skills when the athletes reach the elite level. Or perhaps they expect their athletes to work on skill refinement on their own time, such as before or after team practices with an assistant coach. Thus, more time is spent during team practices trying to out think or out smart opponents. Coaches at this level are expected to scout their opponents and then devise plays to neutralize them while still capitalizing on their own strengths. Possibly, coaches at the beginner or intermediate level are most concerned with teaching fundamental skills to their young athletes, or perhaps they do not possess the sophisticated knowledge needed to create the appropriate offensive and defensive strategies. Moreover, few beginner or intermediate coaches may have the resources to plan intricate tactical strategies since most of them coach on a volunteer and part-time basis. Whatever the case, coaches at the elite level seem to focus most of their practice time on the cognitive or tactical aspects of their sport.
In a similar manner, it is necessary to discuss why physical and mental components of training were not observed, since they have been listed as other equally important components of training (i.e., Côté, Salmela, Trudel, Baria, & Russell, 1995; Durand-Bush, 1996). In relation to physical training, coaches might expect elite-level athletes to already be in top physical condition. These individuals are expected to train on a year-round basis as opposed to seasonally. Furthermore, much physical training, such as running or weight training, occurs outside of team practice time. If coaches feel that athletes are lagging behind, they may encourage them to make up lost time on their own rather than during scheduled team practices. The area of mental training also occurs outside of the regularly scheduled practice time. As Durand-Bush noted, many coaches at the elite level rely on a sport psychologist to work with the athletes both individually and as a team throughout the season, and this generally occurs outside of scheduled team practice sessions. In summary, although this study identifies the importance of tactical training during team practice time, it might be interesting to further explore the importance that coaches attach to all four areas of training.

Results of the present analysis indicated that hustles, technical instructions, praise/encouragement, and general instructions had percentages above 10%. The common thread among these categories is a general positivism. When Coach Tarkanian is not focusing on tactical issues, he verbalizes comments that either energize, praise, or correct his players’ behaviors. These results support other studies on coaches of all levels, although one exception appears to be Tharp and Gallimore’s (1976) study of John Wooden. In particular, results of that study indicated that Wooden rarely used positive statements during his practices, instead focusing on teaching the basic fundamentals of basketball. However, one similarity between Tarkanian and Wooden is that neither of them used physical or negative punishment, such as push-ups, sit-ups, or running laps.

One limitation of the current investigation was that we only studied Tarkanian during the 1996–97 regular season. As Lacy and Goldston (1990) noted, coaches’ behaviors are likely to change across different parts of the season, such as preseason, regular season, and playoffs. It was our goal to examine Coach Tarkanian during the regular season and playoffs. However, Fresno State lost in the first round of the NIT tournament that season.

In conclusion, results of this study have shed some insight on what an expert coach does during scheduled team practices. Now that we know Coach Tarkanian spends a large portion of his practices on tactical training, it might be interesting to further examine this method and uncover what type of tactical training the coach is doing. For example, does he create new plays or work within a fairly consistent set of plays, and how does he adjust his strategies based on the upcoming opponent?

Future research in this area would be greatly enhanced by the creation of a sound descriptive model. We recommend paying more attention to Côté et al.’s (1995) coaching model by examining other categories, such as organization and contextual factors. In fact, Streen (1995) found that youth sport coaches were constrained by their contextual factors when pursuing various objectives. With the coaching model as a guideline, as well as Smith, Smoll, and Curtis’s (1979) finding that coaches can be trained to exhibit positive characteristics or coaching traits, the importance of disseminating information on different areas of the coaching
model is strongly encouraged. In fact, it is also hoped that scientists will continue to modify behavior observation instruments to ensure the most detailed and accurate portrayals (i.e., of coaches).

References


*Manuscript submitted: June 8, 1998
Revision received: December 21, 1998*