The Sport Psychologist, 2008, 22, 197-211

Effective Coaching in Action: Observations of Legendary Collegiate Basketball Coach Pat Summitt

Andrea J. Becker
California State University, Fullerton

Craig A. Wrisberg
University of Tennessee

The purpose of this study was to systematically examine the practice behaviors of Pat Summitt, the winningest collegiate basketball coach in NCAA Division I history. Throughout the 2004–05 season, Summitt's verbal and nonverbal behaviors were video recorded during six practices. A total of 3,296 behaviors were observed and coded using the Arizona State University Observation Instrument (Lacy & Darst, 1984). Results indicated that 55% (n = 1810) of Summitt's behaviors were directed toward the team, whereas 45% (n = 1,486) were directed toward individual players. The most frequent behavior was *instruction* (48%, n = 1,586) followed by *praise* (14.5%, n = 478) and *hustle* (10.7%, n = 351). Contrary to predictions, no differences were found in the quantity or quality of the coaching behaviors that Summitt directed toward high and low expectancy players.

Throughout the years, coaches such as Phil Jackson, Mike Krzyzewski, and John Wooden have received attention for their ability to consistently produce winning teams. Over the course of a season, coaches spend a considerable amount of time conveying information to athletes: imparting knowledge, correcting errors, reinforcing behaviors, and motivating effort. However, achieving success is greatly dependent upon a coach's ability to do this effectively. Although popular books, magazines, and documentaries provide insights into the practices of many coaching greats, research studies that systematically examine highly successful coaches are less common.

The current body of literature suggests that successful coaches provide greater amounts of overall feedback in practice than do less successful coaches (Markland & Martinek, 1988). Results across observational studies consistently show that highly successful coaches use training and instruction more often than any other type of coaching behavior (Bloom, Crumpton, & Anderson, 1999; Kahan, 1999; Lacy & Darst, 1985; Segrave & Ciancio, 1990; Tharp & Gallimore, 1976). In addition,

Becker is with the Dept. of Kinesiology, California State University, Fullerton, CA 92834-6870. Wrisberg is with the University of Tennessee, Knoxville, TN 37996-2700.

coaches appear to be more effective when they present information in a manner that is positive and constructive (Bloom et al., 1999; Côté, Salmela, Trudel, Baria, & Russell, 1995; Tharp & Gallimore, 1976). According to John Wooden, legendary men's basketball coach at the University of California, Los Angeles (1948–75), positive feedback does not necessarily mean praise (Gallimore & Tharp, 2004). Wooden considered all forms of instructive feedback to be positive and this was evidenced in the relative amount of practice time he devoted to teaching his athletes (Tharp & Gallimore, 1976).

Over the course of the 1974–75 season, Coach Wooden became the central focus of what is perhaps the most notable case study of a highly successful coach to date (Tharp & Gallimore, 1976). During 15 practice sessions, Tharp and Gallimore (1976) systematically observed and recorded Wooden's coaching behaviors. Results revealed a total of 2,326 feedback statements that were coded into 10 different behavioral categories. Of these, verbal *instruction* represented the most frequent coaching behavior Wooden exhibited (50%). Other observed behaviors included *hustle* (12.7%), *praise* (6.9%), and *scold/reproofs* (6.6%). Although 30 years have passed since the publication of this study, the findings continue to provide sport practitioners with valuable information regarding the practice behaviors of a highly successful coach (Gallimore & Tharp, 2004; Nater & Gallimore, 2006; Tharp & Gallimore, 1976).

More recently Pat Summitt, women's basketball coach at the University of Tennessee, became the winningest coach in NCAA Division I basketball history. With 34 winning seasons, 26 tournament and regular season conference championships, and eight national titles to her credit, Summitt represents another exemplar of coaching success. Although her accomplishments are often compared with those of John Wooden, no previous attempts have systematically examined her coaching behaviors. Therefore, the purpose of the current study was to analyze Summitt's verbal and nonverbal coaching behaviors during practice.

A second purpose of the current study was to examine whether Coach Summitt would provide differential treatment to players based on her assessments of player abilities and subsequent expectations for performance. Expectancy theory was used as the conceptual framework for this aspect of the study. Current sport psychology literature characterizes the relationship between coach expectations and athlete performance as a 4-step process (Horn, Lox, & Labrador, 2006; Solomon, 2001). In step one, the coach assesses the athlete's ability and establishes expectations for performance based on three types of impression cues: personal (i.e., race, gender, body size), performance (i.e., coordination, speed, agility), and psychological (i.e., confidence, motivation, anxiety). In step two, the coach's expectations influence how s/he behaves toward the athlete. Previous research suggests that high expectancy athletes receive a greater quantity and quality of feedback than their low expectancy teammates (Sinclair & Vealey, 1989; Solomon, DiMarco, Ohlson, & Reece, 1998; Solomon & Kosmitzki, 1996; Solomon et al., 1996). In step three, the athlete becomes aware of the coach's treatment and this subsequently affects the athlete's own self-perceptions and behaviors. In step four, the athlete's performance conforms to the coach's original expectations (i.e., high expectancy athletes typically outperform their low expectancy counterparts). These performance outcomes reinforce the coach's belief that her/his initial assessment of the athlete's ability was accurate.

Although limited research has directly examined coaching behaviors within this theoretical framework, a number of studies suggest that athletes are clearly influenced by their coach's feedback (Allen & Howe, 1998; Amorose & Smith, 2003; Black & Weiss, 1992; Bloom et al., 1999; Markland & Martinek, 1988; Summers, 1991; Tharp & Gallimore, 1976). For example, higher levels of athlete satisfaction are associated with higher frequencies of positive coaching behaviors, such as training and instruction, praise, encouragement, social support, and democratic behavior (Allen & Howe, 1998; Chelladurai, 1984; Dwyer & Fischer, 1990; Riemer & Chelladurai, 1995; Schliesman, 1987). In addition, athletes' feelings of competence appear to be related to the amount of praise and instruction they receive from their coach in response to successful performance attempts (Allen & Howe, 1998; Black & Weiss, 1992). These findings are particularly important in light of the research suggesting that athletes with higher levels of confidence are more likely to succeed than those lower in confidence (Gould, Guinan, Greenleaf, & Chung, 2002; Weinberg, Grove, & Jackson, 1992). Based on this information, it would seem beneficial for coaches to provide an equitable amount of performance-relevant feedback to all of their athletes (Smith, 2001; Solomon et al., 1996). If a coach's primary role is to optimize each athlete's development and performance, this would provide all individuals with an opportunity to succeed rather than just those perceived as having greater abilities.

Unfortunately, available evidence suggests that many high school, college, and national level coaches issue differential treatment based on their assessments of athlete ability (Lacy & Martin, 1994; Markland & Martinek, 1988; Sinclair & Vealey, 1989; Solomon, DiMarco et al., 1998; Solomon & Kosmitzki, 1996; Solomon et al., 1996). In addition, coach perceptions are likely to remain inflexible over the course of time, even when new information regarding athlete ability becomes available (Solomon, Golden, Ciapponi, & Martin, 1998; Solomon & Kosmitzki, 1996). Thus, it appears that once coaches identify athletes as either high or low ability, they tend to maintain those perceptions and persist in the behaviors they exhibit toward those athletes. As a result, high expectancy athletes consistently receive a greater quantity of performance relevant feedback than their low expectancy counterparts.

Based on the results of previous expectancy research (Sinclair & Vealey, 1989; Solomon, DiMarco et al., 1998; Solomon & Kosmitzki, 1996; Solomon et al., 1996), we hypothesized that Coach Summitt's perceptions of player ability would remain stable over the course of the season and that she would provide differential treatment to players based on her perceptions. More specifically, we expected Summitt to provide high expectancy players with a greater quantity and quality (instruction and praise) of feedback than low expectancy players (Sinclair & Vealey, 1989; Solomon, Golden et al., 1998; Solomon & Kosmitzki, 1996; Solomon et al., 1996).

Method

Participants

The participants in this study were Coach Pat Summitt and the 15 players on her 2004–05 basketball team. At the time, Summitt was 52 years of age and had completed 30 years as head coach at the University of Tennessee where she had

accumulated a .836 (852–167) winning percentage. Players who were injured during the season or who did not participate in at least 80% of the recorded practices (n = 5) were excluded from the final analyses. Thus, the results were based on the behaviors that Summitt directed toward the remaining 10 players who ranged in age from 18 to 22 years (M = 20.10, SD = 1.19), and classified themselves as either African American (n = 7) or Caucasian (n = 3). These players also represented each academic level including three freshmen, two sophomores, two juniors, and three seniors. One was a point guard, four were shooting guards, two were forwards, and three were centers. Five of the players classified themselves as starters, while the other five classified themselves as nonstarters.

Measures

Demographic Information. Background information on Pat Summitt was obtained via media statistics provided by the University of Tennessee Athletic Department. This included Summitt's age, years of overall Division I coaching experience, and coaching accomplishments. Background information for the athletes was obtained from a demographic questionnaire. Information provided by the athletes included their age, race, year in school, position, and playing status (starter, nonstarter).

Arizona State University Observation Instrument. The Arizona State University Observation Instrument (ASUOI; Lacy & Darst, 1984) was used to assess Pat Summitt's coaching behaviors. The ASUOI was specifically created to examine coaching behaviors during practice sessions and is one of the most widely used observational instruments in coaching research (Kahan, 1999). It is comprised of 13 behavioral categories representing three general types of behaviors: instructional (preinstruction, concurrent instruction, postinstruction, questioning, manual manipulation, positive modeling, negative modeling), noninstructional (hustle, praise, scold, management, other), and dual codes (statements that include the recipient's name). The behavioral categories of the ASUOI are based on conceptual rationale that satisfy the criteria for both content and face validity (Lacy & Darst, 1984). For the purposes of the current study, the category of dual codes represented statements that were specifically directed toward individual players. Recording whether Coach Summitt stated a player's name was less important than the amount and quality of feedback provided to that particular player.

Modified Expectancy Rating Scale (MERS). A major limitation of previous expectancy research has been the lack of an accurate assessment of coach expectations of athlete ability. Initially, researchers used a rank-order method to distinguish between the coach's perceptions of high and low ability athletes (Sinclair & Vealey, 1989; Solomon, DiMarco et al., 1998; Solomon & Kosmitzki, 1996; Solomon et al., 1996). This method required coaches to hierarchically rank athletes from most to least skilled, resulting in rankings that are primarily based on athletes' physical skills. It does not take into account other characteristics (i.e., psychological abilities) that coaches might use when assessing athlete ability (Solomon, 2001). Another drawback to the rank-order method is that it prevents coaches from assigning equal rankings to athletes of the same level of perceived ability.

In an attempt to address some of these deficiencies, Solomon (1993) created the Expectancy Rating Scale (ERS). Unlike the rank-order method, the ERS is a 5-item instrument that enables coaches to rate athletes independently of one another, and therefore give equal ratings to athletes with similar abilities. The ERS is limited, however, in that it also emphasizes the evaluation of athletes' physical abilities. Again, this minimizes the importance of other characteristics (i.e., psychological skills) that coaches use when evaluating athlete abilities (Solomon, 2001).

More recently, Solomon (2003) created the Solomon Expectancy Sources Scale (SESS) to determine the most common characteristics that coaches use to evaluate athlete ability. Initially, this 30-item instrument was used to assess the degree of importance coaches placed on various physical and psychological characteristics. In a recent study of Division I head basketball coaches, six characteristics emerged as the predominant sources of information coaches use when evaluating their athletes (Becker & Solomon, 2005). These included: *Work Ethic, Receptivity to Coaching, Willingness to Learn, Love of Sport, Willingness to Listen,* and *Competitiveness.* In light of these results, three items were added to the original Expectancy Rating Scale (ERS) for the purposes of the current study (see Appendix for Modified ERS). Thus, the Modified Expectancy Rating Scale (MERS) consists of 8-items in which coaches can rate athlete abilities that are both physical and psychological. Content validity for the MERS was established by obtaining feedback and consensus from three experts in the field of sport psychology. In addition, the test-retest reliability of Coach Summitt's pre- and post- season ratings of her players' abilities using the MERS was found to be acceptable ($r = .77$) given the small sample size and limited number of items.

Procedures

Before the start of the 2003–2004 season, a letter of invitation was sent to Coach Summitt and a meeting was scheduled to discuss the purposes and procedures of the study. At this time, she also indicated her consent to participate and to have her identity revealed. Institutional approval was obtained to conduct the investigation and informed consent statements were read and signed by Summitt and each of her players. After the second week of preseason training, Summitt completed the MERS for each of her players and placed them in a sealed envelope. Over the course of the season, a total of six practice sessions (ranging from 30 min to 2 hr) were video recorded at three-week intervals. To maximize the viewing perspective, the video camera was positioned in the bleachers (approximately 25–50 rows up from the floor) at midcourt. This allowed us to track Coach Summitt as she moved from one end of the court to the other. During all of the recorded sessions, Summitt wore a wireless microphone to ensure that all of her verbal communication was captured. The input receptor for the wireless microphone was attached to the video camera. Therefore, all of the audio and visual data were simultaneously recorded onto the same digital videotape. Two weeks after the final game of the postseason, Summitt completed the MERS a second time for each player and also rank ordered the 10 players based on her perceptions of their overall ability. Summitt placed these evaluations in a sealed envelope. At this time, the players also completed a brief demographic questionnaire.

Once all the data were collected, two observers watched the video footage and coded Summitt's behaviors using the Arizona State University Observation Instrument (ASUOI; Lacy & Darst, 1984). Observers were trained by completing a manual that was specifically designed for researchers using this instrument (Solomon & Reece, 1995). A consensus-building technique was employed to determine the coding of all coaching behaviors. After each statement, the videotape was paused and observers independently coded the feedback. If they agreed on the coding category, the data were entered. If they did not agree, they viewed the segment again. No feedback statements were coded until consensus was achieved. To minimize possible experimenter bias, Summitt's MERS ratings (both pre- and postseason) for each player were not viewed until all coding was completed.

Results

Throughout the 2004–05 season, a total of 504 min of observation consisting of 3,296 of Coach Summitt's practice behaviors were coded. Table 1 provides a summary of the frequencies of behaviors for each category of the ASUOI (Lacy & Darst, 1984). For analysis purposes, the categories of preinstruction, concurrent instruction, and postinstruction were combined to form one general category of instruction. Inspection of Table 1 shows that Summitt provided *instruction* more often (48%, $n = 1586$) than any other coaching behavior. The next most frequent behaviors were *praise* (14.5%, $n = 478$) and *hustle* (10.7%, $n = 351$).

Table 1 Frequencies and Percentages of Total Coaching Behaviors for Each ASUOI Category

Coding Category	Example	Total Statements	Percent of Total
Instructional Behaviors			
Instruction	"When the guard is curling back and you're posting, make sure that you screen first, then post."	1586	48.12
Questioning	"If you are posting down low, where will your defender be?"	152	4.61
Manual manipulation	Physically moving a player's arm to ensure correct technique	2	0.06
Positive modeling	Demonstrating how to perform a movement correctly	69	2.09
Negative modeling	Demonstrating how a player performed incorrectly	19	0.58
Noninstructional Behaviors			
Hustle	"Come on, let's go! What we got? Come on!"	351	10.65
Praise	"Way to read the court. Nice look inside."	478	14.50
Scold	"Go ahead and mark that down for a sprint. This is unacceptable in our program."	226	6.86
Management	"Alright, switch teams. I would like Athlete *X* at the post."	308	9.34
Other	Statements that did not fall into any of the previous categories	105	3.19

The audiovisual technology used in this study also made it possible to distinguish between coaching behaviors that were directed toward the team and individual players. Results revealed that 55% ($n = 1810$) of Summitt's comments were directed toward the team (including small groups), while 45% ($n = 1486$) were directed toward individual players. Figure 1 depicts the frequencies of coaching behaviors directed toward the team and individual players for each behavioral category. For this portion of the analysis, the categories of preinstruction (before action), concurrent instruction (during action), and postinstruction (after action) were not combined. As Figure 1 illustrates, Summitt's most frequent form of instruction was concurrent instruction (40.2%, $n = 639$), followed by postinstruction (32%, $n = 506$), and preinstruction (27.8%, $n = 441$). However, the frequency of preinstruction statements directed toward the team was far higher ($n = 342$) than those directed toward individual players ($n = 99$). The opposite was true for postinstruction whereby more statements were directed toward individual players ($n = 353$) than toward the team ($n = 153$). Interestingly, Summitt directed *hustle* statements toward the team over three times more often ($n = 271$) than she did toward individual players ($n = 80$), but directed her s*colding* statements more often toward individual players ($n = 156$) than toward the team ($n = 70$).

The second purpose of this study was to determine whether Summitt would provide differential patterns of behavior to high and low expectancy athletes. To accomplish this purpose, Summitt's expectancy assessments (preseason MERS scores, postseason MERS scores, and post season ranks) along with each player's average amount of playing time for the entire season were analyzed. Specifically, a Pearson Product Moment correlation was calculated to determine the relationship between these measures (Table 2). Due to the significant relationship among all four measures, they were converted to ranks and combined to establish a composite expectancy score for each athlete. Final composite scores ranged from 7 to 47. The top five scores represented the high expectancy athletes and the bottom five

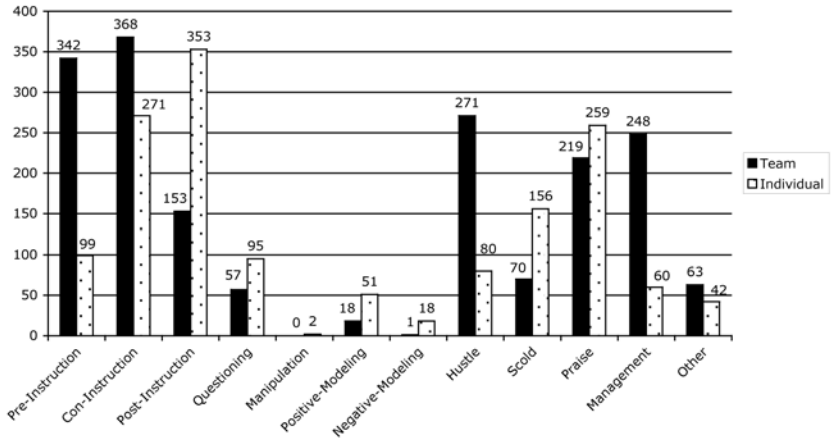

Figure 1 — Frequencies of coaching behaviors directed toward the team and individual players.

Table 2 Correlations of Preseason and Postseason MERS Ratings, Postseason Ranks, and Average Playing Time

Variable	1	2	3	4
1. Preseason ERS	1.0	.77**	−.88**	.75**
2. Postseason ERS		1.0	−.86**	.62*
3. Postseason rank			1.0	−.87**
4. Average playing time				1.0

Note. Correlation coefficients involving postseason rank are negative because lower numbers indicated higher rankings.
*$p < .05$, **$p < .01$.

represented the low expectancy athletes. The average score for the high expectancy group was 42.1 ($SD = 5.18$), while the average score for the low expectancy group was 20.8 ($SD = 8.84$).

Based on previous expectancy research, we hypothesized that Summitt's perceptions of player ability would remain stable over the course of the season. Inspection of Table 2 indicates support for this prediction with a high and significant correlation between Summitt's pre- and postseason MERS ratings of her players' abilities ($r = .77$, $p < .01$). Therefore, it appears that Summitt's perceptions of her players' abilities remained relatively stable from the beginning to the end of the season. We also hypothesized that Summitt would provide differential treatment to players based on her perceptions of their abilities. A MANOVA was conducted to analyze whether differences existed in the quantity of feedback Summitt provided to high and low expectancy players for each category represented on the ASUOI. For the purposes of this analysis, all frequency counts were converted to proportion scores (Sinclair & Vealey, 1989). The independent variable was the players' expectancy status (high, low) and the dependent variables were eight of the 10 behavioral categories represented on the ASUOI. The categories of *Negative Modeling* and *Manual Manipulation* were eliminated due to low frequency counts ($n < 20$). A Shapiro-Wilk test was conducted to assess the normality of the remaining eight categories. Variables with a Shapiro-Wilk value greater than .90 were considered normally distributed. The categories of *Hustle* (.84) and *Scold* (.82) fell below this range. Therefore, a Mann-Whitney Test was conducted to determine whether there were differences between groups on these two variables. Results revealed no significant differences ($p < .05$). A Levene's Test was also conducted to evaluate the equality of variance between high and low expectancy groups on the dependent variables. Once again, no significant differences were found and it was determined that the data met the criteria for a normal distribution. The subsequent results of the MANOVA revealed no significant differences in the quantity or quality of feedback provided to high and low expectancy players. As the frequency counts in Table 3 indicate, Summitt was relatively consistent in the amount of feedback she provided to both groups.

Table 3 Summary of Coaching Behaviors Directed Toward High and Low Expectancy Players

	High Expectancy			Low Expectancy		
Feedback	**Total**	**Mean (SD)**	**%**	**Total**	**Mean (SD)**	**%**
Instruction	351	70.2 (26.57)	23.62	372	74.4 (14.44)	25.03
Praise	137	27.4 (7.13)	9.22	122	24.40 (8.62)	8.21
Scold	62	12.4 (4.34)	4.17	94	18.8 (14.96)	6.33
Questioning	40	8.00 (3.74)	2.69	55	11.0 (5.70)	3.70
Hustle	34	6.80 (2.17)	2.30	46	9.20 (1.30)	3.09
Management	32	6.40 (2.30)	2.15	28	5.60 (1.34)	1.88
Positive modeling	27	5.40 (4.67)	1.82	24	4.80 (1.92)	1.62
Negative modeling	11	2.20 (2.17)	0.74	7	1.40 (1.67)	0.47
Manipulation	2	0.40 (0.55)	0.13	0	0.00 (0.00)	0.00
Other	14	2.80 (2.17)	0.94	28	5.60 (2.51)	1.88
Totals	710		47.78	776		52.21

Discussion

The purpose of this study was to systematically examine Pat Summitt's practice behaviors. Consistent with previous research on successful coaches, we found that Summitt provided *instruction* more frequently (48%) than any other coaching behavior (Bloom et al., 1999; Kahan, 1999; Lacy & Darst, 1985; Segrave & Ciancio, 1990; Solomon et al., 1996; Tharp & Gallimore, 1976). Instruction is clearly an important component of the coaching process, particularly when dealing with young players making the transition from high school to college. Given the more complex tactics and game strategies inherent at the collegiate level, players need and even prefer to receive greater amounts of instruction (Chelladurai & Carron, 1983). We found that the most common form of instruction that Summitt provided during her practices was concurrent instruction. As players executed various tasks, she frequently provided them with technical and tactical information. Doing so allowed players to actively adjust their behaviors and make corrections without interrupting the flow of action.

Another interesting aspect of Summitt's instructional feedback was the higher frequency of preinstruction (before action) and lower frequency of postinstruction directed toward the team compared with individual players. This pattern seems logical considering that it is probably more efficient to address the whole team when introducing skills or plays, and to address individual players when providing performance-relevant feedback. It is also possible that postinstruction promotes greater learning when it is individualized rather than offered to the team as a whole. In the current study, nearly half (45%) of Summitt's statements were directed toward individual players. These findings parallel those of earlier research on John Wooden,

which revealed his feedback to be brief, concise, and individualized according to each athlete's level of development and performance (Gallimore & Tharp, 2004; Nater & Gallimore, 2006).

It could be argued that individualized attention also increases athlete confidence. In an earlier published interview with Coach Summitt, she stated, "eye to eye contact tells a player that you are significant, you are good, and I believe in you" (Wrisberg, 1990, p. 182). However, the type of feedback provided in these one-on-one interactions must also be considered. For example, athletes are more likely to experience feelings of success and competence when they are provided with encouragement and instruction than when they are repeatedly criticized (Black & Weiss, 1992). Of Summitt's total coaching behaviors, only 7% involved signs of displeasure (*scold*) and most of these were followed by instruction. John Wooden exhibited this similar pattern of behavior (i.e., scolds followed by instruction) so frequently that Tharp and Gallimore (1976) categorized them as "Wooden's."

The second most frequent type of feedback Coach Summitt provided during practice sessions was *praise* (15%). While some might consider this percentage to be low, John Wooden contended that positive coaching behaviors often come in the form of instruction rather than praise (Gallimore & Tharp, 2004). When asked about her coaching style, Summitt admitted that early in her career she was more of a "hard-nosed disciplinarian" (Wrisberg, 1990, p. 182). However, she also acknowledged that "college athletes need to feel good about themselves" (Wrisberg, 1990, p. 182), and she encourages this through positive reinforcement. "I try to use a lot more positive feedback with my players, praising them for the things they do correctly" (Wrisberg, 1990, p. 182). This type of feedback helps to reinforce the behaviors that Summitt expects from her players.

Another important aspect of Summitt's coaching behaviors is the high degree of intensity she brings to the practice setting. In sport, one of the more common themes that coaches preach to athletes is "practice like you play." However, many coaches find it difficult to get athletes to consistently practice at the same level of intensity they bring to games. One method Summitt uses to sustain a high level of practice intensity is a time clock. Her practices are planned so that each drill lasts for a specific amount of time. Throughout the course of drills, she reinforces the importance of intensity by utilizing *hustle* statements, which comprised 11% of her overall coaching behaviors. In addition, she directs *hustle* statements toward the team as a whole more often than toward individual players. Providing a greater amount of generalized hustle feedback serves to increase the overall intensity of Summitt's practices, which promotes a more game-like atmosphere. John Wooden appeared to have a similar philosophy as *hustle* statements represented 12.7% of his total practice communication (Tharp & Gallimore, 1976). Therefore, it might be concluded that one factor that has contributed to the success of these two coaches is the careful planning of intense, game-like practices.

The second purpose of the current study was to determine whether Coach Summitt's coaching behaviors would be influenced by her perceptions of player abilities. Research on expectancy theory suggests that coaches provide differential treatment to high and low expectancy athletes at the high school, college, and national levels of competition (Lacy & Martin, 1994; Markland & Martinek, 1988; Sinclair & Vealey, 1989; Solomon, DiMarco et al., 1998; Solomon & Kosmitzki, 1996; Solomon et al., 1996). As the level of competition increases, there is often

a greater amount of pressure on coaches to produce winning teams. As a result, it is possible that coaches are more apt to provide feedback based on whether they believe athletes have the ability to significantly contribute in games. This approach to providing feedback has the potential to hinder the development of those athletes that are initially perceived as less capable because coaches are not likely to change their perceptions regardless of how the athletes perform (Solomon, Golden et al., 1998; Solomon & Kosmitzki, 1996).

Based on the results of previous expectancy research, we hypothesized that Summitt's perceptions of her players' abilities would remain stable over the course of the season and that she would provide differential treatment based on her perceptions. Our results provided only partial support for this hypothesis. While Summitt's perceptions of her players' abilities did remain stable, she did not provide the high expectancy players with a greater quantity and quality of feedback. The latter finding is not consistent with previous expectancy literature, which suggests that head coaches offer differential treatment to high and low expectancy athletes (Lacy & Martin, 1994; Markland & Martinek, 1988; Sinclair & Vealey, 1989; Solomon, DiMarco et al., 1998; Solomon et al., 1996). One possible explanation for this finding is that Summitt's players are all very talented. Outside of the Tennessee basketball program, most of her players (if not all) would be considered high expectancy. Therefore, one might argue that a true distinction between high and low expectancy players was not established in the current study. If so, the results would not represent a true test of expectancy theory.

It is important to note, however, that the expectancy cycle is not dictated by how players are rated against other players in the general public. It is dictated by how players are rated in the mind of their coach. In this study, Coach Summitt clearly perceived differences in her players' abilities. This is consistent with previous expectancy research on other elite level coaches (Sinclair & Vealey, 1989; Solomon et al., 1996), whereas the coaches in those studies provided differential treatment based on their perceptions of player abilities, Pat Summitt did not. Instead, she distributed an equitable proportion of feedback to both high and low expectancy players. Therefore, it might be concluded that a portion of Summitt's coaching success is due to the effort she puts into developing the abilities of *all* of her players.

Practical Implications

Assessing athlete ability is an inherent component of the coaching process. However, coaches must be aware of how their assessments affect their communication patterns. Research suggests that coaches are often unaware of the behaviors they exhibit toward athletes in practice (De Marco, Mancini, & West, 1997; Krane, Eklund, & McDermott, 1991; Wandzilak, Ansorge, & Potter, 1988). Some strategies for coaches to heighten their self-awareness might include keeping a practice journal that highlights coach-player interactions, reviewing video footage of practice sessions, and/or having an assistant coach conduct periodic evaluations of practice feedback. Coaches might also consider using their assessments to determine how they can best accommodate each athlete's individual needs. Pete Carroll, successful University of Southern California football coach, emphasized this point when describing his own coaching. "I don't treat everyone exactly the same – I treat each

player according to what he needs and do whatever I can figure out is the right thing to do" (Voight & Carroll, 2006, p. 327). Therefore, coaches might consider monitoring each player's level of improvement over the course of a season so that they can adjust their coaching behaviors accordingly. By accommodating individual needs, coaches can facilitate the development and performance of *all* athletes.

To date, every observational study conducted on a successful coach, including this study, has revealed the importance of providing athletes with instructional feedback during practices (Bloom et al., 1999; Kahan, 1999; Segrave & Ciancio, 1990; Tharp & Gallimore, 1976). To provide athletes with information that is detailed, accurate, and relevant, it is important for coaches to continue to develop themselves and their knowledge of the sport that they coach. To accomplish this task, coaches might attend coaching clinics, read relevant books and articles, observe other great coaches, and/or talk to the athletes who play for them.

Future Directions

The methodology used in the current study allowed for a more accurate and in-depth analysis of Summitt's practice feedback compared with methodologies employed in previous research. In addition, the current study was the first to incorporate a variety of measures (including the players' average amount of playing time) to determine players' expectancy status (high, low). According to the results, Pat Summitt's perceptions of her players' abilities did not appear to influence how she treated them. However, it should be noted that all the players included in this study received opportunities to participate in games (average amounts of playing time ranged from 7 to 31 min). Therefore, it is possible that Summitt's practice behaviors were also influenced by her perceptions of whether players would contribute in games. While the current study included *actual playing time* as a measure of expectancy status, future research might also incorporate a measure that assesses *coach perceptions of playing time* (i.e., the degree to which each player is likely to contribute in games). Obtaining coach perceptions of both player abilities and anticipated game contributions might provide a more accurate assessment of each player's expectancy status (high, low).

Coaching research has experienced significant growth over the last 25 years (Gilbert & Trudel, 2004). Understanding what makes certain coaches more effective than others can be explored from a variety of angles. In retrospect, Gallimore and Tharp (2004) said that they would have done some things differently if they had the opportunity to conduct the original Wooden study again (Tharp & Gallimore, 1976). One of these was to "make every effort to gain the perspective of players, of coaches, of Coach Wooden himself" (Gallimore & Tharp, 2004, p. 135). Doing so would have likely provided a more complete analysis of Wooden's approach to coaching and the same could be said for the current study on Pat Summitt. Thus, we encourage future researchers to consider implementing qualitative methods (e.g., coach and athlete interviews) in addition to observation techniques when studying the practices of highly successful coaches.

Conclusion

Based on the results of this study, it can be concluded that (a) the majority of Summitt's coaching behaviors are instructional, positive, and hustle oriented, (b) her practices are intense and game-like and, (c) she provides her players with an equitable amount of feedback regardless of expectancy level. Inarguably, Pat Summitt has achieved the highest level of coaching success in her sport. Given the impact of coaching behaviors on athlete development and performance, it is likely that the provision of equitable feedback plays a significant role in her success.

References

Allen, J.B., & Howe, B. (1998). Player ability, coach feedback, and female adolescent athletes' perceived competence and satisfaction. *Journal of Sport and Exercise Psychology, 20,* 280–299.

Amorose, A.J., & Smith, P.J.K. (2003). Feedback as a source of physical competence information: Effects of age, experience, and type of feedback. *Journal of Sport and Exercise Psychology, 25,* 341–359.

Becker, A.J., & Solomon, G.B. (2005). Expectancy information and coach effectiveness in intercollegiate basketball. *The Sport Psychologist, 19,* 251–266.

Black, J.S., & Weiss, M.R. (1992). The relationship among perceived coaching behaviors, perceptions of ability, and motivation in competitive age-group swimmers. *Journal of Sport and Exercise Psychology, 14,* 309–325.

Bloom, G.A., Crumpton, R., & Anderson, J.E. (1999). A systematic observation study of the teaching behaviors of an expert basketball coach. *The Sport Psychologist, 11,* 157–170.

Chelladurai, P. (1984). Discrepancy between preferences and perceptions of leadership behavior and satisfaction of athletes in varying sports. *Journal of Sport Psychology, 6,* 27–41.

Chelladurai, P., & Carron, A.V. (1983). Athletic maturity and preferred leadership. *Journal of Sport Psychology, 5,* 371–380.

Côté, J., Salmela, J., Trudel, P., Baria, A., & Russell, S. (1995). A coaching model: A grounded assessment of expert gymnastic coaches' knowledge. *Journal of Sport and Exercise Psychology, 17,* 1–17.

De Marco, G.M.P., Mancini, V.H., & West, D.A. (1997). Reflections on change: A qualitative and quantitative analysis of a baseball coach's behavior. *Journal of Sport Behavior, 20,* 135–163.

Dwyer, J.M., & Fischer, D.G. (1990). Wrestlers' perceptions of coaches' leadership as predictors of satisfaction with leadership. *Perceptual and Motor Skills, 71,* 511–517.

Gallimore, R., & Tharp, R. (2004). What a coach can teach a teacher, 1975–2004: Reflections and reanalysis of John Wooden's teaching practices. *The Sport Psychologist, 18,* 119–137.

Gilbert, W., & Trudel, P. (2004). Analysis of coaching science research published from 1970–2001. *Research Quarterly for Exercise and Sport, 75,* 388–400.

Gould, D., Guinan, D., Greenleaf, C., & Chung, Y. (2002). A survey of U.S. Olympic coaches: Variables perceived to have influenced athlete performances and coach effectiveness. *The Sport Psychologist, 16,* 229–250.

Horn, T.S., Lox, C., & Labrador, F. (2006). The self-fulfilling prophecy theory: When coaches' expectations become reality. In J.M. Williams (Ed.), *Applied sport psychology: Personal growth to peak performance* (pp. 63–81). New York: McGraw-Hill.

Kahan, D. (1999). Coaching behavior: A review of the systematic observation research literature. *Applied Research in Coaching and Athletics Annual, 14,* 17–58.

Krane, V., Eklund, R., & McDermott, M. (1991). Collaborative action research and behavioral coaching intervention: A case study. *Applied Research in Coaching and Athletics Annual, 6,* 119–148.

Lacy, A.C., & Darst, P.W. (1984). Evolution of a systematic observation system: The ASUOI observation instrument. *Journal of Teaching in Physical Education, 3,* 59–66.

Lacy, A.C., & Darst, P.W. (1985). Systematic observation of behaviors of winning high school head football coaches. *Journal of Teaching in Physical Education, 4,* 256–270.

Lacy, A.C., & Martin, D.L. (1994). Analysis of starter/nonstarter motor-skill engagement and coaching behaviors in collegiate women's volleyball. *Journal of Teaching in Physical Education, 13,* 95–107.

Markland, R., & Martinek, T.J. (1988). Descriptive analysis of coach augmented feedback given to high school varsity female volleyball players. *Journal of Teaching in Physical Education, 7,* 289–301.

Nater, S., & Gallimore, R. (2006). *You haven't taught until they have learned: John Wooden's teaching principles and practices*. Morgantown, WV: Fitness Information Technology.

Riemer, H.A., & Chelladurai, P. (1995). Leadership and satisfaction in athletics. *Journal of Sport and Exercise Psychology, 17,* 276–293.

Schliesman, E. (1987). Relationship between the congruence of preferred and actual leader behavior and subordinate satisfaction with leadership. *Journal of Sport Behavior, 10,* 157–166.

Segrave, J.O., & Ciancio, C.A. (1990). An observational study of a successful Pop Warner football coach. *Journal of Teaching in Physical Education, 9,* 294–306.

Sinclair, D.A., & Vealey, R.S. (1989). Effects of coaches' expectations and feedback on the self-perceptions of athletes. *Journal of Sport Behavior, 12,* 77–91.

Smith, R.E. (2001). Positive reinforcement, performance feedback, and performance enhancement. In J. Williams (Ed.), *Applied sport psychology: Personal growth to peak performance* (4th ed.), (pp. 29–42). Mountain View, CA: Mayfield.

Solomon, G.B. (1993). *The expectancy rating scale.* Unpublished paper. University of Virginia, Charlottesville, Virginia.

Solomon, G.B. (2001). Performance and personality impression cues as predictors of athletic performance: An extension of expectancy theory. *International Journal of Sport Psychology, 32,* 88–100.

Solomon, G.B. (2003). *Solomon expectancy sources scale.* Unpublished paper. California State University, Sacramento, California.

Solomon, G.B., DiMarco, A.M., Ohlson, C.J., & Reece, S.D. (1998). Expectations and coaching experience: Is more better? *Journal of Sport Behavior, 21,* 444–455.

Solomon, G.B., Golden, A.J., Ciapponi, T.M., & Martin, A.D. (1998). Coach expectations and differential feedback: Perceptual flexibility revisited. *Journal of Sport Behavior, 21,* 298–310.

Solomon, G.B., & Kosmitzki, C. (1996). Perceptual flexibility among intercollegiate basketball coaches. *Journal of Sport Behavior, 19,* 163–177.

Solomon, G.B., & Reece, S.D. (1995). *Training manual for the Arizona State University Observation Instrument*. Charlottesville, Virginia: University of Virginia.

Solomon, G.B., Striegel, D.A., Eliot, J.F., Heon, S.N., Maas, J.L., & Wayda, V.K. (1996). The self-fulfilling prophecy in college basketball: Implications for effective coaching. *Journal of Applied Sport Psychology, 8,* 44–59.

Summers, R.J. (1991). The association between athletes' perceptions of their abilities on the influence of coach technical-instruction. *Journal of Sport Behavior, 14,* 30–40.
Tharp, R.G., & Gallimore, R. (1976). What a coach can teach a teacher. *Psychology Today, 9,* 75–78.
Voight, M., & Carroll, P. (2006). Applying sport psychology philosophies, principles, and practices onto the gridiron: An interview with USC football coach Pete Carroll. *International Journal of Sports Science & Coaching, 1,* 321–331.
Wandzilak, T., Ansorge, C.J., & Potter, G. (1988). Comparison between selected practice and game behaviors of youth sport soccer coaches. *Journal of Sport and Exercise Psychology, 11,* 78–88.
Weinberg, R., Grove, R., & Jackson, A. (1992). Strategies for building self-efficacy in tennis players: A comparative analysis of Australian and American coaches. *The Sport Psychologist, 6,* 3–13.
Wrisberg, C.A. (1990). An interview with Pat Head Summitt. *The Sport Psychologist, 4,* 180–191.

Revision received: March 1, 2008

Appendix

Modified Expectancy Rating Scale (MERS)

Directions: Please rate each of your athletes on each item from 1 (not true) to 5 (very true) by comparing them to other athletes at their competitive level.

Name and Number of Athlete _____

	Not True				Very True
1. This athlete possesses sound basketball fundamentals	1	2	3	4	5
2. This athlete has the aptitude to become an exceptional basketball player.	1	2	3	4	5
3. This athlete possesses the natural physical attributes necessary to become an exceptional basketball player.	1	2	3	4	5
4. This athlete is receptive to coaching.*	1	2	3	4	5
5. This athlete is a hard worker.*	1	2	3	4	5
6. This athlete possesses a high level of competitiveness.	1	2	3	4	5
7. This athlete is willing to listen and learn.	1	2	3	4	5
8. Overall, this athlete will be an exceptionally successful basketball player at this level of competition.*	1	2	3	4	5

*Items added to the original Expectancy Rating Scale (Solomon, 1993).