The Sport Psychologist, 2004, 18, 119-137
© 2004 Human Kinetics Publishers, Inc.

What a Coach Can Teach a Teacher, 1975-2004: Reflections and Reanalysis of John Wooden's Teaching Practices

Ronald Gallimore
University of California, Los Angeles

Roland Tharp
University of California, Santa Cruz

This paper revisits a 1970s study of Coach John Wooden's teaching practices in light of new information. The original study reported discrete acts of teaching, including the number of instructions, hustles, praises, among other instructional moves. Using qualitative notes recorded during the original study, published sources, and interviews with Coach Wooden and a former UCLA player, we reexamined the 1970s quantitative data to better understand the context of Wooden's practices and philosophy. We conclude that exquisite and diligent planning lay behind the heavy information load, economy of talk, and practice organization. Had qualitative methods been used to obtain a richer account of the context of his practices, including his pedagogical philosophy, the 1974-1975 quantitative data would have been more fully mined and interpreted.

I think I followed the laws of learning in basketball or baseball or tennis or whatever I taught as far as sports were concerned through the years as much as I did teaching a youngster how to parse a sentence or something in English classes that I taught.

I think everyone is a teacher. *Everyone*! Maybe it's your children, maybe it's a neighbor, maybe it's someone under your supervision in some other way. In one way or another, you're teaching them by your actions. (J. R. Wooden, personal interview, February 12, 2002)

On one side of Westwood Boulevard is Pauley Pavilion. On the other side of the boulevard is the UCLA campus proper, where psychologists and other scholars go about their life work of teaching and learning. Except as fans, the street between academe and sport is seldom crossed by professors on any campus. (Tharp & Gallimore, 1975, p. 1)

Ronald Gallimore is with the Department of Psychiatry and Education at the University of California, Los Angeles. E-mail: ronaldg@ucla.edu. Roland Tharp is with the Department of Education at the University of California in Santa Cruz.

Twenty-five years and a new century later, the street separating professors and coaches is often crossed. A claim documented by the emergence of this journal and a mounting number of studies of coaching and coaches (Gilbert, 2002; Gilbert & Trudel, 2003). In light of the robust interest in coaching as a topic of investigation, we are here revisiting our own crossing, the case study of John Wooden that we did many years ago (Tharp & Gallimore, 1976).

In 1974-75, we crossed Westwood Boulevard as educational researchers to study the UCLA basketball coach at work. Our purpose was simple: Research the practices of a master teacher to generate new hypotheses and investigative avenues. The major challenge in case studies is always sampling: finding a teacher to study whose credentials and accomplishments warrant a claim of exemplary practice. Justifying the choice of Coach John Wooden was the easy part.

Here are the simple facts: At the beginning of the 1974-1975 basketball season, John Wooden's teams had won 9 NCAA championships, including 7 in a row from 1967 to 1973. He won with teams of great talent and some with relatively less. Our study spanned one season, the one many believe was the best of his career and perhaps the best of anyone's career: The 1974-1975 UCLA team won a 10th NCAA title, an accomplishment among the greatest in the history of intercollegiate athletics.

At his retirement following the 1975 season, he was widely regarded as the greatest teacher of basketball. In 1976, we were confident that we had selected a master teacher to study. We still are. That view was reaffirmed when he was named the greatest college coach of the 20th Century by ESPN's expert panel. In this paper, we revisit the original study results in light of new information, including Coach Wooden's published observations (Wooden, 1988, 1997), a dissertation study of his teaching (Dunphy, 1981), the observations of Swen Nater (UCLA player, 1970-73), previously unpublished data from our 1974-1975 observations at Pauley Pavilion, and especially an interview conducted with Coach Wooden at his home specifically for the purpose of this reconsideration. As a result, much of the early study was verified. But much can now be modified, enriched, and corrected.

The 1974-75 Study: Observing Coach Wooden in His Classroom

During the 1974-75 season, we received Coach Wooden's permission to observe and record his actions during afternoon practices, held most week-days from 3:29-5:29 p.m. Practice began at 3:00 p.m. for individual work. The times were exact and unvarying.

We used a conventional approach to classroom research: Create a set of categories that capture events and behaviors of interest and refine them to the point that two people would independently assign the same behavior to same category. Following this convention, we sat at mid-court in Pauley Pavilion taking notes, quietly discussing what played out in front of us, designing a system for coding his acts of teaching.

Wooden's teaching fell naturally into a frequency-count system. His teaching utterances or comments were short, punctuated, and numerous. There were *no* lectures, *no* extended harangues. Although frequent and often in rapid-fire order, his utterances were so distinct we could code each one as a separate event. During

the 8 practices we used to develop our 10 category coding scheme, he rarely spoke longer than 20 seconds. As a procedural rule, we coded 20 consecutive utterances into one of our ten categories, rested briefly, then coded another 20 utterance sequence. Most of what he said we categorized as "Instructions."

> "Take lots of shots in areas where you might get them in games."
>
> "Do some dribbling between shots."
>
> "Don't walk."
>
> "Hard driving, quick steps."

At times, with a short whistle blast he would briefly stop activity to make a point. A typical example of these relatively longer utterances is the following:

> "You're reaching in! You're *still* reaching in! Gracious, I'd hate to see us play a good guard. You can't take the ball away from a good guard! You *can* get position. *Cut him off!* Some of you think you're better on defense than you are and you aren't. Now, no more reaching! *Cut 'em off!* Now go!"

Because he was so easy to code, we quickly established blind reliability of coding every utterance and demonstration into one of ten categories. Table 1 presents our final coding categories used for 15 practices, from December of 1974 to March of 1975. Altogether, we observed 30 hours of practices and recorded and coded 2,326 discrete acts of teaching.

Subsequent research has proven the utility of such direct observation methods (Gilbert, 2002; Gilbert & Trudel, 2003). For example, this literature suggests that "instructing" varies in frequency, although it is often the most frequently observed category, and, on average, is observed more often than praises or reproofs. Langsdorf (1979) observed Frank Kush, a successful collegiate football coach, and reported a 36% frequency of "instructing." A study of Jerry Tarkanian, a celebrated basketball coach, reported three different forms of "instructing" constituted 55% of his teaching (Bloom, Crumpton, & Anderson, 1999). Lacy and Darst (1989) studied 10 winning high school football coaches and observed skill-focused instruction occurred three time more often than any other category. Tennis coaches also appear to use "instructing" more than any other category (Claxton, 1988). Use of praise and reproofs has also been reported in varying amounts, depending on the age of the players being coached. For example, in a study of youth coaches, Smith, Smoll, and their colleagues (Smith, Smoll, & Curtis, 1978; Smith, Smoll, & Hunt, 1977) observed more use of positive reinforcement (17%) and less reproofs (1.8%) than we reported for Wooden. High school tennis coaches also had a greater praise to scold ratio than Coach (Claxton, 1988) as did Jerry Tarkanian (13.6 % praise to 6% scold; Bloom, Crumpton, & Anderson, 1999). To what extent variations in praise to scold ratios are due to age of players, sport, coaching philosophy, or code definitions is difficult to determine given the limited data.

To an extent, the research on coaching suffers from some of the same limitations observed in teaching research (Hiebert, Gallimore, & Stigler, 2002). Namely, there has been more attention to teaching behavior or pedagogical moves than to the role of subject matter knowledge and instructional philosophy, instructional planning, and other features of the context of practice time. In addition, too few studies have documented a link between specific acts of teaching and student learning and

Table 1 Summary of Findings from Study of Coach Wooden's Teaching[1]

Coding Category	Description	Percent of total utterances
Instructions	What to do, how to do it	50.3
Hustles	Activate or intensify previous instructed behavior	12.7
Modeling-positive	Demonstration of how to perform	2.8
Modeling-negative	Demonstration of how not to perform	1.6
Praises	Compliments	6.9
Reproofs*	Expressions of displeasure	6.6
Nonverbal reward	Smiles, pats, etc.	1.2
Nonverbal punishment	Scowls, despairing gestures, temporary removal of player from scrimmage	trace
A "Wooden" (Reproof/reinstruct)**	Combination category: Scold, modeling-positive, followed by modeling-negative ("How many times do I have to tell you to get your hands up for a rebound?"), ending with a modeling-positive	8.0
Other	Anything not above	2.4
Un-codable	Could not be seen or heard	6.6

* In the original, the term "scolds" was used. We have substituted "reproofs" in deference to Coach Wooden's preference.
** In the editing process at *Psychology Today*, the original description of a Wooden was revised from a 3-part to a 2-part sequence. See the next section for the wording in the original manuscript describing the sequence of behavior that was actually coded. The major findings of our coding scheme can be summarized as follows: 75 % of all utterances carried information, much of which was repetitive (instructions, hustles, modeling, & Woodens). Minimal use of praises and reproofs.

achievement. One reason is the high barrier to fielding rigorous designs that require random assignment to different conditions, extended professional development to insure fidelity of implementation of a alternative practices, and rearrangement of institutional organization and routine.

Looking Back With the Hindsight of 25 Years

Like all researchers, the code we constructed in 1974 reflected investigative concerns of the time. We took what might be glossed as an educational psychology perspective. Praise and reproofs were included in our code because of the then dominant behaviorist view of teaching, thus a focus on the effects of positive reinforcement on student learning. When we planned the study of Coach Wooden,

we wondered if a master teacher (presumably with little concern for behaviorist theory) made use of reinforcement and punishment and if so, in what form.

Although not part of our formal coding scheme, we also observed and kept notes on other features of Coach's teaching. First, we noticed that the practices were tightly organized and conducted with clock-like precision. There was constant activity, with players moving from drill to drill quickly and efficiently, so that the intensity level was kept at a remarkably high level. Years later, Bill Walton, a NCAA college player of the year, described the practices this way:

> Practices at UCLA were nonstop, electric, supercharged, intense, demanding . . . with Coach pacing the sidelines like a caged tiger, barking instructions, positive reinforcement, and maxims: "Be quick, but don't hurry." He constantly changed drills and scrimmages, exhorting us to "move quickly, hurry up." Games seemed like they happened in a slower gear. I'd think in games, "why is this taking so long because everything we did in games happened faster in practice." (Wooden, 1997, p. viii)

The intensity and speed of the practices were represented in our coding scheme to a limited extent by the "hustle," a behavior we had never observed in our teaching research nor seen any reference to in the literature. "Hustles" were defined as behaviors intended to intensify actions during drills and scrimmages. Swen Nater remembers "hustles" as a method of "helping us increase speed while maintaining accuracy. Coach always wanted things to become automatic and automaticity was reached through repetition and increased speed" (Nater, personal communication, October 30, 2002).

A second category (scold/reinstruction) also had no distinguished heritage from the educational psychology perspective on teaching we brought to the study. This code combined information, modeling, and feedback and was so noteworthy for its brevity and information load we began to call it a "Wooden." In the original manuscript submitted for publication, we described a "Wooden" as a three-part sequence of reproofs/scolds and modeling that were often combined and blended into a distinctive pattern. The following description is from our original submitted manuscript:

> The majority of Wooden's scolds are embedded with instructions, in a form of statement so characteristic we called the category "Woodens." These are combination, complex statements in which the Coach simultaneously scolds and then specifically reinstructs: "I have been telling some of you for three years not to wind up when you pass the ball: Pass from the chest!" Perhaps the example of greatest artistry is his use of modeling. His demonstrations are rarely longer than 3 seconds, but are of such clarity that they leave an image in memory much like a text-book sketch. This modeling most often takes place during patterned offense drills, or half-court scrimmage, when Wooden will whistle-down play, demonstrate the correct way to perform an act (M+), and then imitate the incorrect way the player has just performed (M-). He then remodels the M+. This sequence of M+, M-, M+ is Wooden's typical pattern, and appears to be an extraordinarily effective way of providing both feedback and discrimination training. (Tharp & Gallimore, unpublished manuscript, 1975[2])

Our category of the Wooden is called by the Coach himself a "sandwich approach." Whatever happened in the editing process, we are satisfied that we accurately described and coded "Woodens" (M+, M-, M+) in a way that accords with the Coach's views of what he did.[3]

In hindsight, the strength of our objective-observable focus was also its limitation. We focused on his words and actions in the moment. We were unable appreciate the relationship of his succinct, punctuated statements and the organized context of those orchestrated and intense practices. Why was he able to teach in so economical a manner? Were the frequent utterances *ad hoc*, spur of the moment? Was he simply relying on his experience and intuition?

Our methodology led us away from thinking of those questions because of the "objectivity" *zeitgeist* of the 1970s. But it was also the case that we considered ourselves so fortunate to have permission to observe (even the closed practices prior to the NCAA championship tournament) that we didn't have the nerve to ask for more, especially after the unexpected retirement Coach Wooden announced just before his team won UCLA's 10th NCAA basketball title. Had we called for an interview instead of writing a letter, we now realize that he would probably have granted it, given his intense and enduring interest in analyzing his own teaching practices. Lacking the context of his intentions, we could only note with admiration the nature and tone of his pedagogical practice, but we could not interpret it.

In the meantime, we learned from his published accounts and those of his players and from our own conversations and interviews with him in the intervening years. It is now clear Coach Wooden's economical teaching that we observed was the product of extensive, detailed, and daily planning based on continuous evaluation of individual and team development and performance. His developing and planning of lessons many now argue are keys to effective teaching (Stigler & Hiebert, 1999). He studied each individual very carefully so he could anticipate what his students would do—or fail to do—and he was primed and ready to instantly respond with one of those brief, information-packed instructions. "He knew me better than I knew myself" (Nater, personal communication, October 30, 2002).

He made decisions "on the fly" at a pace equal to his players, in response to the details of his players' actions. Yet his teaching was in no sense ad hoc. Down to the specific words he used, his planning included specific goals both for team and individuals. Thus, he could pack into a practice a rich basketball curriculum and deliver information at precisely the moments it would help his students learn the most. It was, he always said, the teaching in practices that he valued, more than the games and the winning, and it was practice that he was so reluctant to leave behind when he retired.

Creating Opportunities to Teach

During the season, we observed the Coach at work; one young man was struggling to learn the fine points of his center position. At 7'2" his height was more impressive than his skill at that point in his development. In and after practice he received more than his fair share of the Coach's attention, all predictably short in duration. For example, during fast-breaks, the young center was to secure the rebound and pass it to a guard who could initiate the controlled rush to the other end of the court. Time and again the young center hesitated before making the pass, triggering an

instant terse instruction from the Coach. In an intense intra-squad scrimmage, the center cleared the rebound, looked around, and began to dribble down court. "Pass the ball to someone short!" Coach Wooden shouted.

Earlier that morning he had created a "lesson plan" of important instructions to deliver as "teaching moments" arose in the flow of practice. One bounce of that dribble, and Wooden was ready.

> Everything was planned out each day. In fact, in my later years at UCLA I would spend two hours every morning with my assistants organizing that day's practice sessions (even though the practice itself might be less than two hours long). I kept a record of every practice session in a loose leaf notebook for future reference
>
> I would spend almost as much time planning a practice as conducting it. Everything was listed on three-by-five cards down to the very last detail. (Wooden, 1997, p. 132-133)

Examples of the practice plans and cards were presented in Wooden (1999).

> 3:30-3:40: Easy running floor length, change of pace and direction, defensive sliding, one on one (cutter), one on one (dribbler), inside turn reverse to receive pass, reverse turn and drive with imaginary ball, jumping.
>
> 3:40-3:45: Five-man rebounding and passing.
>
> 3:45-3:50: Five-man dribble and pivot.
>
> 3:50-4:00: Five-man alternative post pass and cut options.
>
> 4:00-4:15: Three-man lane with one and two men alternating on defense, parallel lane, weave pivot, front and side. (Wooden, 1999, p. 31)

The cards were carried to the practice floor by assistant coaches, managers, and the Coach himself:

> My coaches and managers also had three-by-five cards each day so they knew—to the exact minute—when we would need two basketballs at one end of the court for a drill, or five basketballs at mid-court for a different drill, or three players against two players at a certain place and time, or the dozens and dozens of variations I devised.
>
> I kept notes with the specifics of every minute of every hour of every practice we ever had at UCLA. When I planned a day's practice, I looked back to see what we'd done on the corresponding day the previous year and the year before that. (Wooden, 1997, p. 132-133)
>
> By the time I came to UCLA, I'd already been teaching for thirteen years . . . could tell you what we did every minute of practice in my twenty-seven years at UCLA. I could go back to the 48-49 year and tell you what we did on November the 15th—minute by minute what we did—and I think that helped

> me tremendously by doing those [plans] and I can refer back always. I would always make little notations following each practice, maybe . . . too long, a couple of minutes or five minutes too long on this, or [we] need a little more attention to this, maybe taking into account how the season has progressed, and things like that. (J. R. Wooden, personal interview, February 12, 2002)

He planned for the individual as well as the group: "I could track the practice routines of every single player for every single practice session he participated in while I was coaching him" (Wooden, 1997, p. 132-133).

"Pass to someone short" was a byproduct of the detailed practice plans. Coach Wooden went to practice armed with cards that helped him attend to the fine details of a player's performance and development and focus his instructions accordingly. These included what part of the offense the player needed to work on, moves for his particular position, the number of consecutive free-throws required of an individual before he could return to the scrimmage, and many other areas. He is quick to add that individualizing instruction is more complicated than adjusting practice drills:

> They are all different. There is no formula. I could name players, all who were spirited, but in a different way. You can't work with them exactly the same way. You've got to study and analyze each individual and find out what makes them tick and how you can get them under control. Some you may have to put on the bench more. Others you've got to pat on the back more. I wish there was a formula.
>
> The same thing won't work with every team. It depends on the personnel. The same thing was true in my English classes. I had students that just simply could not do well on tests and I knew they knew the material. . . . So to build a team you have to know the individuals you are working with. (J. R. Wooden, personal interview, February 12, 2002)

Keeping his instructional statements brief was part of his instructional philosophy and approach:

> John Bunn, one of the very brightest, most erudite coaches I've ever known, made the statement one time, "Give a coach the opportunity to take fifteen minutes to say what he should in fifteen seconds—*he will*!" (emphasis original). I learned to be concise and quick and didn't string things out. . . . I never had a lot of meetings and things of that sort. I wanted short things during the practice session. (J. R. Wooden, personal interview, February 12, 2002)

On what was this approach based? Coach Wooden credits his experience as a high school English teacher with teaching him to appreciate the importance of detailed planning, whether for a lesson or a practice:

> I felt running a practice session was almost like teaching an English class. . . . I knew a detailed plan was necessary in teaching English, but it took a while before I understood the same thing was necessary in sports. Otherwise, you waste an enormous amount of time, effort, and talent. (Wooden, 1997, p. 132)

> I know at the beginning [of my coaching career] I didn't have a written lesson plan. . . . I just sort of picked things up and I knew of some things that I'm going to do and I'm going to do this and I'll work them out at the time. I learned to have a definite plan of what we're going to do each minute. (J. R. Wooden, personal interview, February 12, 2002)

Coach Wooden credits a visit to Notre Dame University in the 1930s for some important lessons on planning and organization of practices:

> Frank Leahy, the Notre Dame football coach invited Coach Wooden to one of his practices. Wooden said he had never seen anything so organized in his life. Players were sprinting from one activity to another (no time was wasted) and everything was planned to the minute. Practice started and ended on time. Coach Wooden said that he changed his own methods after seeing that practice. (Nater, personal communication, October 30, 2002)

Coach Wooden believes he got better as a teacher each year:

> I hope I was learning the very last year [I coached]. I don't think I learned as much the last year as I did my first year but I hope I learned a little bit each and every year. . . . I think I learned more my first year of teaching than I ever did any other year. The second year I think I learned more than any other year following that, and the third year, and so on. And as time went by, maybe something new would come along that I'd learn . . . (J. R. Wooden, personal interview, February 12, 2002)

Methods for his own learning included research projects during each off-season about particular areas of basketball, such as rebounding, free-throw shooting, etc. Besides library searching and reading, he also surveyed and interviewed successful coaches and players in an attempt to distill out effective principles to be adapted into the program at UCLA (Nater, personal communication, February 21, 2003). Continuously improving his teaching practices based on carefully researched and examined incremental changes was the underlying philosophy:

> When you improve a little each day, eventually big things occur. . . . Not tomorrow, not the next day, but eventually a big gain is made. Don't look for the big, quick improvement. Seek the small improvement one day at a time. That's the only way it happens—and when it happens, it lasts. (Wooden, 1997, p. 143)

Praise for a Larger Purpose

In 1974-75, teacher-praise was a major topic of classroom research (Tharp & Wetzel, 1969). Thus we were surprised that Coach Wooden so seldom praised or reproved his players. This was at odds with the view held by many in the early '70s that the effective teacher signals, by praise and reproof, what student behaviors do and do not match expectations.

When asked during the interview in 2002 about praises and reproofs, his answer suggested an altogether different perspective than the one had in 1974-1975. What we thought of and coded as "instructions" represented to him the positive

approach to teaching, and he quickly corrected the interviewer's assumption that positive meant praising:

> RG: Of the twenty-five hundred things we recorded about what you said, about six percent of those were positive praises. And six percent were [reproofs]. But the thing that we were most struck about was that you didn't do either of those things so much. Most of the things you said were just plain information about how to play basketball. I think we calculated that seventy-five percent of everything you said was information about the proper way to . . . do something in a particular context.
>
> Coach: I believe that is the positive approach. I believe in the positive approach. Always have. (J.R. Wooden, personal interview, February 12, 2002)

The positive approach in Coach's practice was to focus players' attention on specific, fine points of how to properly play basketball. A former player confirms that the Coach practiced what he preaches and offers an assessment of its value.

> As a former student who committed many errors during practice and therefore having been the recipient of plenty of corrections, it was the "information" I received, during the correction, that I needed most. Having received it, I could then make the adjustments and changes needed. It was the information that promoted change. Had the majority of Coach Wooden's corrective strategies been positive ("Good job") or negative ("No, that's not the way"), I would have been left with an evaluation, not a solution. Also, corrections in the form of information did not address, or attack me as a person. New information was aimed at the act, rather than the actor. (S. Nater, personal communication, February 3, 2003)

In one sense, John Wooden's views on praise and how he used it are consistent with conclusions from research done post-1975: Praise that is specific and informative is better than general noninformative praise; praise that is perceived to be manipulative is not as good as praise perceived to be genuine; praise has the most effect when focused on effort and mastery (Stipek, 1993). So, what about the praising he did?

> Most of the compliments and the praise . . . would be given to those that aren't playing too much. But with the players that are playing, no . . . they're going to get that from everybody . . . when I did give praise most of it would be to those that aren't going to get it from the outside and the criticism would be a little more strong for those that are getting a lot of outside praise. Yes, that was done with purpose. (J. R. Wooden, personal interview, February 12, 2002)

In the interview, Coach Wooden expressed curiosity about whether we had observed this pattern of greater praise for reserves compared to regulars who got the bulk of playing time in games. He indicated that while he intended to do this, some former players had felt in their individual cases he had not done so. Although these data were not reported in the original 1976 paper, we had noted in many

practices which individuals were singled out for praise or reproof. The results are presented in Table 2.

In one sense his intentions were enacted in the practices we observed: The ratio of positive to negative comments delivered to reserves favored praise, while it was roughly even for regulars. This is consistent with Swen Nater's report who remembered differential treatment of starters and reserves to be as the Coach intended:

> The regulars were reinforced by the attention they received during practice, by teaching (he taught regulars more than he taught us) and during games from the fans and media. The reserves were reinforced by being reminded that we needed to stay ready and that our role was to make the regulars better. We did receive praise during practice, more than the regulars, that is for sure. (Nater, personal communication, October 30, 2002). 2

Three decades later, we learned that Wooden had his own reasons for treating reserves differently, for giving them the positive attention that the regulars got from fans and the media. And those reasons were only indirectly related to the ideas of educational psychologists about strengthening specific behaviors through positive reinforcement. To understand his use of praise, we needed to know more about

Table 2 Percent Praises and Reproofs Directed at Regulars and Reserves

Regulars	Approvals	Scolds	Totals	% Approvals
M	8	2	10	80%
D	3	1	4	75%
R	8	8	16	50%
P	3	4	7	43%
R	5	8	13	38%
A	0	9	9	0%
Regular Averages	4.50	5.33	9.83	48%
Reserves	**Approvals**	**Scolds**	**Totals**	**% Approvals**
M	1	0	1	100%
W	5	1	6	83%
C	4	1	5	80%
J	8	4	12	67%
R	2	2	4	50%
G	5	6	11	45%
B	3	6	9	33%
Reserve Averages	4.00	2.86	6.86	66%

his approach than could be directly observed. In brief, he believed that playing a limited number of men made for a stronger, more competitive team:

> I wanted them to understand that I'm am only going to play seven, probably never over eight players. And my players have to learn to accept that. . . . I feel that we got better continuity [playing a limited number]. [Those that played regularly were] far more accustomed to playing together than if I was making constant substitutions. And I also felt that [the regulars] were going to be in better condition . . . than they would be otherwise. . . . [And] the others are going to be in good enough condition . . . to do what we need for them to do at any particular time. For the [7 or 8 regulars], I wanted them to have a lot of time working together so they'd learn to know each other on the floor. (J.R. Wooden, personal interview, February 12, 2002)

But for this to work, it was crucial to keep the reserves engaged and find ways to let them know what their contributions could be and what they would mean for the team.

> . . . the [reserves] are going to be needed [and I needed to let them know that]. You're going to be developing those that are going to be playing the most and you're very important . . . we may have a injury or, or a sickness or some other thing that might cause us to lose one of [the regulars]. You have to be ready to step in. If the reserves are dogging it there's not going to be any improvement in the regulars. So, I've got to constantly get across to them how much they are needed. I think it took a special effort to make sure that we do have harmony on the group as a whole. (J.R. Wooden, personal interview, February 12, 2002)

Coach always told the reserves to remember this rule: "I will get myself ready and then my chance may come" (S. Nater, personal communication, October 30, 2002).

However, he did recognize what a challenge it would be, under the circumstances, to persuade the reserves of their importance to the team:

> RG: Did you try to develop a positive bond with all players or did you think that wasn't really necessary to do?
>
> Coach: Another coach once said, "I'm hired to coach 'em, not court 'em." And, while I don't look at it quite the same way, I wanted to be well liked by all the players. But I knew very well that those who aren't going to play very much, they're not going to like me that much. Many of them are going to think it's personal. I hope it isn't personal but am I perfect? Can I be sure of my own self that I'm not playing favorites? I know I don't mean to, but I can understand how others would feel that way. . . I know that. (J. R. Wooden, personal interview, February 12, 2002)

Thus, praising reserves was intended to let them know he appreciated their role of helping regulars prepare for stiff competition. By extending themselves in practice, they would create the conditions that he needed to teach the regulars. If he praised them more than the regulars, he hoped this would reinforce their commitment and effort. However, he reports that he was not always successful in his communication:

> I tried, maybe not very successfully as I found out later, to give most of the compliments and praise to those who are not playing too much. . . . There was one reserve player who avoided me for years, and finally (he) told me that he had felt I didn't like him. I never had any feeling about [him] that was ill. I thought he was a nice young man. . . . I knew he was intelligent and it was just my feeling about him that he wasn't as good as the players I had playing ahead of him. He never felt that way. That's alright. I wouldn't expect him to feel any other way. . . . But suddenly he finds out the things that *I* was using, were things that *he* was using in his profession. And now we're close as could be. (J. R. Wooden, personal interview, February 12, 2002)

One significant factor in reserves' discontent arose from the way practices were organized 1960s to 1975. Just prior to the first NCAA title in 1964, not only did he regularly play just 7 men in games, the same 7 practiced as a unit. Unless there was an illness or injury, reserves never got to practice with regulars, but only played against them, which some felt never gave them a chance to show what they could do. Given the talent level of the 7 starters, many of whom might have been on one or more NCAA title teams, the problem is evident for the reserves. To crack into the starting 7 might require successfully competing with someone who had played on an NCAA championship team.

> A player one time said, "you never let me play with Alcindor (Abdul-Jabbar). I can do better if you let me play with him. Now you have me with some rinky-dinks." I told him one time, "That's what somebody said about you when you were in there. You were one of the rinky-dinks." By practicing and playing only 7 . . . I don't think it made for better harmony for the team as a whole. It made for better harmony [and consistency] among the seven regulars that are going to get the actual playing time. But [the reserves] are important to the development of the seven [regulars]. If they're dogging it, there's not going to be any improvement in 7 regulars. I've got to constantly get across to [the reserves] how much they are needed. I think it took a special effort to make sure that we do have harmony in the group as a whole. (J. R. Wooden, personal interview, February 12, 2002)

In a later telephone conversation, Coach Wooden was asked how he might critique his teaching in hindsight:

> Looking back, I think I sometimes failed to get reserves to feel how important they were. Over time, some of my players began to tell me that. My intentions were to make the reserves feel important to the team, and I thought I did. I guess I was fooling myself. (J. R. Wooden, personal communication, July 11, 2003)

This disconnect between intention and enactment may be reflected in the reanalysis of the 1974-1975 data presented in Table 2. As he intended, Coach Wooden was more complimentary of the reserves in the ratio of positive to negative comments. However, he directed a higher mean total of utterances (positive + negative) to the regulars: a mean of 9.83 approvals and scolds directed to regulars, compared to a mean of 6.86 directed at reserves. Since the data reflect only what could be observed (heard) from the Pauley Pavilion center court seats, and not

private comments, these results need to be cautiously interpreted. However, they are consistent with the doubts in Coach's mind raised by former players telling him they felt their contributions and successes on the practice court were seldom acknowledged. Perhaps Coach Wooden did as he intended in one sense—praise the reserves more than he reproved them. But not in another—he did not compliment and acknowledge reserves' successes and contributions as often as he thought he did, or meant to do. We will leave the issue there, adding that some of the players most critical on this point are now among the Coach's most ardent admirers (Hill, 2001), and let the Coach have the last word.

> I was recently asked if I had any regrets. I said I did. Mostly I regret things I didn't do, not what I did. I hope those I didn't do were of the head and not the heart. (J. R. Wooden, personal communication, July 11, 2003)

Some Wooden Views on Pedagogy

When the Coach insists that "everyone's a teacher" he explicitly includes college professors as the following vividly indicates:

> You just don't throw material out for someone to get, as I've heard some college professors say. I had a discussion with an English professor at UCLA. We were both asked to go to Sacramento by Dr. Murphy, the Chancellor at UCLA at the time. When we began to discuss teaching, [the professor] indicated that he was there to dispense material and students were to get it. And I said "I thought you were there to teach them." He said, "No, no, college students should be getting it themselves. Maybe in the lower levels they're taught [but not when they get to university]." And I said, "Well I think you're always teaching." I can still remember having that discussion. We just differed a little bit on our philosophy. (J. R. Wooden, personal interview, February 12, 2002)

Because everyone's been taught, there's no end of opinions about what is good and bad teaching. Whether it involves scholars, practitioners, policy-makers, or the public, debates can get intense and spill into the media. One debate turns on the relative value of drilling students to strengthen skills and habits. The controversy plays out in many areas, including the teaching of reading, science, and mathematics. For many "drill is a way to kill" student interest and learning. For others, it is fundamental to teaching.

Coach Wooden is unabashedly an advocate of drill when it is used properly within a balanced approach that also attends to developing understanding and initiative, and, as recent work suggests, attentional processes (Abernethy, 2001; Moran, 1996). Repetition, or drill, is one of his four laws of learning:

> The 4 laws are explanation, demonstration, imitation, and repetition. The goal is to create a correct habit that can be produced instinctively under great pressure. To make sure this goal was achieved, I created eight laws of learning, namely, explanation, demonstration, imitation, repetition, repetition, repetition, and repetition. (Wooden, 1997, p. 144)

However, drill for Coach Wooden is a means to an end, not an end in itself. Drilling is intended to achieve an automaticity or mastery of fundamentals that opens up opportunities for individual creativity and initiative. To make certain the drills were understood by his students to be part of a larger, more meaningful whole, he tried to show the context in which a skill or habit would operate:

> I tried to teach according to the whole-part method. I would show them the whole thing to begin with. Then I'm going to break it down into the parts and work on the individual parts and then eventually bring them together. [I wanted to teach] within the framework of the whole, but don't take away the individuality because different ones are going to have different things at which they excel. I never wanted to take away their individuality, but I wanted that effort to put forth to the welfare of the group as a whole. I don't want to take away their thinking. I wanted options. I wanted a second and third option on most of the plays that we would set up and I wanted our plays to come within the framework of our general overall philosophy and not say you have to do this, you have to do this, and you have to do this. This is the general idea, but the other team may have some ideas too and we've got to have a choice, you have to think for yourself sometimes. Now there may be those that disagree with that but that was my feeling. I never wanted to take away their individual initiative but I wanted them to put that to use at the proper time for the welfare of the group. (J. R. Wooden, personal interview, February 12, 2002)

An emphasis on drill and repetition to build habits runs counter to some trends in teaching research of the past two decades. Some critics believe that skills and drills should take second place to assisting learners to construct meaning and understanding. The discussions tend to pit the two points of view as opposites. However, Coach Wooden takes a very different view. He is strong on basic skills and drill; he knows the right way, and he sees his role as teaching students to do it automatically (Bloom, 1986), without thinking. At the same time, for him the purpose of drilling automatic skills and habits is to create the foundation on which individual initiative and imagination can flourish (J. R. Wooden, personal interview, February 12, 2002). One does not have to choose. Perhaps this idea is not so new to those who study coaching, but in many discussions of classroom teaching it might prompt some reevaluation.

Teaching by Example

> I tried to teach by example too. I think that's very important. I think it made me feel that my actions away from the basketball court or tennis court or baseball diamond was important and I must be consistent in the things that I did. I must set an example. I feel that anyone in the public eye has a responsibility to conduct themselves in the proper manner. . . .Way back in the mid-thirties I picked up something and I still don't know who it was, you might know who wrote it. "No written word, no spoken plea can teach our youth what they should be. Nor all the books on all the shelves, it's what the

> teachers are themselves" (Anonymous). That made an impression on me in the middle thirties and I never forgot it. (J.R. Wooden, personal interview, February 12. 2002)

Years after his retirement, many players, the former pupils in his classrooms, regularly say he taught about life as well as basketball and that he practiced what he preached, whether it was on the practice floor or in the private sessions he often had with individuals to discuss personal issues, role on the team, and other matters of import to the young men he taught at UCLA.

> "Life to him is a one-room schoolhouse," wrote sports columnist Jim Murray. "A pedagogue is all he ever wanted to be." But Wooden's best teaching technique is hard to pass along. Not every teacher can use the model of his own life to inspire students beyond their talents. (Tharp & Gallimore, 1976, p. 78)

Lessons Learned Since 1976

In our original report, we claimed that the intensive study of a single exemplary coach/teacher could provide dependable information. In the quarter century since the results were published, it appears that claim was justified. Subsequent research has revealed that, for example, coaches spend more time conveying information than they do praising good performances and scolding errors (Gilbert, 2002; Gilbert & Trudel, 2003). The original study of John Wooden yielded other helpful and even provocative findings, such as the heavy information load that characterized Wooden's practice and his skillful use of modeling or demonstrations. So, it would seem that case studies can serve a field well, and the observation of exemplary cases can provide valid information or suggest new avenues of investigation.

Like every endeavor, research is a product of its *zeitgeist*. What can be imagined and accepted as pertinent data are constrained by the convictions and theoretical passions of the times. In 1974-1975, we focused on recording discrete acts of teaching. Coach Wooden made the method easy and justifiable, using concise speech acts and demonstrations to convey messages and information. So, in accordance with the time, we counted and reported the number of instructions, hustles, praises, and the rest.

If we were to repeat that study today, we would make two changes. First, we would certainly attempt to describe the planning context that made possible the Coach's concise, apt, and codable behavior. Even at the time, he had made clear in his autobiography (Wooden, 1988) that the economical teaching we admired so much was hardly improvisational. Rather, he saw it as a byproduct of the careful planning that created each season an improved-by-his-own-research basketball curriculum implemented with exacting detail. His limited use of praise and reproofs and the density of information conveyed, in which we were so interested in 1970s, may have made more sense to us if only we had asked him what he was doing. But perhaps not, because method flows from theory, and at that time, we were over-optimistic for the promise of systematic observation of observable behavior. Those data continue to serve, however, so collecting them was a good idea about which we have no regrets.

The second point is harder to phrase but involves the issue that the respectability of research methods changes over time. Though we have not returned to the coaching floor, in the intervening thirty years, we have both continued as researchers of teaching and now realize that teaching, schooling, coaching, and all education are so complex that understanding can come only from multiple perspectives and multiple methods. Were we to do it over, now we would make every effort to gain the perspective of players, of assistant coaches, of Coach Wooden himself. Qualitative data are now generally accepted as necessary to provide explanations for quantitative observations. An ex-player colleague would have been invaluable, even in the construction of the code itself.

So if we could coach those two young researchers of 1974-75, those are the two points we'd put on 3 x 5 cards. Beforehand, we'd work to get the *instructions* phrased more tersely. We might even show them some demonstrations of how to do it better (Tharp & Gallimore,1989). We'd give them a hustle or two: Goodness Gracious, call the Coach! You'll never score if you don't push!

But we wouldn't give them a scolding, nor even a reproof. The data they collected are still interesting, nearly 30 years later. Neither would we praise them. They don't need it, they got that reward from others and especially from the privilege of watching a master at the peak of his craft. His teaching changed the way they thought about all teaching. We know they'll never again see his like.

References

Abnernethy, B. (2001). *Attention*. New York: John Wiley & Sons.

Bloom, B. (1986). Automaticity: The hands and feet of genius. *Educational Leadership*, **43**(5), 70-77.

Bloom, G.A., Crumpton, R., & Anderson, J.E. (1999). A systematic observation study of the teaching behaviors of an expert basketball coach. *The Sports Psychologist*, **13**, 157-170.

Claxton, D.B. (1988). A systematic observation of more or less successful high school tennis coaches. *Journal of Teaching in Physical Education*, **7**, 302-310.

Dunphy, M. (1981). *John Robert Wooden: The coaching process*. Unpublished Ed.D. Dissertation, Department of Physical Education, Brigham Young University.

Gilbert, W.D. (2002, June). An annotated bibliography and analysis of coaching science: 1970-2001. Washington, DC: American Alliance for Health, Physical Education, Recreation, and Dance. Available: http://www.aahperd.org/research/template.cfm?template=grantees.html.

Gilbert, W.D., & Trudel, P. (2003). *Analysis of coaching science published from 1970-2001*. Manuscript submitted for publication.

Hiebert, J., Gallimore, R., & Stigler, J. (2002). A knowledge base for the teaching profession: What would it look like, and how can we get one? *Educational Researcher*, **31**(5), 3-15.

Hill, A. (2001). *Be quick—but don't hurry!* New York: Simon and Schuster.

Lacy, A.C., & Darst, P.W. (1989). The Arizona State University observation instrument (ASUOI). In P.W. Darts, D.B. Zakarajsek, & V.H. Mancini (Eds.), *Analyzing physical education and sports instruction* (2nd ed.; pp. 369-378). Champaign, IL: Human Kinetics.

Langsdorf, E.V. (1979). *A systematic observation of football coaching behavior in a major university environment*. Unpublished doctoral dissertation, Arizona State University.

Moran, A.P. (1996). *The psychology of concentration in sport performers: A cognitive analysis*. Hove, UK: Taylor and Francis.

Smith, R.E., Smoll, F.L., & Curtis, B. (1978). Coaching behaviors in little league baseball. In F.L. Smoll & R.E. Smith (Eds.), *Psychological perspectives on youth sports* (pp. 173-201). Washington, DC: Hemisphere

Smith, R.E., Smoll, F.L., & Hunt, E.B. (1977). A system for behavioral assessment of athletic coaches. *Research Quarterly*, **48**, 401-407.

Stigler, J.W., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York: Free Press.

Stipek, D.J. (1993). *Motivation to learn*. Boston: Allyn & Bacon.

Tharp, R.G., & Gallimore, R. (1989) *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge: Cambridge University Press.

Tharp, R.G., & Gallimore, R. (1976). Basketball's John Wooden: What a coach can teach a teacher. *Psychology Today*, **9**(8), 74-78.

Tharp, R.G., & Gallimore, R. (1975). *Learning Theory meets Coach Wooden*. Unpublished manuscript, Department of Psychiatry & Biobehavioral Sciences, UCLA.

Tharp, R.G., & Wetzel, R. (1969). *Behavior modification in the natural environment*. New York: Academic Press.

Tutko, T.A., & Richards, J.W. (1971). *Psychology of coaching*. Boston: Allyn & Bacon.

Wooden, J.R. (with Jack Tobin) (1988). *They call me Coach* (Rev. ed.). Lincolnwood, IL: Contemporary Books.

Wooden, J.R. (with Steve Jamison) (1997). *Wooden: A lifetime of observations and reflections on and off the court*. Lincolnwood, IL: Contemporary Books.

Wooden, J.R. (1999). *Practical modern basketball* (3rd ed.). Boston: Allyn and Bacon.

Acknowledgment

This article is based on a paper presented to the Association for the Advancement of Applied Sports Psychology, Tucson, Arizona, November 2, 2002. Many thanks to Coach John R. Wooden for his assistance in the conduct of the 1974-1975 study, the preparation of this paper, and for the interview he gave which is referenced here. Swen Nater provided numerous helpful comments and additional observations, based on his experience as a UCLA player in the early 1970s, for which we are deeply grateful. Our appreciation to Tara Scanlan who encouraged us to re-visit the original study and submit a paper proposal to AAASP for presentation at their annual meetings. She also helped improve the manuscript by commenting on an earlier draft. Many thanks to Karen Givvin, Claude Goldenberg, Nancy Perham, Frank Smoll, Ron Smith, and Jim Stigler for their assistance and comments. Two anonymous reviewers provided valuable feedback and pushed us hard to improve the manuscript in a manner that Coach Wooden would approve. All remaining errors are our own.

Authors' Notes

[1] Adapted from Tharp & Gallimore (1976).

[2]We were not given final page proofs before the article appeared. The *Psychology Today* editor separated the coding definition from the label "Wooden." In the published article, the description of the coding category was truncated from a sequence of three acts of modeling (M+, M-, M+) to the two-part description of "scold/reinstruction."

[3] The three-part instructional move we observed in 1974-75, and what Coach Wooden calls a "sandwich" may not overlap fully with what is described in the literature as a "positive sandwich" (Tutko & Richards, 1971; Smith, Smoll, & Curtis, 1978; Smith, Smoll, & Hunt, 1977). In contrast to a Wooden, Smith, Smoll, and their colleagues (R. Smith, personal communication, January 17, 2003; F. Smoll, personal communication, January 17, 2003) describe a "sandwich" technique of three sequential elements: (a) positive reinforcement for effort or for some part of a skill executed correctly, (b) future-oriented positive instruction focusing on the good thing that will happen if corrective instruction is followed, and (c) encouragement designed to increase self-efficacy (e.g., "You'll get this down if you work on it"). However, a "future-oriented" statement can imply criticism couched in positive terms (T. Scanlan & L. Scanlan, personal communication, February 4, 2003).

Manuscript submitted: February 19, 2003
Revision received: August 25, 2003