



**Pedagogical Self-Improvement Methods:
Lessons from a Master Coach Extrapolated to Developing Educators**

*Méthodes d'amélioration pédagogique:
Application des leçons d'un entraîneur émérite
aux éducateurs en voie de formation*

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In this article we explore how research on a master coach, deliberate practice, and teaching effectiveness intersect in an effort to suggest key strategies for instructional self-improvement for developing physical educators and sport instructors. Wooden's reputation as a master coach and teacher is legendary, based upon his lengthy tenure and success as the coach of the men's basketball team at UCLA. During his career his methods attracted the scrutiny of educational researchers who were interested in the lessons that they could derive from his coaching and apply to a classroom setting. Those lessons continue to resonate, particularly considering the recent emphasis on sustained, effortful, 'deliberate' practice as a key component of continual improvement in sports and other fields (e.g., Carter & Bloom, 2009; Ericsson, Krampe, & Tesch-Römer 1993). The theory of deliberate practice exemplifies Wooden's coaching philosophy, which was to seek small, incremental improvements every day, both in his players, and in his own coaching techniques. Borrowing from teaching effectiveness literature (Siedentop & Tannehill, 2000), we suggest ways by which developing instructors might improve, with a primary focus on personal self-improvement activities

Cet article veut établir en quoi les résultats d'une recherche axée sur un entraîneur émérite, sur la pratique délibérée et sur l'efficacité de l'enseignement convergent, menant à la détermination de stratégies clés sur l'auto-amélioration instructive pour mieux former les enseignants d'éducation physique et les instructeurs sportifs. La réputation du légendaire Wooden à titre d'entraîneur de l'équipe de basket-ball masculine de l'Université de la Californie à Los Angeles (UCLA) et d'enseignant émérite découle de ses longues années de service et de ses réussites hors pair. Tout au long de sa carrière, ses méthodes ont suscité un vif intérêt en raison des grandes leçons qu'on pouvait en tirer et ensuite appliquer à divers contextes de classe. Ces leçons sont plus pertinentes que

jamais en raison de la nouvelle attention que suscitent les modes de pratique délibérée soutenue axée sur l'effort qui constitue aujourd'hui l'élément clé d'une amélioration permanente dans les domaines du sport et autres (p. ex., Carter et Bloom, 2009; Ericsson, Krampe, et Tesch-Römer 1993). La théorie de la pratique délibérée exemplifie la philosophie d'entraînement de Wooden qui consiste à faire chaque jour de petits progrès évolutifs, qu'il s'agisse du rendement de ses joueurs ou de ses propres techniques d'entraînement. S'inspirant de la documentation sur l'enseignement efficace (Siedentop et Tannehill, 2000), les auteurs proposent des approches utiles pour aider les nouveaux entraîneurs à s'améliorer, misant surtout sur des activités d'amélioration personnelle.

Introduction

The purpose of this article is to integrate the literature on expert coaching and expert performance to inform the on-going efforts of instructors working in a pedagogical environment who seek strategies for self-improvement on a continuing basis. Our effort is informed by our past experiences as coaches and physical educators, and more recent forays into literature pertaining to master coaches, theories of expert development, and our appraisal of teaching effectiveness literature for use in undergraduate physical education methods courses. In our search for common themes amongst these content areas, we have continually noted the systematic processes of self-improvement embodied in the expertise theory of deliberate practice, and similar systematic processes characterizing self-supervision models for effective teacher development. Furthermore, the intentionality and rigour of such processes are hallmarks of perhaps the greatest coach of all-time, John Wooden. Both ESPN and Sports Illustrated named Wooden the greatest coach of the 20th century (Bloom, 2006). In addition, Wooden received the Medal of Freedom from the President of the United States in 2003, which recognizes exceptional service and is the nation's highest civilian award (Bloom, 2006). Wooden's coaching methods have been analyzed extensively, and he has been the subject of books and academic studies (e.g., Gallimore & Tharp, 2004; Nater & Gallimore, 2006; Tharp & Gallimore, 1976) We have chosen him as the example to frame our discussion on instructional self-improvement, as his actions reflected deliberate efforts to better himself as a pedagogue and to better his athletes/students. We propose that by examining the rigorous methods utilized by John Wooden, and subsequently attempting to extrapolate such methods to activities and strategies at the disposal of developing teachers, we may be able to derive important practical lessons for how to become better instructors in the gymnasium.

While we recognize that there are limitations to the degree to which coaches and physical educators employ instructional strategies similarly to disparate clientele (i.e., athletes and non-athletic students), we contend that there are parallels in self-improvement strategies by which all motivated instructors become better at their craft. We believe that all instructors may benefit by exploring self-improvement strategies that underlie expertise, and as we progress in this article, we attempt to identify specific processes that physical education teachers might use as they further develop their professional practice. We frame our discussion as it might relate to instructors in a motor skill domain, and

specifically physical education teachers who work with secondary school-aged populations.

Examining Coach Wooden's Methods

In 1976, *Psychology Today* published a research study on basketball coach John Wooden, entitled 'What a coach can teach a teacher' (Tharp & Gallimore, 1976). This article launched the methodology of systematic study of 'coaching behaviours', and Wooden continues to be the standard against which coaches are measured. Wooden passed away in 2010 a few months shy of his 100th birthday, and although it has been 35 years since he last coached the UCLA Bruins, his coaching methods and the lessons he imparted throughout his career continue to resonate in the sporting world and beyond (www.coachwooden.com; Gallimore & Tharp, 2004). Wooden coached 27 years at UCLA¹. In that time he won ten NCAA championships, seven of those titles in succession, a record that is without parallel in collegiate coaching. Wooden won with teams that featured future NBA Hall of Famers (i.e., Kareem Abdul Jabbar², Bill Walton, Gail Goodrich) but also won with teams that were considered 'small' and much less talented. It was this ability to put together winning teams season after season that inspired two educational researchers to systematically study Wooden's coaching methods with the intention of applying those lessons to a classroom setting.

During the 1975 season Tharp and Gallimore attended a number of Wooden's practices. They adapted an observational instrument they had used in the classroom, calling it the Coaching Behaviours Recording Form, and utilized this to record every utterance Wooden made during practice. This observational tool consisted of 12 categories of behaviours, although Tharp and Gallimore found that the vast majority - 75% - of Wooden's behaviours consisted of one specific behaviour - instruction. Wooden was a teacher, first and foremost, and his practices were designed for that purpose. A second noteworthy aspect of Wooden's practice sessions was their pace and intensity. Wooden's players were constantly on the move; no one was permitted to stand around watching, and Wooden would bark out orders and instruction as the play swirled around him.

This initial study was essentially the first attempt at a systematic study of coaching behaviours, and spawned further academic work into what precisely coaches do during practice sessions (e.g., Bloom, Crumpton & Anderson, 1999; Claxton, 1988; Deakin & Copley, 2003; Horton, Baker, & Deakin, 2005; Lacy & Darst, 1984; Lacy & Darst, 1985; Segrave & Cianco, 1990). These studies built on the original by expanding beyond the 12 behavioural categories. In an attempt to further examine the notion of 'instruction', subcategories of 'technical instruction', 'tactical instruction', and 'general instruction' were created in order to gain further insight into the subtleties of how effective coaches conduct practice sessions. The results of these studies supported the findings of Tharp and Gallimore (1976) in that expert coaches are primarily teachers, and spend most of their energies instructing their athletes (Horton & Deakin, 2008).

Almost 30 years after publishing their landmark study, Gallimore and Tharp (2004) conducted qualitative interviews with Wooden in order to understand the guiding philosophy that provided the foundation for those great teams and those practice sessions they had observed. A number of fascinating themes emerged from those interviews, and we believe that these themes have implications for how all aspiring instructors and teachers might become experts at their craft. For

example, Wooden was incredibly meticulous in planning his practices, and drills were timed to the minute. He spent two hours planning each practice session (even though the actual practice session itself may have been shorter), making detailed notes on cards that he would file and keep permanently. In subsequent years, Wooden would often refer back to those cards, comparing the current team to teams of years past. Wooden stated “I ...could tell you what we did in every minute of every practice in my 27 years at UCLA” (Gallimore & Tharp, 2004, p. 125). His attention to detail went beyond what occurred on the court – each year he instructed the team’s rookies on the proper way to put on their socks to ensure they avoided blisters. It was in this unremitting attention to the smallest details that distinguished Wooden; he looked for small, incremental improvements each and every day. This was a crucial component of his approach to coaching:

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 (Wooden, 1997, p. 143).

Wooden applied the same principles to his own development as a coach. Each off-season Wooden picked an aspect of the game about which he felt he could learn more - shooting free throws, for example, or rebounding. He then systematically researched that aspect of the game, by reading through library materials and by talking to other players or coaches who, in his opinion, had a good understanding of that aspect of the game. In this way, Wooden systematically improved his coaching knowledge each season.

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 (Gallimore & Tharp, 2004, p. 127).

It is noteworthy that Wooden spent 27 years coaching at UCLA, and while he achieved considerable success throughout his entire tenure at the school, he did not win his first NCAA championship until his 15th season. All ten of his championships came in his last 12 years (www.wooden.com). His final championship season was in 1975, after which he promptly retired. One has to wonder how many more titles may have come to UCLA had Wooden decided to coach for a few more years.

It is clear the Wooden’s success was not immediate, and that his career exemplified a slow, deliberate building of his coaching knowledge and expertise. Determining exactly when Wooden achieved ‘expert status’, however, is difficult. Was it after he collected his first NCAA championship? Certainly the four 30-0 seasons, the stretch of 88 consecutive victories, and the 10 NCAA titles are integral to Wooden’s reputation as a master coach (Bloom, 2006). It does, however, outline the problem of determining coaching expertise – a coach’s reputation often hinges on the success of their athletes.

Coaching excellence is often defined by the number of championships attained, or a superior win-loss record. While most coaches would agree that this is less than ideal as a ranking system, traditionally there has been little agreement as to what constitutes an expert coach (Horton & Deakin, 2008). Many countries have extensive certification programs that coaches must successfully navigate to be eligible to coach at a national or international level. Certification in and of itself however, is generally thought insufficient for a coach to be considered an expert. Traditionally, academic studies examining coaching expertise have used

multiple criteria, including level of certification, number of years coaching, win-loss records, championships won, along with more subjective criteria such as identification by a panel of peers as being an expert (i.e., Horton et al., 2005; Vallée & Bloom, 2005; Young, Jemczyk, Brophy, & Côté, 2009). In a similar fashion, teachers can be evaluated based on the performance success of their students. If the students do well, the teacher may be deemed effective. If the students fare poorly, the teacher may be blamed. The pressure on teachers to produce measurable student outcomes is increasing (Ripley, 2010), particularly as studies emerge suggesting that students in a classroom with a top-ranked teacher will learn 1.5 years worth of material in the school year, while children with poor teachers will learn only a ½ year's work (Gladwell, 2008). While coaches, fairly or unfairly, are judged predominantly by their win-loss records, teachers are often evaluated based on the performance of their students on standardized tests.

Fairness of these evaluative methods aside, questions abound as to the extent the skills of the expert coach or teacher can be studied and replicated. Can anybody learn to be an effective teacher or coach with consistent application and proper training, or is it the domain of a privileged few who have the requisite innate abilities? To what extent can instructors themselves be taught?

The debate on the importance of innate genetic traits versus the influence of one's environment pervades most areas of human endeavour, from sporting achievement to musical skills, to the ability to do well in math and science. Anders Ericsson and colleagues (1993; 1996; 2003; 2007) proposed that expertise was acquired and not innate, and that the most-skilled individuals in any field reached their position only after accumulating volumes of practice over the long-term. His theory of "deliberate practice" explained that the reason certain individuals became experts and others remained sub-expert was due to differences in the amount and the quality of practice. Few reached expert status without at least 10 years or more than 10,000 hours of deliberate practice. Although little research has specifically examined instructors, we feel that the need for long-term deliberate practice is particularly pertinent to the teaching domain. It is consistent with growing movements in education where exceptional teachers are recognized by their preparatory methods, that is, they are 'perpetually looking for ways to improve their effectiveness' (Ripley, 2010, p. 62). Deliberate practice, as a form of perpetual self-improvement, is very different from 'experience' or time spent in a particular field in that it consists of activities that are goal-oriented and require considerable mental effort and attention. These are the types of practice activities that are most relevant for improving an individual's skills.

Extrapolating Key Self-Improvement Methods to Developing Instructors

Sport scientists believe that an important role for an instructor/coach is to design preparatory activities and provide feedback that help athletes gain experiences that meet deliberate practice criteria (Salmela, 1996; Young & Salmela, 2002). This begs the question - who crafts the deliberate practice experiences for the instructors? The simplest answer is that, most often, instructors are left to craft these experiences for themselves.

To do this, instructors should first identify certain goals toward which they intend to work, and then develop strategic activities to address these goals. For example, if a teacher feels that he/she does not interact with students enough in a

lesson, they may build more teacher-student interactive segments into a lesson, they may try to cycle through the activity space more during drills, monitor the number of interactions that they have with students, and count the number of praises they direct towards students. Each of these strategies is related to an interactive goal, and all require strategic planning prior to teaching. They require the instructor's attention to self-monitor, and each will require feedback to assess whether improvements actually occurred. This feedback will likely be self-generated, and instructors might decide to borrow one of many techniques for observing evidence of one's own deliberate practice efforts and improvements (Darst, Zakrajsek, & Mancini, 1989; Martin & Hyrcenko, 1985; Rink, 2006). Many of these techniques are used in the pre-service preparation of physical education teachers, yet few instructors take the opportunity to use such methods at later points in their careers in attempts to refine their own competencies. Thus, *goal-oriented drills*, *attention and reflection*, and *self-generated feedback*, are instrumental components to deliberate practice for instructors. When an instructor/coach considers which self-improvement drills to emphasize as part of their own deliberate practice, they should understand that the drills must target areas for improvement based on current competencies (Ericsson, 2007).

Drawing from the habits of Coach Wooden, instructors should seek out evidence for small, incremental improvements each day. To derive such evidence, instructors need to first keep up-to-date on literature about teaching and learning processes, and, secondly, adopt a 'teacher as researcher' role (Brunelle, Drouin, Godbout, & Tousignant, 1988). Like Coach Wooden, to become a highly effective instructor requires the building of knowledge, both in-season and "out-of-season". This knowledge is acquired by reading pedagogy periodicals, journals and magazines, and by attending lectures and clinics, in order to stay current with thinking about teaching or coaching effectiveness (e.g., Randall, 1992). Research shows that, like Wooden, top-level sport coaches spend more time in coaching courses and clinics, and exchanging information with colleagues at technical events, than lesser-skilled coaches (Young et al., 2009). Highly competent instructors identify the most important skills and functions of their craft, and can describe in detail how they anticipate student behaviours to appear if they deliver their instructional sessions properly.

In-season, instructors can learn to become adept at analyzing learning conditions during their own lessons. They can engage in cycles of self-reflection afterwards, in which they summarize their lessons and self-diagnose their performance, from which they form plans for how to further improve. Through this process, instructors are able to identify incremental advances. Coaching research demonstrates that self-reflection is a very important way of making meaning from one's own experiences, and it has been linked to the accumulation of coaching knowledge and refining coaching practices (Mallett, 2004; Salmela & Moraes, 1996).

Practical Lessons for Improving Instruction in the Gymnasium

When we consider how self-improvement mechanisms might influence instructional practices and ultimately students' behaviour/learning, our thinking is informed by the process-process paradigm of physical education teaching effectiveness, which "assumes that what the teacher does (teacher processes) will influence what students do (student processes), which in turn will influence

learning” (Randall, 1992, p. 43). Simply, we recognize that teaching functions (i.e., processes) and student processes (e.g., behaviours) are intertwined and causally impact on skill learning, but a systematic approach to effective teaching involves segregating the two, and documenting how a strategic self-manipulation of the former impacts the latter. Thus, when seeking evidence for improvement, instructors might consider examining their own actions and enacted strategies, *as well as* their students’ behaviours (Siedentop & Tannehill, 2000). Instructors should, for example continually ask themselves about how they implemented their own strategies - whether they have explained practice routines with sufficient clarity, whether they have effectively organized space to encourage maximal movement in a class, and whether they have given feedback to students in a timely fashion to maximize skill learning. Similarly, instructors can try to seek evidence for improvement in students’ behaviour, questioning whether students are moving continuously during a lesson, whether they are demonstrating tendencies to strive during difficult tasks, and whether they are obtaining more opportunities to respond during practice time. There are some possible considerations of which to be mindful when engaging in such a process. First, instructors who are dedicated to this task will likely be able to find evidence of small, concrete improvements in their own tendencies; this part of the ‘teacher as researcher’ process is somewhat under the control of the instructor. On the other hand, evidence of student improvement will likely be more arbitrary and delayed. Considering the heterogeneity of students in a physical activity class, which will also be manifested in highly variable behaviour collectively, the teacher who looks for improvements must do so over time and must be wary of the fact that these improvements can be more difficult to pin down. This is a great challenge for the instructor seeking to understand how their actions have translated to their students in a meaningful way. All instructors can learn on the job, by trying out new strategies and then observing the consequences in a systematic fashion. In fact, this type of systematic experimentation has been acknowledged by coaches as a key source for gaining coaching knowledge, with 64 % of coaches reporting this activity as important (Irwin, Hanton, & Kerwin, 2004).

One lesson that can be gleaned from Coach Wooden is that instructors who wish to become expert must devote unremitting attention to the smallest details. They plan and over-plan, and these plans are housed in an archive that can be accessed and reviewed. Of interest is the fact that Wooden started his career as a high-school English teacher, while also coaching the school’s basketball team. He quickly realized that the extensive lesson planning his English lessons required was an approach he needed to apply to his basketball practices to ensure that court time was utilized effectively. Coach Wooden’s primary focus during that court time was on instruction (Tharp & Gallimore, 1976). Wooden considered himself to be a teacher above all else, and the manner in which he ran practice sessions was aligned with pedagogical literature that considered active learning time in physical education to be the most-critical measure of the efficacy of an instructor (Metzler, 1989; Siedentop & Tannehill, 2000). More recent emphases on cognitive-based learning and the recognition that effective learning experiences in a physical education domain integrate social-affective goals (Metzler, 2005) has perhaps lessened the emphasis that was placed on active learning time as a barometer of instructional excellence. Coach Wooden’s focus

on instruction should perhaps remind us that a prominent marker of the instructional value of lessons is whether we have constantly moving students in a manner that is consistent with motoric or tactical instructional goals, and in a manner that affords students a proper degree of mastery. To this end, an expert instructor can strive to learn how best to manage and organize the instructional environment (e.g., use of space, equipment distribution, plotting of movement patterns in drill and game activities) in order to maximize instructional time (Rink, 2006).

Deliberate Practice and an Instructor's Developmental Stage

The deliberate practice theory suggests that there needs to be a purposeful template for how time is spent applying one's craft. Critically, the self-improvement strategies that are ascribed to such a template should encourage an instructor to avoid arrested development at their present stage of competency. The various self-improvement activities that an early-career instructor employs will thus be different in nature from the deliberate practices of more senior instructors. It is important for instructors to continually ask, "What do I need to be doing to move myself beyond my present level?" if they are to successfully refine their competencies.

One previously identified self-improvement strategy is an investment in planning. Explicit planning is a critical activity for instructors at earlier stages of development. Highly experienced teachers may indeed become more efficient in their planning, and they may begin to store much of the planning they had previously written on extensive lesson plan sheets in memory (i.e., implicitly), yet they still should continue to plan. What may change are the details to which they attend. Early-career teachers might focus on details relating to student characteristics (e.g., entry skill levels, prerequisite abilities, gender differences, activity preferences), the instructional context (e.g., available time and equipment, material, financial, and human resources), as well as programming and activity content issues (e.g., curricular and unit goals, nature of the content, types of instructional tasks) (Brunelle et al., 1988). As instructors become more effective and find some ease when planning those components, they might consider higher-order instructional themes that relate less directly to delivery of motor content, but are themes that result in more engaged students on a cognitive or personal level, in a manner that is highly motivating. For example, more experienced teachers might challenge themselves to re-invent communication cues and re-orient activities to facilitate the teaching of complex decision-making during sport situations (Vickers, 1994; 2000), to build 'teaching for invitation' aspects into lessons (Tjeerdsma, 1995), re-sequence activities to better accommodate 'games for understanding' programming (Mandigo, Butler, & Hopper, 2007), modify organizational and reward structures to foster appropriate motivational climates (Treasure & Roberts, 1995), and create scripts to reward desired student behaviour or behavioural contingencies to discourage undesired student behaviour (Brophy, 1981; Wurzer & McKenzie, 1987). Although experienced teachers likely become efficient at planning lower-order details, they can find new strategies to plan for novel higher-order aspects; this represents the deliberate practice route to the building of expert instruction/coaching.

Conclusion

An examination of Coach Wooden's habits provides all sport pedagogues with evidence for how one is able to embark, with great patience and rigour, on a deliberate path that builds to excellence. Wooden built his skills gradually over many years by paying attention to the smallest details. According to Wooden, accruing small, daily advances is the key to success, rather than seeking big, quick gains. The improvements may be barely discernible from one day to the next, but when a gain is made it has been earned, and just as importantly, it lasts (Wooden, 1997). It is likely no accident that all of Wooden's championships came in the last 12 years of his career. The theory of deliberate practice states that 10 years are required to achieve expertise – Wooden's first NCAA title came in year 15 at UCLA³. The 10 titles in his last 12 years provided a measure of proof that Wooden's coaching skills were indeed permanent and lasting.

Many of the lessons we take from Wooden intersect with the tenets of deliberate practice and the systematic approach to the development of instructional skills in physical education. Specifically, a commonality linking highly skilled instructors in coaching and physical education is an introspective and deliberate approach to self-improvement that translates into more effective outcomes amongst one's students. In this article, we have attempted to delineate this intersection by extrapolating from a master coach to physical educators. Instructors are encouraged to continually engage in self-development through goal-oriented and effortful deliberate practice, to regularly generate self-feedback and work to realize small incremental gains, while always retaining a degree of planning which entails an increasing focus on higher-order themes. In this manner, certain key self-improvement activities gleaned from the methods of a master coach appear to parallel the self-improvement strategies that developing instructors and physical educators might employ to become effective teachers.

Endnotes

1. Wooden's coaching experience, in addition to the 27 years at UCLA, included 2 years at Indiana State University and 11 years coaching at the high school level. (<http://www.coachwooden.com>)

2. Kareem Abdul-Jabbar changed his name in 1971, after leaving UCLA. His name during his time there was Lew Alcindor. (<http://kareemabduljabbar.com/>)

3. See <http://www.coachwooden.com>

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