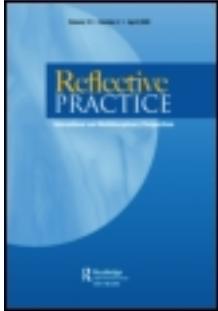


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Reflective practice and ongoing learning: a coach's 10-year journey

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Reflective practice and ongoing learning: a coach's 10-year journey

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Commitment to ongoing learning is a hallmark of effective sport coaches. Available literature indicates: (a) coach learning inquiries have become more common but mostly conceptual not empirical; (b) the few available empirical studies provide only brief snapshots of ongoing learning efforts and seldom track learning impact; and (c) ongoing learning for sport coaches should be coach-driven and contextually-situated. To help close the gap between conceptual advice and empirical evidence, this paper shares our collective reflections on a unique, 10-year ongoing learning effort initiated and sustained by an American high school basketball coach in a suburban Midwestern community. This story is compelling, not only because of its sustained longitudinal nature, but because of the peer teaching role played by the iconic American basketball coach John Wooden. The story we tell is based on our conversations and interviews with the high school coach, media documents, systematic observation of the coach's practice videos seven years apart, and perspectives from his school administrators and one of his former players. Ermeling's four-feature reflective practice typology is used to frame the coach's ongoing learning effort, and connect the story back to the coach development literature.

Keywords: coach education; coaching; coach effectiveness

Introduction

A commitment to ongoing learning has long been recognized as a hallmark of effective sport coaches. In fact, based on a recent review of coach learning, Armour (2010) concluded that ongoing 'professional learning is *the* job of coaching' (p. 162). In recognition of this importance, considerable coach learning literature has been generated in the last decade. This includes original research reports on ongoing learning in action (Culver, Trudel, & Werthner, 2009; Gilbert & Trudel, 2001), learning pathways (Gilbert, Côté, & Mallett, 2006; Jones, Armour, & Potrac, 2004), learning preferences (Erickson, Bruner, MacDonald, & Côté, 2008; Lemyre, Trudel, & Durand-Bush, 2007), learning interventions (Cassidy, Potrac, & McKenzie, 2006; Knowles, Gilbourne, Borrie, & Nevill, 2001) and coach learning concept papers (Gilbert, Gallimore, & Trudel, 2009; Nelson, Cushion, & Potrac, 2006).

A common theme across the literature is the 'coach as a reflective practitioner'. Reflection mediates the relationship between experience and learning (Dewey,

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1933). Reflection is the pondering, reviewing and questioning of their experiences that prompts individuals to adapt and change their behaviours in subsequent action. Cultivating experiential learning or learning from experience is a nearly universal goal of liberal education – the thoughtful, reflective individual prepared for life-long learning.

Not surprisingly then, recent definitions of coaching effectiveness highlight the foundational role played by coach *reflection* in sustaining ongoing learning efforts (Côté & Gilbert, 2009; Gilbert & Côté, 2013). Coach education programs designed to prepare practitioners for ongoing learning across their careers increasingly emphasize the importance of having sport coaches reflect on problems they encounter in their everyday work (Gilbert et al., 2009; Trudel, Gilbert, & Werthner, 2010). This coach education trend is rooted in the emerging global acknowledgement that sports coaching is a relational activity shaped by athlete needs and the unique profiles of local settings. In other words, there are no standard coaching methods that can be applied uniformly across the wide and diverse range of coaching contexts. Therefore, effective coaching rests on a coach's ability to continually reflect, adapt and innovate. This key message is also clearly evident in the recently released International Sport Coaching Framework (ICCE, ASOIF, & Leeds Metropolitan University, 2013).

Attempts to systematically integrate reflection into coach education programming have primarily focused on socially supported or mediated forms of reflection. Cassidy et al. (2006) shared insights from a small-scale coach education program for rugby coaches in New Zealand designed to provide regular two-hour coach reflection meetings over a period of six months. The content of the coach reflection meetings was selected by the program designers and the purpose of the meetings was to provide coaches an opportunity to discuss course content in relation to their particular coaching contexts and experiences. Although coaches valued the reflection meetings, they also believed the open forum format could be improved by including a trained facilitator to mediate reflection. Interestingly, identical findings were reported the same year from a series of coach education studies conducted at the other end of the globe (Culver & Trudel, 2006). Studies with track and field and downhill skiing coaches in Canada found that coaches highly valued regular opportunities to engage in mediated reflection. However, Culver and Trudel also found that without social mediation, despite working together in the same club, the coaches largely ceased to engage in collective reflection. Although plausible that self-mediated reflection did occur, this was not measured.

Several attempts have also been made to formally integrate coach reflection into university-based coach education courses, often framed as a 'problem-based learning' approach (Demers, Woodburn, & Savard, 2006; Jones & Turner, 2006; Knowles, Tyler, Gilbourne, & Eubank, 2006). During the courses, coaches struggled with adopting a reflective practice orientation because they were primarily concerned with immediate action – not careful and time intensive reflection. After the courses coach reflection appeared to fade quickly because coaches did not think they had time for this 'extra' work.

Armed with lessons learned from these attempts to integrate coach reflection into coach education, several groups in Canada have been experimenting with redesigning coach education to include both socially and self-mediated reflection. Hussain, Trudel, Patrick and Rossi (2012) reported on a five-stage ongoing coach learning initiative created by Triathlon Canada. Entry into the ongoing coach learning

initiative is predicated upon a coach's formal application and submission of an individual learning portfolio that in effect invites each applicant to engage in self-mediated reflection prior to program entry. The portfolio is used to identify learning needs and set a course of action for ongoing learning. It is believed that these steps will increase adherence to coach reflection because the learning topics are coach-generated and situated in context. The program director noted many challenges with implementing the ongoing learning initiative, particularly with changing long-standing views and assumptions about coach education (i.e. shift from large-scale generic certification to individualized learning programs). As a result of these ongoing challenges the approach has yet to be fully adopted. In the second example, this time extended beyond a specific sport to an entire national sport coaching education program, Werthner, Culver and Trudel (2012) used interviews with four master learning facilitators to explore an attempt to shift a nationwide coach education program to a constructivist view of learning. This large-scale ongoing learning effort included a 'nested learning support infrastructure', whereby master learning facilitators collaborate with advanced learning facilitators who then work closely with learning facilitators (the actual course instructors who teach the coaches). A key change was training coach education clinic instructors (referred to now as 'Learning Facilitators') to adapt each clinic to the needs of the particular coaches in attendance. Challenges included lack of consistency in the facilitation process and transforming mind-sets from content-based learning to coach-driven competency-based learning, paralleling the findings of Hussain et al.

In sum, efforts to teach coaches how to engage in regular and meaningful reflection have demonstrated that (a) coaches highly value facilitated reflection (socially mediated) opportunities provided during formal coach education experiences, and (b) ongoing learning mediated by self-reflection erodes quickly without continued formal support. Yet we also know that coaches in general – across sports and levels of competition – repeatedly indicate that 'learning through experience' is the most valued means of coach learning (Gilbert et al., 2009). We are left then with a situation in which coaches report they value and use reflection as part of their informal ongoing learning efforts, but documented examples of these efforts across time are non-existent.

The purpose of the present paper is to report a 10-year ongoing coach learning journey of reflection that we witnessed as participant-observers with one American high school basketball coach. Like others before us we view the sharing of these types of stories as an important source for reflection, not only on coach education but also on the coaching process itself (Armour, 2010; Jones, Armour, & Potrac, 2004). Although the sports coaching and coach education literature is replete with calls for integrating reflection into actual practice and coach training, the field suffers from a noticeable lack of coach reflection case reports. Without such reports it can be difficult for coaches and coach educators to envision how reflection guidelines and theories can be put into action in real coaching contexts. Lee, Chesterfield, Shaw, and Ghaye (2009) also noted that stories of coach reflective practice are needed to 'draw in' sceptics of reflective learning because stories are much more potent than theoretical models and reflection tools. We believe the particular coach reflection story reported here merits telling for several reasons and will contribute new insights to the evolving dialogue about ongoing learning and reflective practice in coach education. We are unaware of any similar account of a sport coach's ongoing learning efforts extending across 10 years of actual practice and supplemented

with insights from multiple sources of evidence. The observations provide a rare glimpse into coach reflection (self-mediated) as it evolved over time, and the role played by peer facilitators in guiding coach reflection (socially mediated). One of the primary social facilitators on the journey was John Wooden, the now deceased iconic sports coach, named coach of the twentieth century (Sporting News, 2009), and considered by many as ‘The Greatest Coach Ever’ (Fellowship of Christian Athletes, 2010) – a man who claimed reflection on his coaching was a key to his success.

We present insights gleaned from a coach’s journey in three parts. In Part 1 we begin the journey with an introduction to the setting and the main characters. This is followed by a consideration of evidence of improved coaching as a result of the ongoing learning process and coach reflection (Part 2). Finally, in Part 3 we describe the 10-year ongoing learning process employed by the coach using Ermeling’s (2012) four-feature reflective practice typology as a conceptual framework. We introduce data and briefly describe the sources of evidence where they are relevant across the three parts of the journey. We conclude the paper with a discussion of results and directions for future research.

Part 1: Hank’s story

The reflective practice story began in 2003, after Henry ‘Hank’ Bias finished his third season as head coach of an American high school boys’ basketball team, profoundly discouraged by a season of three wins and 17 losses. It was a critical juncture in his life and career. Bias had been coaching 15+ years, including a stint as a successful high school soccer coach. Based on his recent basketball coaching experiences, however, he began questioning whether he was capable of coaching this sport at the high school level. Like many youth coaches, his pre-service preparation was relatively informal, beginning with a transition out of a playing career into a job as a graduate coaching assistant for basketball and soccer while pursuing a Masters degree in education. After graduation and two years as full-time college assistant, Bias got his first head basketball coaching job at a local high school but it did not turn out well. By Bias’s own assessment he was not ready. ‘When I look back on it now I did not understand that the job, more than anything, was the job of a teacher’.

His next job was at Fairmont High School, in Kettering, Ohio, where he had success as the head soccer coach. But when he was appointed head boys varsity basketball coach things did not go as well. He vividly recalls a headline in the sports section of the local paper: ‘Bias fired’. A few years later, Bias applied for and, to his surprise, was re-hired for a second stint as head basketball coach at Fairmont after the former coach left for another job when the team was experiencing a downturn. Two years into his second stint as Fairmont’s head coach, the basketball team hit bottom, losing 17 of 20 games. Under fire from fans and local media, Bias was at a crossroads in his aspiration to be a basketball coach. Not only had the team struggled in games, Bias felt he had lost control of the situation and his reaction to it. Criticism was intense and sometimes venomous. ‘Am I cut out for coaching basketball?’ Hank wondered. ‘Maybe I just don’t have what it takes. I either learn how to teach better or get out of coaching!’.

He turned to Professor George DeMarco at the University of Dayton for advice. At DeMarco’s urging, Bias began reading literature on teaching and coaching, including a study conducted during John Wooden’s final season as head basketball

coach at UCLA (Tharp & Gallimore, 1976). DeMarco advised him to contact author Gallimore to ask if there were films of Wooden conducting practices at UCLA. Perhaps watching how a successful coach like Wooden had taught might provide a model. Gallimore reported there were some old 16 mm films, but Bias would need Wooden's permission to get digitized copies. Advised to give himself 'two hustles and call the Coach', Bias summoned up the courage to telephone Wooden who took the call and asked: 'Why would you want to talk to someone who hasn't taught in 30 years?' Bias replied, 'I want to learn how to teach better'.

To Bias' surprise, Wooden talked with him at length, and invited him to California for a visit. With the support of his superintendent and school board, a short time later Bias flew to California and spent a day with Wooden. Bias learned many things from Wooden, but the lesson we focus on in this story is this: *teaching and coaching basketball can be steadily improved if the teacher is dedicated to reflective practice throughout a career*. Wooden said it took years of steady improvement of his teaching before one of his teams won a national title. Over the following 11 years, his teams won nine more national titles, and every year, including the last he coached in 1975, Wooden was still working on his self-improvement process (Gallimore & Tharp, 2004; Nater & Gallimore, 2010).

When Hank left Wooden's home that day in 2003, he knew he had a lot of work to do. On the plane ride home, he furiously wrote in his notebook trying to record what he had learned from Wooden, and to sketch out a plan for the coming months and a new season. This was the same notebook Bias used on the plane ride out to California to list the questions he wanted to ask Wooden. He used that notebook to record what he learned in his conversations with Wooden – the same notebook that Wooden borrowed from Bias at one point to make his own notes while they were talking about teaching and how to improve it. Wooden was teaching, but still learning and wanted to keep a record. Bias still has that notebook. Do not ask to borrow it.

After returning home just days before practice began, Hank updated Gallimore about the visit with Wooden, and outlined his strategy for putting into effect what he had learned. It was at this time that the 10-year study reported here was initiated. Gallimore asked Hank to share practice plans, send email updates on what changes he was attempting, and to video a practice early in the upcoming season. Some months later, Swen Nater and Gallimore began collaborating on a book about Coach Wooden's teaching practices. Swen joined the project tracking Hank's attempts to change his teaching on the practice court. Swen kept notes on his contacts as did Gallimore, and these notes plus occasional phone conversations provided the bulk of the material used in this report. In addition, on two occasions Hank tape recorded reflections on his efforts to improve his teaching, and sent them to Gallimore. Using the recordings and all the other materials as a basis, Gallimore conducted a face-to-face interview with Hank in May 2007. Permission was obtained from the school, players and parents for the collection of the videos, and Hank consented to be a focus of the study.

The selection of Hank as a case for investigating reflective practice is most properly described as an example of opportunity sampling. A highly motivated coach guided by a coaching legend launched an effort to improve his practice depending largely on a self-directed process heavily dependent on reflection. At the time the study was initiated none of the participants imagined it would stretch to 10 years. Hank was concerned with improving enough to remain employed as a coach. Gallimore and Nater were principally interested in a question constantly asked of

Wooden: will your methods work with today's youth? Requesting a 'before' video tape of a practice and documentation of what Hank had done before and what changes he intended was done to establish a baseline. No one involved thought that baseline would be measured against 10 years of observations.

Part 2: Reflective practice impact

The first season after Bias met Wooden and began his reflective efforts in earnest, the Fairmont Firebirds won six games and lost 15; a small improvement over the disastrous 3–17 season that started Bias on his quest for better teaching. The second year, the team had a record of nine wins and 12 losses. During these two years, Bias was steadily transforming his teaching practices. He describes these two years as ones of 'partial implementation' of improvements. During the third year Bias believes that major features of his teaching changed significantly (what he calls 'full implementation'). Certainly, there was a dramatic change of fortunes for the Fairmont Firebirds. This team compiled a record of 17 wins and five losses, won their first division championship in many seasons and went deep into the post-season tournament. Bias was named conference co-coach of the year.

In the first five years of full implementation of teaching improvements, the average winning percentage was 62% (see Table 1). The average during the years he coached the Firebirds before introducing changes was 29%. Since 2004, the team has had a losing record only once in an injury-plagued season. According to the high school athletic director at the time, this was the best five-year record for the team since 1927. These successes came at a cost: as Fairmont's team became more successful in the seasons following 2003, they were scheduled by rule to play a tougher schedule the following year.

There is no evidence that the improved Firebird record was a function of increases in talent level Bias got to coach. Bias had four players who were recruited to play college athletics (three to Division II, one to Division III). While this represented a change from the prior period when none were recruited, during this same period of time the Firebirds' competition had a healthy number of college recruits. The schools the Firebirds faced had 26, 12 and four players recruited by

Table 1. Year-by-year comparison of Firebird's record.

Season	Won	Lost	Win %	Notes
2001–2002	9	12	43%	Hank appointed Fairmont coach
2002–2003	3	18	14%	2nd year as Fairmont coach
2003–2004	6	15	29%	Met Wooden: Partial implementation
2004–2005	9	12	43%	Partial implementation
2005–2006	17	5	77%	Full implementation
2006–2007	17	6	74%	Full implementation
2007–2008	7	14	33%	Full implementation
2008–2009	15	9	63%	Full implementation
2009–2010	19	9	79%	Full implementation
Summary: Pre-implementation, Partial implementation, Full implementation				
2005–2010	71	43	62%	After full implementation
2003–2005	15	27	36%	Partial implementation
2001–2004	18	45	29%	Pre-implementation
2001–2010	98	100	49%	9-year totals

Division I, II and III colleges, respectively. Since 2003, the nine competitor high schools represented in these statistics had an average of 2.9 players recruited to Division I, 1.3 to Division II, and 0.4 to Division III. During that same period Fairmont had a total of four recruited, or an average of less than one recruit per season (one Division II, three Division III and none to Division I).

No outcome like an improved team record can be attributed to a single factor. Complex outcomes are a function of complex causes. Talent, competition level and luck are always factors in team success. In addition to the changes he made in his instruction, Bias began introducing features of Wooden's high-post offense and defensive schemes. Despite this and other possible explanatory factors, the documented improvement in team record combined with lack of evidence that talent had improved makes it plausible to claim that changes in teaching Bias implemented played at least some role in the Firebirds' turnaround.

Contemporary news accounts suggested that outside observers were noticing changes in Fairmont basketball and implying they were due in part to Hank's efforts. For example, at the end of the 2005–2006 season – which Bias described as the first full year of changes he made in his teaching – sports writer Dave Lamb credited Hank for having built...

Kettering Fairmont's soccer team into a powerhouse in five years, then stepped down to take on the challenge of turning around the basketball program. After tentative steps in the first few seasons, the Firebirds have become a force to be reckoned with in their fourth season under Bias. (Lamb, 2006a)

In a second article in the *Dayton Daily News*, Lamb offered this assessment of Fairmont's 2005–2006 season: 'Fairmont, guided by head coach Hank Bias, shocked many fans by emerging as one of the area's premier boys basketball teams after winning nine last year and just six the year before' (Lamb, 2006b).

What is the evidence that Hank changed how he taught practices? One source was Andy, a player on the team that began practising days after Hank met Wooden. Andy wrote in an email:

It started changing my sophomore year (03–04) and continued getting better until it finally climaxed in my senior year (05–06) ... Practices went from long grueling 3–3:30 hour sessions to 2 hours on the dot full of work with no wasted time. Everyone stayed focused and involved the entire time. Before with the long practices there would be down time and lulls throughout practice where it would be easy to lose focus and not get better. The one constant being Coach Bias, he had given the players control of the team and not one person wanted to let him down. Everyone hated him at one point, wanted to fight him at one point, and loved him the whole time.

Before Hank met Wooden, another player once said: 'Coach, you know a lot about the many drills you use, but they don't seem to connect with each other'. Brandon's comment was one of several stinging experiences that focused Hank on improving his teaching, and prompted the phone call that led to meeting Coach Wooden. Years later, and back from college on break, Brandon heard things were going better with his old team, and wanted to see what had changed. Because a player was hurt Brandon volunteered to participate in a practice. After it was over, he said, 'Coach, if we would have practiced like that when I played here, we would have been a much better team'.

Table 2. Systematic observation behaviour categories.

Category	Definition
A. Instructional Behaviour	Instructional behaviour is defined as the coach giving instruction to the athlete that is directed at teaching a skill or team strategy.
1. Pre-Instruction (PRIN)	Initial information given to player preceding the desired action to be executed. It explains how to execute a skill, play, strategy and so forth associated with the sport.
2. Concurrent Instruction (CIN)	Cues or reminders given during the actual execution of the skill or play.
3. Post-Instruction (PIN)	Correction, re-explanation or instructional feedback given after the execution of a skill or play.
4. Questioning (Q)	Any question to the player concerning strategies, techniques, assignments and so forth.
5. Physical Assistance (PASS)	Physically moving the player's body to the proper position or through the correct range of motion.
6. Positive Modelling (PMOD)	Demonstration of a correct skill or technique.
7. Negative Modelling (NMOD)	Demonstration of incorrect performance of a skill or technique.
B. Non-Instructional Behaviour	Although this is still instructional these behaviours are not intended to provide players with specific instruction towards learning a skill or team strategy.
8. Hustle (H)	Verbal statements that are intended to intensify the efforts of the player.
9. Praise General (PG)	Verbal or nonverbal compliments, statements or signs of acceptance without any direct emphasis on what is being complimented on.
10. Praise Specific (PS)	Verbal or nonverbal compliments, statements or signs of acceptance with a direct emphasis on what or who is being complimented on.
11. Scold (S)	Verbal or nonverbal behaviours of displeasure.
12. Concurrent Management (CMG)	Verbal statements related to organizational details of practice while player is physically active in the drill that does not refer to any skill or strategy.
13. Management (MG)	Verbal statements related to organizational details of practice while player is physically inactive in the drill that does not refer to any skill or strategy.
14. Uncodable (UNC)	Behaviour cannot be seen or heard or does not fit into the above categories.
C. Dual Codes	When a coach speaks specifically to a player by calling the player's name followed by any of the above behaviours.
15. First Name	Using the name of a player when speaking directly to the player.

A more formal analysis of changes in Hank's teaching used before and after video tapes of practices. Two practices (134 minutes total) seven years apart – one in 2003 (prior to reflective practice initiated teaching changes) and one in 2010 (after full implementation of reflective practice initiated teaching changes) – were coded using a systematic observation system. A modified version¹ of the Arizona University Observation Instrument (Lacy & Darst, 1984), based on the coding system first developed by Tharp and Gallimore (1976) in their original study of Wooden's teaching behaviours, was used to explore changes in Bias' teaching behaviours during practices. All discrete teaching behaviours exhibited by the coach during the practices were recorded into one of 15 behaviour categories (see Table 2). A discrete teaching behaviour is defined as 'behavior exhibited by an instructor that has a clearly distinguishable beginning and end' (van der Mars, 1989, p. 15). Frequencies and rate per minute (rpm) were then calculated for all discrete behaviours.

These results are best viewed as exploratory and complementary to the other sources of evidence (team records, Bias personal observations, indirect observations from media, players and peers). Results show support for positive changes in teaching behaviour areas targeted for improvement by Bias across the reflective practice period. The rate per minute (rpm) of all coaching behaviours decreased from 20.46 to 9.97 from 2003 to 2010, indicating that Bias was more efficient with his instructional behaviour, or in his words 'talked less' during practices. More importantly, the analysis shows that the behavioural changes were indicative of more effective teaching. For example, the rpm for pre-instruction dropped from 0.61 to 0.04, the rpm for concurrent instruction increased slightly (3.13 to 3.87), while the rpm for post-instruction dropped from 1.90 to 0.69. In the two observed practices, at least, it appears that Bias was more organized (almost no pre-instruction) and provided more immediate skill feedback. Furthermore, perhaps the greatest indicator of positive behavioural change is seen in the dramatic decrease in management (non-instructional) behaviours from an rpm of 8.87 in 2003 to 2.79 in the 2010 practice.

Some of the changes observed in the before-after video analysis were also noted by a former rival coach who later joined Hank's staff. He noted in an email that practices were better organized, each drill and activity timed and ended on schedule, players were encouraged to ask questions during practices, drills were rarely repeated during a single practice, and that Hank kept his instructions and corrections short and timely.

An Assistant Superintendent of Schools, and Hank's former teaching supervisor, wrote in an email:

... at one point you could argue his career might be over. Instead of quitting, Hank spent time reflecting on ways to grow and improve. He did not waste time blaming, instead he assessed where he was at and planned where he wanted to go. His athletes still are excited to play but now have a plan and a purpose. [Teaching can be improved with effort and I would] add one more ingredient – passion. In a nutshell that describes Hank and his development. The other part that I see Hank do well is the assessment piece. He is constantly assessing what he is doing and what his athletes are doing.

Summarizing how Bias' struggles and improvements unfolded over multiple years is difficult to do in a few pages. There is no point that can be distinguished as 'the moment' it all came together. That is how many teachers experience reflective practice (Gallimore, Ermeling, Saunders, & Goldenberg, 2009). Likewise, teaching improvement does not come swiftly. It is gradually secured through sobering

missteps, discouraging returns to the drawing board, refining instructional goals and plans, satisfying but just noticeable incremental changes, small and encouraging successes, relentless efforts to find a better way, and, with dogged persistence, tangible indications that students are learning and understanding more (Ermeling, 2010; Gallimore et al., 2009; Gilbert & Trudel, 2001).

Hank's story provides a glimpse into the tedious, extended and systematic drive to 'get better' at coaching. A drive built on analysis of and reflection on what it would take to provide the learning opportunities his players needed. One of us (Nater), who both played for and collaborated with Coach Wooden to help Hank, made this observation regarding Hank's approach:

Hank is a thinker, he likes to take ideas and run with them. He takes information and modifies it to fit his team, his practice, and his team's needs. For example, Hank tinkered with Wooden's drills. At first, I thought this was not good. If it's not broke, don't fix it. But, I realized Coach Wooden would have done the same. For example, had he left his full court zone press the same year after year, teams would be running all over it. Bias' stance as a learner was to assume he knew nothing. So everything suggested to him, he would try out. He was open, willing to admit he didn't know something, and was not self-conscious about asking for help and information, qualities that some head coaches might not display. Bias was a sponge when it came to learning, but a very careful sponge. He didn't take everything he heard about and apply it without testing it first to make sure it was right for him and for his players (S. Nater, 23 February 2009).

This observation suggests how Hank's reflective process worked. He gathered information and ideas from any credible source and tried it out in his teaching, reflecting on his experiences and judging whether what he was doing was of benefit to the team. In Part 3 we conceptualize more fully the nature of the ongoing learning and reflective process Hank employed over his 10-year journey.

Part 3: Conceptualizing Bias' reflective practice

Ermeling (2012) recently examined the literature on teacher problem-based learning and identified four key features of reflective practice in teaching contexts: (a) identifying and defining important and recursive instructional problems specific to local contexts; (b) preparing and implementing detailed instructional plans; (c) utilizing evidence to drive reflection, analysis and next steps; and (d) persistently working towards detectable improvements in teaching and learning. Although Ermeling featured 'problem-solving' the typology need not be constrained to problems; it can be used to implement innovations and other changes assumed to be enhancements to practice. Certainly other learning frameworks could be used to frame and analyze reflective practice and the ongoing learning journey we present. However, we believe Ermeling's (2012) summary provides a compelling framework for describing and analyzing reflective practice in our case because of its direct application to coaching, in particular his use of coach John Wooden as an exemplar of the four-feature typology in action. In Part 3 of our reflective practice story we illustrate how Hank's ongoing learning effort aligns with Ermeling's four-feature typology of reflective practice.

In the following sections, the characterizations of his teaching practices and attempts to improve are based on an interview with Hank in May 2007, phone calls, emails and the two tape recorded sets of reflections he provided the researchers.

Reflective practice feature no. 1: Identifying and defining important and recursive instructional problems specific to the local context

When he began his reflective practice efforts, through his own assessment Bias described his instructional approach as ‘bull teaching’. He described ‘bull teaching’ as charging full speed here and there, head down, without a coherent plan and instructional approach. He used what he had picked up about planning and pedagogy at coaching clinics and by observing and working for other coaches, and put them into a pile that he picked from haphazardly. In his own words, these are the instructional issues he wanted to address when he started:

There was a lot of stoppage of practice, a lot of dead time. A lot of times I was talking for a long time, and a lot of what I said I was thinking up at the moment in reaction to some problem I had just seen [and had not anticipated in my practice planning]. I wasn’t teaching, I was reacting. Drills don’t teach, they are a tool a coach uses to teach understanding and skills. The players were not getting any consistent instruction or certainly not what they needed. It was not surprising that in a lot of games the players weren’t sure what to do. (Hank Bias, interview, May 2007)

After talking to Wooden, reading Wooden’s book and the journal article reporting on Wooden’s practices (Tharp & Gallimore, 1976), Bias identified two specific improvements he would try to make. First, he would revamp the way he planned practices. Second, he decided he would also make changes in his instructional talk during practices by trying to move away from the ‘bull method’ he had been using.

Necessary as these changes might be, they were framed largely from the coach’s perspective on how he was trying to behave in practices. How changes in his behaviour might address student learning and understanding remained relatively implicit and mostly unspecified. His initial instructional goals were referenced in the quotation above, for example, ... teach understanding and skills. The players were not getting ... what they needed But how would better planning and different instructional talk accomplish these ambitious ends? He knew he wanted his players to understand the concepts he was teaching, to use their growing knowledge to make good decisions during games, and know how to respond to the opposition in the flow of the game. To achieve these ends, he assumed if he planned better and used more disciplined instructional talk those changes would somehow help players to understand more. He was only partly right.

Reflective practice feature no. 2: Preparing and implementing detailed instructional plans

In the earliest days of his reflective practice efforts, Bias first focused on investing more time in development of practice plans. The following was summarized from a document Hank prepared in 2010 when asked to detail the changes he made when he first began trying to improve.

1. Fixed length practices. A Wooden principle that Bias installed after he returned from California was a strict limit on the length of practices. No time was to be added if drills did not go well or Bias was displeased with player effort. The goal was practices that were intense, demanding and two hours long, but no more. This way players knew the practices would begin and end on time, and there was no rea-

son to save energy in case the time was extended as Bias had sometimes done in the past. Just as Wooden did, Bias huddled up the team before practice each day to tell them the objective of the day's practice, sometimes introducing a bit of humour. Practice ended with a fun activity, usually competitive, and involved actions typical of a basketball game.

2. *Writing a practice plan and sticking with it.* In the past, Bias wrote out his practice plans, but did not always adhere to them. For example, if a drill was going badly, he sometimes extended it. Consequently, the time allotted for some of the other drills was reduced or practice extended beyond the normal ending time. After returning from Los Angeles, Bias began planning practices more carefully, giving each activity an exact duration. The goal was to stick with the schedule no matter what. Any changes that needed to be made were written down during practice and implemented the next day, not that day.

3. *Transitions between drills.* During practices small groups of Firebird players were always distinguished by coloured shirts. In the past, Bias would stop practice and read off for each series of drills which colour each player was to wear. To save time, Bias began posting player groups in the locker room board before practice began. Consequently, each player knew what colour to wear for any particular drill. At first, transitions from drill to drill were slow as would be expected. To speed things up, Bias would inform the slowest group how long it took them to change jerseys. 'That took you guys 15 seconds'. He would start a drill before the players finished changing their shirts. They got the message; coach would tolerate no wasted time. Gradually, transitions became smoother and quicker.

4. *Transitions between drills.* Equipment needed for the next activity was positioned before the previous one was finished. To accomplish this, Bias wrote out his practice plan, minute-by-minute, and went over the plan with his managers and assistant coaches. Every coach and manager received a copy of the schedule which made it possible for them to prepare for the next drill, including when and where to locate equipment for each activity.

5. *Keep drills to eight minutes maximum.* When teaching the various components of an offensive or defensive play, the time was limited to eight minutes. Any longer, and the intensity of practice would be compromised.

6. *Integrating water-breaks into drills.* Each player had his own labelled water bottle that was stored to the side of the court, out of the playing area. 'Team' water bottles would be placed under the two baskets on the main court. Players were taught to avoid touching the spout with their mouths. Within reason, players were permitted quick drinks when it did not impede the flow of practice.

The second focus during the partial implementation period was instructional talk during practice. He selected the following based on what Wooden had suggested and on what he learned from various readings.

1. *Reduce total number of coaching statements.* Like Wooden, Bias strove to keep interruptions in activity to a minimum and one way to do that was to cut out stop-pages caused by long lectures. Too much talking by the coach leads to less activity by players, and thus fewer opportunities to learn by enacting what is being taught.

2. *Keep corrections and feedback to 10-second maximum.* Before he met Wooden, when correcting a player Bias would talk at length, often stopping the flow of practice. Wooden told him that corrections should be no more than 10 seconds if possible, the player should be addressed by first name, nothing should be mentioned that would discourage the player, and the correction should be packed with practical information the player needed to make the change. ‘Kyle. Make your cut at the right time. It was a little early. Wait a second and see what happens. Try it again’. He also sought to deliver corrections at a time the players learn the most – right after something needs correcting.

3. *Be specific in teaching behaviours.* Previously, Bias would praise or scold players, but not always make clear what was good or bad about what he had noticed. Now he strove, whether praising or reproving, to add to the ‘good job’ a concise statement of why it was good. ‘Justin, way to go, you cut off the driver’. ‘Sam, good – crisp, fast outlet pass’.

Running practices became a lot more fun for me and the players. Players got immediate feedback on what they were doing and how they can improve. I try to pack a lot of specific information into each thing I say during a drill. Ten seconds or less, blasted out, first name of the player if it’s for an individual. It’s made me feel more like I am really coaching, that I have a sense of ownership of what the players are doing on the court. (Hank Bias)

Reflective practice feature no. 3: Utilizing evidence to drive reflection, analysis and next steps

Compared to the distressing 3 and 17 season, Bias’s team improved their record during the first two seasons of ‘partial implementation’. Bias believed practices were better organized and more efficient, and he was confident he had become a more disciplined ‘instructional talker’. But something was still missing – his players were not moving to the level of development he thought they were capable of. His changes had some good effects, but they were not adding up to significant gains in student learning and understanding. Bias continued to assess and reflect after the first two years of partial implementation and began to gradually sharpen his definition of the instructional issues he needed to address to get the players to the next level:

I remember sometimes in a game I would tell a player something like “take care of your man” or “why are you passing to him?” He would look at me like “what are you talking about? I don’t understand”. A lot of times I instructed or corrected something in a game I had never mentioned in practice. (Hank Bias, interview, May, 2007)

Looking back, Bias realized that he made assumptions that were not warranted. He assumed when he asked ‘why did you pass to him?’ in a game that the player ought to know who else he might have passed to, what passing options were available or what pass at that instant might or might not be the most desirable. He began to realize that no matter how well he planned practices and used more succinct and disciplined instructional talk, the players were not abstracting from the drills and activities the level of understanding they needed to ‘put the pieces together’. The players were not learning the principles they could quickly apply in games to solve unexpected or novel problems their opponents presented.

To address this newly identified teaching challenge, Hank returned to his previous research method: reading what he could find, and talking to Wooden and Nater. Based on what he learned, Bias decided he needed to make practices more closely mirror games. The goal was to maximize opportunities in practices for him to explicitly instruct players how to respond quickly to the problem-solving and decision-making challenges that arise in games. He still needed to be prepared to provide concise instructions and corrections at exactly the right moment to maximize learning. But it was not just that he needed to be succinct and to the point whenever he spoke; he needed to see that all of his instructions as connected over the course of a practice to an overall set of explicit and coherently related instructional objectives. He needed to design drills and activities that ‘connected the dots’ so that a conditioning drill included passes of different types in different situations that arise in games and then add in elements that repeated key offensive or defensive moves and decision making. What he needed to do was akin to what a mathematics teacher faces when she realizes her pupils have memorized procedures but do not grasp the underlying principles which prepare for developing solutions when presented with novel problems. Wooden once said he wanted ‘... to be as surprised as our opponent at what my team came up with when confronted with an unexpected challenge’ (Nater & Gallimore, 2005, pp. 89–90). This is what Hank wanted to learn how to teach.

He needed to learn how to knit practice activities and instructional talk together into an over-arching system of content and pedagogy that developed his players into independent problem-solvers.

For instance if in a game the wrong person got in the wrong rebounding position, I would say the same thing I would say in practices. “Brad, make sure you’re at the free throw line to be the short rebounder”. I might have said that exact same thing in practice the day before. When the game begins, there’s no change in what I am saying, or in the emotional tone except maybe on game night I don’t use my “loud coaching” voice and maybe say a lot less than in practices. The corrections are the same in content and tone, like “Lamar, use the glass from that angle at that distance”. Now we practice the way we play. Nothing more, nothing less. We know exactly how we want to play now, and everything’s built into practice. (Hank Bias, interview, May, 2007)

As these changes were introduced and the pace speeded up, players began to describe Firebird practices as ‘two hours of go and no show!’ as one player commented to Hank. They were also a lot more fun. Bias’ changes represent a point worth highlighting. Improving instruction of any type is seldom a matter of simply increasing the use of discrete pieces of content and pedagogy. Just cutting out long lectures and increasing the number of short, succinct corrections will not improve teaching and learning. It matters more how activities and instructional talk build toward an instructional goal over the course of a practice session or week; focusing only on the quality of each activity drill is necessary but not sufficient to create powerful learning opportunities that build up like a scaffold to higher levels of learning comprehension.

Reflective practice feature no. 4: Persistently working toward detectable improvements, specific cause-effect findings about teaching and learning

The reflective practice process is never truly finished. Becoming a better coach is a career-long opportunity. When asked about what he did after his initial successes to

seek improvement, Bias reported that over the years, among other changes, he had done the following in addition to continuing reading and researching basketball and pedagogy:

- (1) Made notes on the back of my file cards, if a drill was inappropriate for the intended goal, made a tally as to how many repetitions of each offensive or defensive set to try to add up to 100; Wooden's rep rule he told me about;
- (2) Asked questions of players, staff and guest observers. Reviewed each practice mentally afterwards to see how it could improve. I was super conscious of all the things that came out of my mouth that were not instruction/information related or took too long;
- (3) Monitor. I allowed the clock to monitor how on task I was becoming during practices. I had a checklist of overall drills, etc. for the season and the day that I would check off as I made a lesson for the day.

Some of the specific improvements he made in later years included:

Continue to try and tweak drills so they are more game like and meet the demands of the player. How? We might examine how we can either increase the speed or intensity of the drill or the intellectual process the player must manage as the difficulty of the drill increases. We are always trying to find ways to increase the difficulty of the drill to meet the increasing demands of the game on the player. As the season develops, the drills should become a little more complex. We added the clock and score to a number of drills that we do. We have added during our drills instructions on how other teams will attempt to guard our stuff and have the players react. We added 'player led' or 'captain led' offensive execution time to prepare for our summer games. We have added or changed or adjusted many things to constantly put pressure on the players. (Hank Bias)

In addition to improvements he sought based on research and self-monitoring, another source was player feedback which led him to make other changes in years well after the Firebirds had become more successful. A concrete example he recalled as especially painful led to another change in his teaching practices. The feedback came from a gifted player who was part of the first winning season in '05-'06, who Bias thought might get a Division I offer, but ended up with offers from two low ranked Division I schools that did not appeal to him. He took a Division II basketball scholarship from a program that had actively recruited him:

After he had gone on to college, L came back and told me that I wish you would have spent a little more time with us individually. I asked, "What do you mean L?" He said, "The couple of days and times you did come before practice and pulled me aside to work on my shooting or after practice, that really helped me but I needed a lot more of that individual attention. I feel like [if I worked on his outside shot with him], he would have gone Division 1. The boy could have been a shooter from outside on top of what he had, even at 5'10". I had many college coaches tell me, "I'm not sure he can shoot". That's where the 'ouch' part came in. L recognized it, and that is why he came to give me the feedback that was so tough to take, but right on the money. I said, "L, that's really nice of you to come back to tell me that". It's not that I never worked with individuals. I did. But it was the way I did it that made L's feedback so wounding. Before he came to see me, I would see a guy would have some problems or faults. But I was doing it just if the guy had a void in his game. After talking to L, I knew I needed to take it another step further in my teaching and spend time with them individually. I was going to make it a daily thing, before or after practice every day whenever

the time's available. I didn't care if it was in my office. I needed to spend time with these guys individually, explaining to them. That's where I talk and demonstrate to them how to improve individually, because then the corrections will make even more sense to them. (Hank Bias, interview, May, 2007)

After several years of satisfying progress in the way he taught practices, Bias identified another area in which he needed improvement that is not explicitly instruction-focused but one that might affect how well he taught in a broader sense:

I tried to stop being so concerned about winning. I starting thinking about the results of my teaching, not the winning. I made a pact to measure myself by how well I was teaching, not whether the team was winning. (Hank Bias)

A focus on winning was generated by both outside pressures and Hank's competitive spirit. A year after he met Wooden, the high school opened a new and large arena. To amortize the costs of constructions, it was important that during basketball season the new arena was filled with ticket-buying fans — a winning, exciting team was essential. Because high school basketball is an obsession in Midwestern USA, there is always pressure from local fans on the coach and administration. Even a winning coach can be dismissed if the team plays a boring style. But Hank's own competitive spirit was a challenge. Before he met Wooden, and even after that, Hank struggled to tamp down his focus on team wins. This effort to rein in his passion for wins was reinforced by a note he received from Wooden dated 18 September 2005. Wooden's letter was in response to a letter Bias had written describing the mounting pressure for a better season when Fairmont's new arena opened.

Dear Hank: Never forget that the only pressure about which one should be concerned is the pressure one puts on oneself. And that must always be present. Those who succumb to outside pressure will tighten up and will not perform to their own level of competency. Be yourself and always keep learning. Your poem pleased me. Best wishes, John. (John Wooden)

'When you are through learning, you are through' were not just words to John Wooden; he believed they were a key to his success as teacher. Bias does too, even though he concedes it is an on-going struggle to remain more focused on teaching well than winning big.

Discussion and future research

Given talent improvement or reduced competition, a tentative and reasonable conclusion is Hank's efforts to improve his coaching helped better his teams' performances over a 10-year period. This claim is plausible given his improved won-lost record, the video-tape analysis, comments by players, peers, sports writers, researcher observations and Hank's reflections.

What role did the intervention of a coaching legend have beyond setting Hank on a beneficial course and boosting his confidence? Coach Wooden told Gallimore how impressed he was in the first phone call with Hank's focus on learning to teach better. In brief, he said that many coaches call me, drop by to chat, but not as many want to talk 'nuts and bolts' of teaching as they want to pick up 'some tricks of the trade.' How much should be credited to Hank's self-directed research, analysis of practices, and reflections on what was working and what was not? All we have to

offer is speculation and conjecture, so it is probably more useful to regard Hank's story as a palette illustrating arguably common features of reflection-cultivated, on-going learning – as represented in Ermeling's (2012) four-fold typology for reflective practice in teaching contexts.

Lending credence to its application to sport coaching, Ermeling's typology captures Armour's (2010) eight recommendations for guiding reflective practice for sport coaches, or what she referred to as the development of a learning coach. She concluded that reflective practice for sport coaches must be situated in each coach's actual practice, driven by athlete learning needs and supported by formal and informal learning networks – suggestions clearly encapsulated by Ermeling's reflective practice framework. How generalizable Hank's case is remains undocumented, but what he did is sufficiently specified by Ermeling's typology that it can be replicated and tested in other contexts with other coaches.

Guided reflective practice and on-going learning for coaches is promising, but whether it can be scaled beyond proof of concept studies remains to be demonstrated. Research on this topic clearly illustrates the many challenges of redesigning formal coach education programs to include a genuine and durable reflective practice component (e.g. Cassidy et al., 2006; Culver & Trudel, 2006; Knowles et al., 2006; Werthner et al., 2012). Primary challenges include changing longstanding individual and institutional attitudes about what constitutes 'learning', training and supporting learning facilitators, and teaching coaches why and how to engage in meaningful reflective practice. These collective challenges have previously been framed as a need to change coaching 'mindsets' and 'cultures' (Lee et al., 2009). We need to help coaches move past the common view that setting aside time for reflection is 'something extra I don't have time for' to viewing reflection as 'a normal part of sport coaching'. Clearly, as evidenced by Hank's story, some coaches have made this transition in their practice and exhibit what is often referred to as personal mastery. Personal mastery is considered a hallmark of effective practitioners across disciplines and is defined as 'the discipline of personal growth and learning' (Senge, 2006, p. 131). It could be argued that personal mastery is in fact the most critical attribute required for reflective practice and becoming an effective sports coach. A recent study of Olympic coaches adds further support for this conclusion, finding that 'having a passion and commitment to wanting to succeed' was the most commonly identified attribute required to become a successful coach (Currie & Oates-Wilding, 2012). Interestingly, reflective practice itself is sometimes defined as a form of personal mastery, or 'a meta-competency that is used to develop and sustain the other teaching competencies' (Collin & Karsenti, 2011, p. 571).

There are many barriers to wide-scale implementation of reflective practice. Many youth coaches are volunteer, uncompensated, working adults with minimal time for anything beyond the conduct of practices and game attendance. Means of delivery for ongoing learning efforts of any type remain limited and largely untested, although a slowly growing repository of intervention reports is being accumulated in the coach education literature. At present reflective practice seems more fitting for compensated coaches and those volunteer coaches who are exceptionally motivated – that is, those who display personal mastery. Perhaps coach education programs should include more emphasis on teaching coaches how and why to adopt a personal mastery orientation, and methods for actually assessing this type of orientation. The Self-Reflection and Insight Scale (Grant, Franklin, & Langford, 2002) has recently been identified as a potential tool for quickly measuring a coach's level of

personal mastery and willingness to regularly engage in reflective practice (Bertram & Gilbert, 2011).

The SRIS is a 20-item self-reporting scale with two subscales, one for self-reflection and one for insight. Sample questions include ‘I frequently take time to reflect on my thoughts’, ‘It is important for me to evaluate the things I do’ and ‘I often think about the way I feel about things’ (Grant et al., 2002). Developing plausible models of reflective practice for coaches involves many questions. To what extent can new technologies and the internet address the ‘time’ problem that many youth coaches confront, especially volunteer community coaches? To what extent can reflective practice be self-guided without access to expert guidance, professional development or other resources? Is a collaborative learning team approach better than a self-guided form of reflective practice such as Hank used? If a team approach is superior, how much training, expert assistance and facilitation are needed by coach teams to sustain and succeed using reflective practice? Would a national network of trained facilitators be required to implement and sustain reflective practice in a face-to-face model, or can web-based resources, including video examples, be used to cut costs? What assessment instruments can be used to evaluate the effect of reflective practice on the quality of coaching, and for measuring developmental and other benefits to youthful athletes? Many of these questions specifically address what Collin and Karsenti (2011) referred to as the ‘appropriate support devices’ for reflective practice, e.g. contexts that provide opportunities to discuss and learn from experiences. We might, then, condense these issues into one broad question: what are the appropriate support devices needed to scale-up and sustain reflective practice for sport coaches? A recent series of articles on the development of coaching expertise included descriptions of sample support devices such as reflection cards, after action reviews, critical reflection exercises (Gilbert & Trudel, 2013), and suggestions for coach development administrators on how to create optimal coach learning situations that integrate these support devices (Trudel & Gilbert, 2013). These types of theory-driven practice-oriented articles, coupled with reflective practice stories such as Hank’s, provide rich insight into the types of appropriate support devices that are more valuable, and practical, for sport coaches.

What about the role that trained facilitators can and should play to mediate and support coach reflection? Trained facilitators are critical ‘support devices’ for coach learning, and if we expect our coaches to engage in regular and meaningful reflection sport organizations must provide coaches with access to reflection facilitators. Trudel and Gilbert (2013) provided a detailed discussion about the role that trained facilitators – referred to broadly as coach development administrators – can play in different types of coaching contexts (recreational, developmental and elite sport). For example, in recreational and development sport contexts – where coaches such as Hank work – trained facilitators should view themselves primarily as connectors. Coaches in recreational and development sport often work in isolation without the benefit of coaching or support staffs. Therefore, trained facilitators need to provide coaches with a support system – ideally one that includes a mix of personal face-to-face connection and an online open access connection whereby coaches working in similar contexts can share issues, ideas and resources. The objective of the trained facilitator should not be to ‘train’ the coaches or ‘solve’ their problems, but instead to help coaches connect with each other and to relevant learning resources.

A final and lingering concern. While researchers and policy makers might argue that ongoing learning is the job of coaching, to borrow Armour’s phrase (2010), we

have to face the likelihood that not all coaches share that characterization of their work. Although coaches report reflecting on their work, that it is beneficial, and that they appreciate socially mediated opportunities that support it, if external support ends reflection rapidly fades. Certainly time constraints are a major reason for this fading; it will be difficult to overcome this challenge in many situations in which coaches are part-time or volunteers. Probably there is another barrier to sustaining reflective practice. Reflection requires individuals to focus on their own teaching behaviours, and some are not going to like what they see. Attention to self, required by reflective practice, can evoke negative emotions (Mor & Winquist, 2002). Some people respond by disparaging the value of self-observation and reflection and ceasing to do it. Others might convince themselves their initial negative reactions were misguided, and decide their teaching might not look appealing but works well enough. Perhaps Hank is an outlier, someone willing to take a hard look at his coaching, who soberly concluded he needed to make major changes, and lay himself open to criticism by seeking feedback and guidance from multiple sources. Perhaps he is one of those with a personal mastery orientation (Senge, 2006), and a passion to succeed, willing to do whatever it takes no matter how personally uncomfortable (Currie & Oates-Wilding, 2012). Certainly, what Hank accomplished, and how he did it, supports the claim that dogged commitment to ongoing learning and critical self-monitoring can lead to better teaching and team performances. But how many coaches are likely to adopt the same willingness to look so objectively at their own behaviour, even if provided the time? Do we know how to temper the expected reactions to what they see in their coaching behaviour? The research agenda has to expand and address this and other challenges as well as to investigate better ways to integrate reflection into coach education.

Note

1. Please contact the second author for a copy of the modified systematic observation form, code definitions and coding instructions.

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