How the best get better: an analysis of the self-monitoring strategies used by expert golf instructors
Paul G. Schempp a; Collin Webster b; Bryan A. McCullick a; Christopher Busch a; Ilse Sannen Mason a
a University of Georgia, Athens, USA b University of South Carolina, Columbia, USA

Online Publication Date: 01 May 2007
How the best get better: an analysis of the self-monitoring strategies used by expert golf instructors

Paul G. Schempp*, Collin Websterb, Bryan A. McCullicka, Christopher Buscha and Ilse Sannen Masona

aUniversity of Georgia, Athens, USA; bUniversity of South Carolina, Columbia, USA

The purpose of this study was to analyse the self-monitoring strategies that 31 expert golf instructors used to improve their teaching. Specifically, criteria characteristic of both instructional strengths and weaknesses were identified, as were the strategies these teachers used to continue to develop their strengths and improve their areas of weakness. Data were collected at Golf Magazine’s Top 100 Teacher Summit held at Pinehurst, NC. Teachers were asked to complete a written survey, which asked them to list aspects of their teaching they considered strengths and aspects they considered weaknesses. Subsequently, the teachers were requested to identify strategies they used to maintain their strengths and improve their weaknesses. Data were analysed by identifying themes in the teachers’ responses. Results of the analysis indicated that the teachers identified both goals and actions in their self-monitoring strategies. Self-monitoring goals included improving communication, adjustments to personal lifestyle, examining teaching perspectives and increasing learning. Self-monitoring actions incorporated seeking help from others, reading, using technology, developing business strategies and adapting teaching practices.

Introduction

On the most general level, the study of expertise seeks to understand and account for what distinguishes outstanding individuals in a domain from less outstanding individuals in that domain, as well as from people in general. (Ericsson & Smith, 1991, p. 2)

Research seeking to understand and account for expertise in both teaching (e.g., Borko & Livingston, 1989; Griffey & Housner, 1991; Berliner, 1994; Schempp et al., 2004) and coaching (Jones et al., 1995; DeMarco & McCullick, 1997) has uncovered promising findings. Specific to sport instruction, recent studies have revealed insights into expert teachers’ interactions with students (Schempp et al., 2004), use of metaphors (St Pierre, 2001), routines and rituals (Baker et al., 1998), knowledge acquisition (Schempp et al., 1998a), professional orientations (McCullick et al.,...
Expert sport instructors plan more appropriately and contingently than novice instructors (Lubbers, 1998), possess rich and extensive knowledge bases that are organized in a hierarchical and efficient manner (Griffey & Housner, 1991), construct knowledge from both discipline-based sources and practical experience (Dorgo, 2003), are more ritualistic in their instructional delivery than novices (Woorons, 2001), have mastered a variety of instructional techniques (Fincher, 1996), possess extensive analytic and reasoning capabilities (Bian, 2003) and demonstrate a more acute perceptual capacity than novices (Woorons, 2001). These findings are consistent with other research on the nature of expertise, both in teaching and other domains of performance (deGroot, 1965; Chi et al., 1988; Ericsson & Smith, 1991). Although promising, the search to identify and understand the characteristics of expert instruction has not been exhaustive.

The scientific investigation of expertise is, in part, the search for the characteristics and practices that continually contribute to the superior domain-specific performance of the expert. One characteristic identified in the early research into expertise was the careful and systematic monitoring of one’s practice (Ericsson, 2003). This practice amongst experts is commonly referred to in expertise research as self-monitoring (Chi et al., 1981, 1987).

Self-monitoring is among many cognitive factors that appear to mediate the teaching and learning process, including, for example, self-efficacy, self-regulation, motivation and reflection (Zimmerman & Schunk, 2001). Reflection, in particular, has attracted widespread attention in the educational literature and has long been considered important to the development of teachers’ knowledge and the improvement of pedagogical practice (Schon, 1987). Self-monitoring, in contrast, is a process that has mainly been studied by educational psychologists. As a term it is less familiar to the more general educational community. However, research has shown self-monitoring to have a distinct role in teacher cognition, which makes it uniquely important to teaching performance (Zimmerman, 1996).

Educational psychologists have defined self-monitoring as the observing and tracking of one’s own performance and outcomes (Zimmerman, 1996). This is in contrast to reflection, which is conceptualized more broadly as mentally reliving aspects of professional experiences that might encapsulate a wide spectrum of educational matters (Ross, 1989). Dilemmas encountered while teaching may trigger reflective activity in teachers, which typically involves an appraisal and evaluation of personal and situational factors within the teaching experience.

Self-monitoring shares a common attribute with teacher reflection in that both require teachers to extract insightful information for improved practice from their experiences. The distinction between these two constructs is that self-monitoring requires a teacher to move beyond an evaluation of his or her teaching experiences to engage in an exclusively introspective process of critical self-analysis (Karoly, 1993). Through self-monitoring, the teacher identifies elements of his or her professional practice that merit increased attention and scrutiny. Goal-setting and behavior modification become inextricably linked as the teacher engages in an ongoing
critique of personal performance and traces his or her progress toward targeted objectives. Thus, self-monitoring and reflection differ in that reflection is a broad and undirected analysis of the teaching experience, whereas self-monitoring is a wholly intrapersonal and goal-directed process of behavior analysis, modification and implementation (Karoly, 1993).

Self-monitoring has been traced to superior performances in acting (Lan & Morgan, 2003), academic achievement (Maag et al., 1992; Lan, 1996) and motor learning (Zimmerman & Kitsantas, 1996). Expertise research has discovered strong self-monitoring skills in expert physicists, writers, athletes and musicians (Chi et al., 1981; Zimmerman, 1996). Substantive empirical evidence also indicates that self-monitoring improves teacher performance (Fuchs, 1988; Belfiore & Browder, 1992; Webber et al., 1993; Allinder, 2000).

As a result of this practice, experts are more aware of errors made and better at predicting accurately which problems are difficult during problem-solving (Tan, 1997). They also are superior at understanding why they fail to comprehend certain elements of a problem, and are more aware of the appropriateness or adequacy of the solutions attempted (Chi et al., 1982). They objectively and honestly assess and identify their shortcomings and knowledge deficiencies with a high degree of precision. They are, therefore, better able to accurately analyse the cause of their failure and take corrective action (Berliner, 1986). The superior monitoring skills and self-knowledge of experts are attributed to their greater underlying domain-specific knowledge and the way they represent that knowledge (Anzai, 1994).

Despite the links to superior performance and consistent association with expertise, the self-monitoring strategies employed by expert sports instructors have yet to be investigated. The purpose of this study was, therefore, to analyse the strategies expert sport instructors used to monitor their teaching performance. Specifically, this study endeavored to identify and describe the strategies engaged by expert golf teachers in monitoring their instructional strengths and weaknesses. Investigating the strategies experts use to track their successes and shortcomings as teachers will not only illuminate a key behavior for great teachers, but also provide guidance for those seeking to improve their own instructional performance.

Method
Participants

The participants in this study were 31 of Golf Magazine’s ‘Top 100 Golf Instructors in America’. These teachers are widely recognized by both the public and the golf industry as among the best teachers of their sport. The teachers are nominated for the ‘Top 100’ list through a peer and professional organization nomination and then selected by a panel of experts. The list is reviewed and refreshed every two years.

The participants were attending Golf Magazine’s Top 100 Teacher Summit at Pinehurst, NC at the time these data were collected. A table was set up near the registration counter, and the teachers were requested to participate in this study.
immediately after they registered for the conference. The teachers were allowed as much time as they deemed necessary to complete the two-question survey form. The majority of teachers completed the form in 20 to 30 minutes.

**Data collection**

**Instrument.** Data were collected using a survey developed for the purpose of having the teachers identify aspects of their teaching they considered strengths and weaknesses. Additionally, the teachers were asked to identify specific strategies they used to ensure their strengths remained strengths and specific strategies they used to shore up weaknesses. These criteria were selected based on descriptions of expert teachers’ self-monitoring behavior by Berliner (1986, 1994) and Tan (1997).

Once constructed, the survey was pilot-tested with a group of golf instructors who were not participants in this study. Modifications were made to the instrument in order to improve clarity of directions, elicit more salient data and be sensitive to time demands on the teachers in completing the survey. The final survey requested the participants to:

1. **Identify** three aspects of your teaching that you consider strengths. *How* do you ensure they remain assets in your instruction?
2. **Identify** three aspects of your teaching that you have tried to strengthen in your teaching. *How* have you attempted to improve in these areas?

**Data analysis**

Data were analysed in three steps.

**Step 1.** The investigators individually reviewed the written responses from all teachers. After an initial review, it was evident that the instructors had provided a great deal more data and detail than originally anticipated. To fully analyse these data, it was decided to separate the data into the strategies of self-monitoring and the topics of self-monitoring. This study reports the findings relative to self-monitoring strategies.

The investigators reviewed the written responses for the purpose of identifying the strategies used by teachers to recognize strengths and weaknesses in their instruction, and to maintain strengths and address weaknesses. The identified strategies were compiled onto a single spreadsheet. For the 31 teachers, 186 strategies were listed.

**Step 2.** The investigators collectively reviewed the listed strategies for themes and commonalities. Initially, it was thought that the strategies for addressing strengths and weaknesses would be different, but it became apparent that the same strategy could be used in either case. For example, a strategy such as ‘watch other teachers teach’ could be listed for both maintaining a strength and rectifying a weakness.
The investigators reviewed the operational definition of a strategy in search of guidance for data analysis. After discussion and looking up several dictionaries, the researchers adopted the definition of a strategy as consisting of two sequential components: a goal and an action. Therefore, we attempted to categorize the responses for each teacher as either a goal or an action. If all strategies could be placed into these categories, without overlap, then we believed the thematic framework was sound. If there were strategies that did not fit, or could fit under multiple themes, then the framework would be amended.

First, the strategies listed by the teachers as associated with strengths were analysed, followed by the strategies associated with weaknesses. Each strategy identified by the teachers was representative of either a goal or an action, and there was unanimous agreement by the five investigators that the data fitted distinctly and independently into these two categories.

**Step 3.** In the final step of data analysis, the investigators collectively reviewed the responses listed under the category of goals and under the category of actions in search of themes that would summarize, crystallize and richly explain the category. Commonalities and consistencies of the responses were located, and tentative themes were discussed until the investigators agreed that the themes derived were comprehensive, accounted for all responses and adequately represented the participants’ reported self-monitoring strategies. The categories for goals included ‘teaching perspective’, ‘personal lifestyle’, ‘learning’ and ‘communication’. In monitoring their practice, the expert teachers in this study listed 87 actions for maintaining their strengths or improving their weaknesses, almost twice as many as goals. These actions represented five channels of pursuit of better teaching, and were classified as ‘seek help from others’, ‘adapt teaching practice’, ‘read’, ‘use technology’ and ‘develop business strategies’.

**Findings and discussion**

Emerging from the data was a clear set of self-monitoring strategies that these experts employed to continue on a path of success and mastery as teachers. The instructors’ strategies consisted of goals and actions related to their perceived strengths and weaknesses as teachers. In setting goals, instructors targeted areas of instructional practice that would lead them to become better teachers. Instructors’ self-monitoring actions outlined procedures that would advance their teaching.

By dividing these expert teachers’ self-monitoring strategies into goals and actions, categories were drawn from these two themes that richly explained the nature of the instructors’ identified self-monitoring strategies. As we have stated above, the emergent themes for the instructors’ goals included ‘teaching perspective’, ‘personal lifestyle’, ‘learning’ and ‘communication’. Emergent themes for actions included ‘seek help from others’, ‘adapt teaching practice’, ‘read’, ‘use technology’ and ‘develop business strategies’. Instructors’ self-monitoring goals and actions are
presented in Tables 1 and 2. To report these findings, descriptions of each theme and representative sample quotes from the teachers are provided. Following the description and supporting evidence, each theme will be discussed in relation to relevant literature on self-monitoring.

**Self-monitoring goals**

*Teaching perspective.* The overwhelming focus of the instructors’ goal-related responses was on the perspective they brought to their teaching. This theme comprised statements the instructors made about broadening their view of the teaching and learning process, empathizing with their students, simplifying their manner of instruction (e.g., ‘look for ways to make teaching easy to understand and simple to use’), challenging themselves with new clients (e.g., ‘become involved in junior golf and kids’ programs’) and seeking creative approaches to teaching. Goals in this theme were predominantly set to maintain strengths. For example, one instructor connected his liking for people and empathy with students to his goal of trying to understand his students’ perspectives:

> I like people. They take me on an adventure, every one of them. I never know quite where and that is why it’s never boring. They are all different. Trying to get into their shoes, empathy, is what fascinates me.

In setting goals to improve weaknesses, the instructors listed goals such as ‘remind myself that each golfer has individual needs’ and ‘be creative in what I offer’. In identifying several weaknesses in teaching perspectives, it appears that even though the experts are at the pinnacle of their profession, they know that they can be better. It seems that even their perspective on professional practice, which has served them well for years, does not escape their search for improvement.

As the most prominent focus of the instructors’ goals, it is clear that the expert instructors in this study were primarily cognizant of their pedagogy, which Kilbourn (1991) refers to as the profession’s ‘soul’ and claims is ‘central to the point of teaching’ (p. 728). He asserts, ‘The self-monitoring characteristic of skilled professional practice respects the details of what was said and done in a teaching/

<table>
<thead>
<tr>
<th>Teaching perspective</th>
<th>Personal lifestyle</th>
<th>Learning</th>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look for ways to make teaching easy</td>
<td>Never be satisfied</td>
<td>Stay on a constant journey of learning</td>
<td>Ongoing awareness of verbal communication</td>
</tr>
<tr>
<td>Become involved in junior golf and kids’ programs</td>
<td>Develop more trust</td>
<td>Learn from education and peers</td>
<td>Improve communication</td>
</tr>
<tr>
<td>Make sure the student owns the knowledge</td>
<td>Evaluate myself</td>
<td>Learn from other sports’ best teachers</td>
<td></td>
</tr>
<tr>
<td>Tackle as many difficult cases as I can find</td>
<td></td>
<td>Get better in specialty shots</td>
<td></td>
</tr>
</tbody>
</table>
learning situation’ (p. 732). As highly skilled practitioners, the experts in this study lived up to this assertion, monitoring closely and in detail their ability to promote and maximize student learning.

**Personal lifestyle.** Goals related to personal lifestyle were characterized by personal qualities the instructors monitored and linked to professional aspirations. The chief focus of statements in this category was on adopting attitudinal and philosophical changes on a personal level. For maintaining teaching strengths, this theme comprised the second largest body of goal-related responses and included statements such as ‘think and do what you want to do’ and ‘biting off more than I can chew and improving my chewing’. Examples of goals for shoring up weaknesses in this area included ‘maintain balance in life to have equal energy for each student’ and ‘step out of the box’, which illustrates the underlying connection some instructors made between their personal lifestyle and their professional practice.

In monitoring their personal lifestyles, the experts in this study set personal goals that have important connections to teaching. They recognized that to become better teachers, they must first become better people. A similar link was shown in a study by Alderman et al. (1993), who examined the benefits of teaching learning strategies to preservice teachers. The authors found that the success of learning strategies was linked to the motivation of the student. Components of motivation, such as goal-setting and self-monitoring of goals, are important factors in the overall effectiveness of a learning strategy. Specifically, establishing performance goals can enhance the inherent benefits of self-monitoring (e.g., Kazdin, 1974). Citing Bandura (1986), Alderman et al. (1993, p. 41) stated, ‘Explicit proximal sub-goals . . . lead to the achievement of larger future goals’.

The golf instructors in this study set goals related to their personal lifestyle that were indicative of these types of strategies. They monitored their behavior and

<table>
<thead>
<tr>
<th>Seek help from others</th>
<th>Adapt teaching practice</th>
<th>Use technology</th>
<th>Develop business strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch teachers teach</td>
<td>Keep notes on each student</td>
<td>Read some old books on the short game</td>
<td>Videotape myself</td>
</tr>
<tr>
<td>Work with horseback riding psychologists</td>
<td>Move my lesson planning to small groups</td>
<td>Read about [the] body</td>
<td>Utilize Internet sites</td>
</tr>
<tr>
<td>Take lessons from others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk to instructors who have good reputations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with golf physical therapists</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Table 2. Examples of instructors’ self-monitoring actions, organized by theme
thinking on a personal level by setting ‘explicit proximal sub-goals’, which were indirectly, yet inextricably, tied to their teaching performance. By setting goals related to their personal attitudes and philosophies, the instructors demonstrated the ability to identify important connections between their personal lives and their professional lives, which suggests a powerful and meaningful commitment to their professional practice.

Learning. The third category emerging from the instructors’ responses was the goal of learning. Learning reflected an interest in expanding knowledge, skills or techniques for teaching. Statements fitting this category pinpointed several resources that instructors considered important to their learning and growth as teachers, including their education, their peers and other professionals, their ability to perform golf skills and their personal motivation for continued learning. Examples of learning goals targeted to maintaining teaching strengths were ‘broaden my knowledge’ and ‘get better in specialty shots’ (examples of specialty shots in golf include hitting the ball around obstacles or out of bunkers). In addressing their weaknesses, instructors’ learning goals comprised statements such as ‘learn new ways to relate to the student’ and ‘staying on a constant journey of learning’.

Research supports the apparent benefit of self-monitoring as a vehicle toward increased learning. Self-monitoring has often served as a successful intervention strategy for stimulating learning (Zimmerman & Paulson, 1995; Lan, 1996; Zimmerman, 1996; Jacobson, 1998). Moreover, findings from several studies show that its utility also has relevance in teacher training (Yates, 1983; Alderman & Klein, 1993; Manning & Payne, 1993). If we consider McCullick et al.’s (2002) proposition that teacher education and sport instructor (coach) education share structural and theoretical underpinnings, self-monitoring may be useful in training coaches, as well. Therefore, from an educational standpoint, self-monitoring appears to be a potentially potent tool in the process of learning to teach and coach.

Self-monitoring also has advantages in motor skill acquisition, an area in which the teachers set goals for improving. Studies in several sporting contexts have illustrated the effectiveness of self-monitoring in learning a variety of sports skills, including throwing darts (Zimmerman, 1996), swimming (Bell & Patterson, 1978; Polasha et al., 2004) and bowling (Kirschenbaum et al., 1982). For example, Zimmerman studied the impact of goal-setting and self-monitoring on learning to throw darts. He found that goal-setting was especially effective in acquiring dart-throwing skills, but self-monitoring had a motivational influence that was an important factor in overall skill acquisition. Our study suggests that goal-setting and self-monitoring are not only strongly related, but that goal-setting is a significant part of self-monitoring.

The connection between self-monitoring and motivation is one that has seen a good deal of attention in the literature (Schunk, 1985; Alderman & Klein, 1993; Zimmerman, 1996). Like goal-setting, motivation appears also to be an inherent feature of accelerated learning (Zimmerman, 2002). Schunk (2001) states that ‘allowing students to set learning goals can enhance their commitment to attaining them, which is necessary for goals to affect performance’ (p. 135). As discussed
earlier, Alderman and Klein (1993) conceived of goal-setting and motivation as inextricably wedded, with goal-setting as a constituent of motivation. Based on the findings from this study, these ideas seem to hold together in a teaching context, as well. By setting goals and monitoring avenues of growth that might lead to better teaching, the expert teachers in this study may find the motivation to continue pursuing a constant course of learning.

**Communication.** The final category of goals included statements the instructors made related to monitoring their communication with students. Responses in this category focused primarily on post-lesson procedures to keep track of and enhance student progress toward subject mastery. In teaching terms, these procedures were commonly referred to as ‘follow-up’. Only two instructors listed communication as a strength, setting goals that aimed to maintain an ‘ongoing awareness of verbal communication’ and ‘look to strengthen my follow-up’. With respect to improving weaknesses, instructors mentioned creating an ‘easy-to-do follow-up plan’, ‘getting better with email notices’ and ‘develop better processes for follow-up and record keeping’.

Most would agree that communicating effectively with students is at the heart of effective instruction. Indeed, a wealth of literature has addressed the significance of instructional communication in teaching (Nussbaum, 1992; Waldeck et al., 2001; Chesebro & McCroskey, 2003), and some research also suggests that communication is an important element of effective coaching (Turman, 2003). However, the role of self-monitoring in the promotion of effective instructional communication has not been well examined.

To this end, a recent study by Schempp et al. (2005) found that of all the traits expert teachers self-monitor, communication was the one most frequently monitored. Given the high level of expertise exhibited by these teachers, it would seem that self-monitoring is indeed a mediating mechanism in expert teacher communication. The findings from the current study reveal, however, that although expert teachers may closely monitor their communication with students, they did not identify many strategies to maintain or improve this aspect of their instruction.

Only two other studies directly addressed the relationship between self-monitoring and instructional communication. Workman et al. (1982) found that teachers’ self-monitoring of praise was valuable in enhancing the amount and effectiveness of teachers’ praise in classrooms. Additionally, Yates (1983) found that student teachers who received peer feedback about their use of praise maintained an increased student praise schedule in the absence of such feedback, when they used a system of self-monitoring. Thus, as also shown by much of the related research, the benefits of self-monitoring in teaching when used as an intervention strategy were highlighted in these studies. Important in the present study is the idea that communication is another area of teaching where self-monitoring appears to have a positive influence. As evidenced by their monitoring, the expert golf instructors deemed follow-up an especially important part of the communication process in their teaching and set goals to address it.
Self-monitoring actions

Seek help from others. Looking to the expertise of others for knowledge and guidance comprised the action most often undertaken by these expert instructors toward becoming better teachers. This category of responses made it clear that the experts in this study value the professional wisdom of their colleagues, as well as experts in other fields, and sought the benefit of building a broad and expansive knowledge base in reaching higher levels of performance as teachers. To maintain their strengths, the instructors planned to seek help from fellow professionals by ‘watch[ing] teachers teach’ and ‘tak[ing] lessons from others’, but mainly sought the expertise of unspecified others, as indicated by statements such as ‘spending time on the golf course observing’ and ‘listen to others’.

Seeking help from outside experts (e.g., ‘work with horseback riding psychologists’) and fellow professionals (e.g., ‘take lessons from teachers who have taught players in the past’) were the most prominent actions listed to address perceived weaknesses. Attending seminars and lectures (e.g., ‘hear and see new presentations on swing of the short game’) and enlisting the help of unspecified others (e.g., ‘receive feedback from others’) were also commonly identified actions stemming from self-monitoring.

Vygotsky’s (1978) theory of the ‘zone of proximal development’ suggests that children learn best under the guidance of more advanced thinkers. Recently, however, this theory has also been considered and tested with adults, including teachers (Samaras & Gismondi, 1998), with more positive effects in learning taking shape through collaboration than through independent efforts. As a strategy for learning, therefore, seeking the expertise of others appears a proven way of developing what Manning and Payne (1993) refer to as ‘higher order thinking processes’ (p. 368) and ultimately of advancing one’s practice.

In terms of self-monitoring, Manning and Payne (1993) draw on another of Vygotsky’s (1978) tenets, which states that such higher-order thinking embraces self-regulation, while more inchoate forms of thinking are ‘subject to the control of the environment’ (p. 362). As a construct, self-regulation has shared definitional boundaries with self-monitoring in much of the literature, and Behncke (2002) viewed self-monitoring as a component of self-regulation. While a consensus definition of self-monitoring may be elusive, its association with high levels of thinking is important in the context of our findings. The elevated thinking associated with expertise may be not only a function of self-monitoring, but also a medium through which self-monitoring can operate effectively. In seeking help from others, the experts in this study may be not only advancing their knowledge, but also improving their ability to monitor and control their teaching as ‘change agents’ without falling prey to environmental demands.

Adapt teaching practice. A major focus of the instructors’ self-monitoring was their teaching practice, which comprised the second largest body of responses for actions these experts planned to take to become better teachers. This category encapsulated
statements that targeted specific instructional changes the participants planned to make. Most of the statements in this theme concentrated on ways the instructors could maximize student learning, which included tuning in more to students needs, altering lesson structures and trying new instructional strategies. Examples of actions to maintain strengths were ‘ask questions to students’ and ‘keep notes on each student’. To improve their weaknesses, some of the actions the instructors planned to take included ‘get players to work on only one or maximum two issues’, ‘minimize skill cues’ and ‘listen more to player and customize lesson’.

Kilbourn (1991) defined the teaching enterprise as ‘all of the things a teacher normally does while teaching’ (p. 724), which is inclusive of any duty a teacher might perform at school, such as supervising recess or photocopying material. In scrutinizing their teaching practice, the instructors in this study emphasized actions they took with respect to both the teaching act and the teaching enterprise. Comments such as ‘minimize skill cues’ were indicative of actions that related to the teaching act and were directly tied to student learning. However, comments such as ‘keep notes on each student’ or ‘videotape lessons’ were characterized by those aspects of teaching that were indirectly tied to student learning and representative of the teaching enterprise.

The teachers in this study were clearly conscious of what they did and said during instruction that directly engaged their students in learning, as evidenced by the types of goals they monitored with respect to their teaching perspective and actions they monitored with respect to their teaching practice. Moreover, as evidenced by the actions they monitored in regard to their teaching practice, these teachers were cognizant of their actions outside a pedagogical context, which suggests that they saw connections between all of the things they did as a teacher and the learning that emerged at the teacher–student interface. Kilbourn (1991) states that ‘Many things are legitimately said and done in the classroom in the name of teaching... and, as they affect the lives of learners, merit self-monitoring’ (p. 728).

Kilbourn (1991) also added, however, that for self-monitoring to serve its purpose, the teacher must be aware of ‘what is central and what is peripheral to the point of teaching’ (p. 728). Notably, the self-monitoring strategies of the expert teachers in this study addressed aspects of the teaching act and the teaching enterprise, but did not address the teaching occupation. This suggested that for these teachers, only the teaching act and the teaching enterprise were central to teaching’s purpose in that they linked with pedagogy, which, as others have argued (e.g., Siedentop, 1983), is the mainstay of the occupation.

Read. Reading a wide variety of both golf-related and non-golf-related material was listed frequently by the instructors as a course of action toward continued learning and improvement. Comments such as ‘read a lot of books, websites, and research outside of golf’ and ‘do research to back up knowledge I have’ exemplified actions in this category that were planned for maintaining strengths. ‘Read about [the] body’ and ‘read some old books on the short game’ (the short game in golf includes shots
hit near or on the green, such as a chip or a putt) were actions listed to address weaknesses.

Although substantial attention has been given to the role and benefit of self-monitoring strategies in improving how one reads (e.g., Glazer, 1992; Shimabukuro & Prater, 1999; Ernsbarger, 2002; Kolic-Vehovec, 2002), the extant literature on self-monitoring lacks any connection to the importance of self-monitoring what one reads. By tracking the types of materials they read, the experts in this study highlighted an apparent advantage of self-monitoring that has escaped the notice or interest of those who have studied self-monitoring in the past. To maintain or improve elements of their expertise, the teachers monitored what they read and carefully considered how it would help them on their journey to become better teachers. Furthermore, in many cases, they knew exactly what they needed to read in order to get better, as illustrated by statements such as ‘read self-help books’ and ‘study sport psychology works’.

Use technology. Several of the instructors’ responses centered on the influence of technology on aspects of their job. They listed using technology as an instructional medium, a feedback mechanism to enhance their teaching practice, a tool to simplify administrative tasks or a resource for new information. Regarding the instructional utility of technology, one instructor stated:

I am a big believer in the use of video/technology and other technologies to speed the learning process. By keeping up with the latest versions of technology I feel I gain an edge in my ability to communicate with my students.

Actions fitting this category geared to maintaining strengths were ‘videotape myself’, ‘use of video and computer’ and ‘use video more’. Examples of actions for improving weaknesses were ‘watch videos of their swing’, ‘research new video programs’ and ‘keeping better records using computers’.

In monitoring how they used technology in their teaching, the instructors revealed yet another aspect of the teaching and learning process that has not previously been studied in the context of self-monitoring. While technology’s educational relevance has emerged in many new and innovative ways, there has been little exploration into how teachers think about and subsequently connect technology to their teaching. As experts, the teachers in this study traced the different ways they used video and computers, demonstrating how they prioritized certain technological tools to support their expertise and grow as teachers. A more thorough investigation of the various ways expert teachers consider and apply technology in their practice may help other educators determine how to more efficiently trawl through the swelling sea of technological advancements and effectively employ new tools of the trade.

Develop business strategies. The final action category included responses that focused on ways the instructors planned to promote their business and increase their accessibility to students. The teachers in this study were independent contractors and their instruction was promoted through their business. Their success in
recruiting students and increasing income was, therefore, largely dependent upon their business practices. Actions that clustered to form this category were only listed as strategies to address weaknesses, and included ‘budget time and stay on schedule’, ‘use Top 100 label for self-promotion’ and ‘restructure rates to open up more time for follow-up’.

As the smallest category for either goal-oriented or action-oriented strategies, business strategies, as they were described by the experts in this study, seem to fit Kilbourn’s (1991) understanding of the occupational side of teaching. In the broadest sense of the word, teaching is ‘a job one does’ (p. 724). By focusing their attention on teaching as a business, the instructors monitored their actions not as teachers, but merely as professionals, and extricated themselves from the more specific sphere of teaching and learning. However, with only three responses fitting this theme, it is clear, as discussed previously, that the predominant focus of the instructors’ attention and monitoring was on their ability to teach and promote student learning.

It was evident from explicating the nature of each theme that the instructors formulated specific tactics, in the form of goals and actions, that were intended to help maintain their strengths as teachers and address aspects of their teaching they believed needed improvement. The emergent themes outlined and detailed above reveal how, through a process of self-monitoring, the experts in this study employed an extensive array of strategies to stay on a course of continued excellence. In our conclusion, these strategies will be reviewed and their implications considered in the general arenas of education and sport to explain, at least in part, how the best teachers get better.

Conclusion

Becoming an expert teacher requires extensive knowledge and years of experience (Berliner, 1994; Tan, 1997). But what knowledge is needed and what kinds of experiences lead to superior teaching? Educational research has pointed to teacher reflection as a vehicle toward improved insight and awareness of important features of the teaching and learning process (Sparks-Langer & Colto, 1991; Jung, 2005), but less attention has been given to self-monitoring. In this study, we found that self-monitoring is a significant factor in expert teaching performance. Expert teachers closely monitor their skills, perspectives and knowledge in order to plan and execute strategies to continue their professional growth.

Self-monitoring strategies consisted of both setting goals and taking action to sustain areas of strength and bolster areas perceived as weakness by the teachers. In total, 50 goals and 91 actions to meet those goals were identified by the 31 teachers studied. The quantity of responses indicated that self-monitoring was an active and well-exercised practice of the expert teachers. Further, as previously argued by Chi et al. (1988), the self-monitoring strategies of experts reflected their extensive underlying knowledge of the field.
In addition to the number of responses, the quality of self-monitoring strategies was also noteworthy. Both the goals and actions defining the self-monitoring of these teachers appeared to focus on topics germane to excellence in instructional practice. The majority of goals were in the area of teaching perspective. This category of responses described the teachers’ commitment to monitoring practices pertinent to the process of learning, teaching, empathizing with students, simplifying instruction, embracing new students and discovering innovative teaching practices. The self-monitoring of these expert teachers also scrutinized aspects of their personal lifestyle, continued learning and communication effectiveness.

The experts studied identified over 90 actions they undertook to accomplish their goals for improving their teaching. Although these individuals were all internationally acclaimed for their expertise in teaching, they were not afraid to seek help from others. According to the teachers’ reports, seeking help from experts from a variety of fields was the action they most often undertook to improve their practice. It was interesting to note that these teachers wanted face-to-face contact with other experts so they could discuss particular topics in depth. These teachers also adapted their teaching to experiment with ways of stimulating greater student learning, meet student needs and discover more effective instructional structures and strategies. Reading and using technology were identified as actions these teachers took to gain new information, increase student learning and simplify administrative tasks. Not surprisingly, the literature indicates that coaches may not be any different from teachers when it comes to this strategy. A recent study of Bobby Bowden, an American football coach at Florida State University, revealed that expert coaches also tend to read outside their own domain to augment their knowledge (Smith, 2004). Finally, these teachers undertook actions to develop their business strategies so as to promote their business and increase their accessibility to students. In sum, the actions undertaken by these teachers revealed a robust quantity and quality of strategies to sustain and extend their expertise as teachers.

In an essay on the development of elite performance, Anders Ericsson (2003) writes that ‘the central claim of the expert-performance framework is that further improvement of performance requires increased challenges and the engagement in selected activities specifically designed to improve one’s current performance’ (p. 79). In undertaking self-monitoring strategies consisting of both goals and actions, it appears that the expert teachers in this study set themselves both challenges and activities specially designed to improve their teaching. In short, this study offers insights into how these teachers became expert, and how they continue to raise the bar of excellence in instruction ever higher.

Acknowledgement

This study was funded by a grant from Golf Magazine.
References


