



# Can You Skype Me Now? Developing Teachers' Classroom Management Practices Through Virtual Coaching

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**A**t 9:39 AM on a cold November morning, the first author (i.e., Marcia) was working from her university office in North Carolina, when she received a Skype instant message. The message was from a second-grade teacher located several states away, whom we will call Kalli. Kalli's message was: "Are you busy right now? 'M' is having a meltdown and I need some backup." For the next 10 minutes, Marcia virtually coached Kalli as she provided individualized positive behavior support to M and engaged the whole class in language arts instruction.

Marcia and Kalli began their Skype interactions as part of a federal training grant that included a master's level course in behavior management. When Marcia first Skyped into Kalli's classroom, M was exhibiting a variety of challenging behaviors, including whining, crying, yelling, and making repeated requests for teacher assistance. He was also out of his seat frequently. Based on the results of a functional behavior assessment Kalli had completed, the hypothesized function of M's meltdowns was to gain teacher attention. So, Marcia focused her feedback on helping Kalli carry out the strategies included in M's positive behavior support plan with fidelity. In a short period of time, M's challenging behavior decreased dramatically.

At 9:54 AM, after quickly debriefing with Kalli and disconnecting the Skype-based virtual coaching session, Marcia sent Kalli this instant message: "You did an exemplary job—absolutely masterful.

*Hang with it during the extinction burst—it will get better. However, if he endangers self or others, then he needs to be removed to the office. Keep up the great work and the positive attitude (hug)!"* Approximately 3 minutes later, during a routine break in instruction, Kalli replied, "thank you thank you thank you."

Like Kalli, many frontline practitioners find it a real challenge to translate the principles of effective classroom management into everyday practice. New special educators frequently report that they exit teacher preparation programs unprepared for the realities of the classroom (Kaff, Zabel, & Milham, 2007; Rush & Harrison, 2008; Westling, 2010), whereas in-service teachers report that classroom management is one of their top professional development needs (Cakmak, 2008; McNally, I'anson, Whewell, & Wilson, 2005).

Traditionally, teacher educators have relied on college courses and topic-based workshops to foster classroom management skills; however, there is little evidence to suggest that these formats provide special education teacher candidates with a strong grounding in the use of evidence-based classroom management practices (Simonson, Myers, & DeLuca, 2010). Rather, it is supervising teachers, not college instructors, who have the greatest influence on preservice teachers' classroom management beliefs and practices, with preservice teachers basing classroom management

procedures on those used in their mentor teachers' classrooms (Oliver & Reschly, 2010; Putman, 2009; Sandoval-Lucero, Maes, & Chopra, 2011). This is not to suggest that learning from mentor teachers is unwelcome. Indeed, if the mentor uses evidence-based classroom management practices, then emulating those practices is certainly to be desired. However, the fact that the strength of mentor imitation is greater than skills taught elsewhere suggests that time spent in teacher preparation courses, professional development activities, and other forms of mentorship are of little practical value in developing a teacher's classroom management skills, a finding that is much more problematic.

If the material taught in other venues is to provide the value that it should, changes in teaching methods will have to be made. New technology, such as the Skype-based virtual coaching used with Kalli, has already begun to provide a promising direction for these changes, making possible new forms of interactions between students and university instructors (Israel, Knowlton, Griswold, & Rowland, 2009; Rock, Zigmond, Gregg, & Gable, 2011). Still, the need for additional research remains, particularly in the area of Web-based coaching (Gallucci, Van Lare, & Boatright, 2010; Kretlow & Bartholomew, 2010; Rock, Gregg, Thead, et al., 2009; Rock et al. 2012).



In this article, situated within the context of a larger ongoing study on the efficacy of Web-based virtual coaching, we describe a virtual coaching model for maximizing pre- and in-service teachers' effective use of evidence-based classroom management practices. We also provide a brief summary of previous results obtained through observational analysis of planned and impromptu, real-time, online support sessions, and present new survey data. The latter of these begins to shed light on which classroom management practices were retained as well as what challenges teachers faced 1 and 3 years after virtual coaching. Finally, we share future implications for teacher training or job-embedded professional development using virtual coaching technologies.

### The Model

The virtual coaching model described here was developed through a U.S. Department of Education Office of Special Education personnel development grant. Under this grant, the principle author used a Bluetooth headset, a Bluetooth adapter, a Webcam, and Skype to see and communicate in real time with 28 teachers-in-training in their field placements, providing inconspicuous, on-the-spot feedback while they were delivering classroom instruction. This kind of coaching, called virtual coaching, differs from other more readily available forms of mentor feedback, such as literacy coaching (Casey, 2006), differentiated coaching (Kise, 2006), instructional coaching (Knight, 2007), or cognitive coaching (Costa & Garmston, 2002), in that the feedback or coaching is provided immediately in real time online. More extensive descriptions of the technological components of virtual coaching are available elsewhere (see Rock, Gregg, Gable, et al., 2009; Rock, Gregg, Howard, et al., 2009; Rock, Gregg, Thead, et al.,

2009; Rock et al., 2011; Rock et al., 2012).

### Facets of Virtual Coaching for Classroom Management

A variety of approaches have been proposed to describe the skills and traits of effective mentors or coaches, most notably Hudson's five-factor model (Hudson, 2010; Hudson, Skamp, & Brooks, 2005; Sempowicz & Hudson, 2011). Drawing on these, we adopted a six-trait mentoring model of effective coaching, which formed the basis for how to provide virtual coaching in classroom management. The model included

*Demonstrating professional dispositions.* Effective virtual coaches are supportive and encouraging. In our case, the virtual coach was the first author, who strived to instill confidence and a positive attitude in each teacher-in-training. One way in which this was achieved was by adhering to a praise-to-correction ratio of 4:1, which is a key component of positive behavior interventions and supports (PBIS) (Sugai & Horner, 2002). This means that when providing immediate feedback online, the virtual coach provided a minimum of four positive or encouraging remarks for each instructive or corrective comment. Other essential attributes for virtual coaches include energy, enthusiasm, critical thinking, flexibility, dependability, and integrity. In our case scenario, an example of the virtual coach's enthusiasm can be seen in the instant Skype message she sent Kalli shortly after disconnecting.

*Possessing content and pedagogical expertise.* Successful virtual coaching relies strongly on the coach's expertise in both the science and the art of classroom management. This means the virtual coach should possess expert knowledge of and real world experience in the application of classroom management, including but not limited to proactive and reactive approaches, evidence-based academic interventions, and tiered

positive behavioral supports at the school-wide, class-wide, and individual student levels. The work of adapting these concepts to new technologies has already begun; for example, Stormont and Reinke (2012) developed a face-to-face coaching framework to support teachers' use of universal and Tier 2 supports that could easily be adapted for virtual coaching. Also, because effective instruction and effective classroom management go hand in hand, an effective virtual coach needs deep and broad content knowledge in any related content curriculum.

In our work, the virtual coach, who has an earned doctorate in special education and has 25 years of professional experience, focused on five evidence-based classroom management practices (Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008) as the pedagogical basis for her coaching. These included (a) maximizing structure and predictability; (b) posting, teaching, reviewing, monitoring, and reinforcing expectations; (c) actively engaging students in observable ways; (d) using a continuum of strategies to acknowledge appropriate behavior; and (e) using a continuum of strategies to respond to inappropriate behavior. In a further merging of knowledge and practice, these five classroom management practices were also incorporated into a graduate course offered to the teachers in training, which was also taught by the first author.

*Incorporating models and demonstrations.* Modeling is one of the strongest forms of teaching—indeed, a lack of effective modeling outside of one's mentor teachers in traditional teacher preparation is one of its greatest drawbacks (Aleccia, 2011; National Council for Accreditation of Teacher Education, 2010). This means the virtual coach must not only comment on the mentee's classroom management practices but also provide models of what carrying them out with fidelity actually looks like. This can be accomplished in



several ways, including but not limited to modeling or demonstrations during coursework, providing opportunities for the mentee to observe the coach or other skilled practitioners during field-based clinical practice, and making use of online video clips. In our case, with Kalli and the other participants, we incorporated a combination of the three. A sample list of Web-based resources we used to compile a repository of online video clips, which provided models (i.e., examples and nonexamples) of classroom management practices, is available at <http://www.ccbdoundation.org/virtualcoaching>. Viewing these clips and the electronically archived versions of their own virtual coaching files helped the teachers-in-training “see” how to and how not to apply various classroom management practices in their classrooms. As alternatives to utilizing online video clips, Kennedy and Swain-Bradway (2012) offered two more options: The first is to make a series of “homegrown” video clips. The second is to join a free online community (e.g., <http://www.PBISVideos.com>), which allows access to videos that have been put together on location (i.e., by school personnel in the real world).

*Providing feedback loop.* The power of virtual coaching lies in its immediacy, a strength that must be used by the coach when providing various forms of feedback—the most important of which is immediate feedback *in situ*. Other more traditional forms, such as after lesson debriefings or written summaries of performance, can be incorporated on a case-by-case basis. Regardless of the kind of feedback, as often as is possible the virtual coach should aim to provide feedback that is focused on the P-12 students’ responsiveness to the teacher’s use of evidence-based practices. In Kalli’s case, not only did the virtual coach provide immediate feedback about which evidence-based practices to try and when, but also she pointed out how M responded to

them (e.g., “M’s out of his seat again. Try praising around to those who are seated. Great, that’s it! Look, M’s back in his seat. Be sure to praise him now, too!”).

Also, in our virtual coaching work with Kalli and others, we have infused both immediate and delayed forms of feedback. Drawing on the work of Scheeler, Ruhl, and McAfee (2004), the first author provided four types of immediate *in situ* feedback: (a) instructing, (b) correcting, (c) encouraging, and (d) questioning. Instructing feedback consisted of “objective information related to predetermined specific teaching behaviors” (Scheeler et al., 2004, p. 399), such as suggestions to restate expectations positively and to praise those students who are demonstrating the desired behaviors. *Correcting feedback* was characterized as “the type and extent of errors and specific ways to correct the error” (Scheeler et al., 2004, p. 399), for example, “Thank him for raising his hand quietly and call on him now. When you were calling on him after blurting out, you were reinforcing the undesired behavior—making it more, not less, likely to occur in the future.” *Encouraging feedback* (e.g., “Excellent use of a traditional seating arrangement [i.e., desks and rows] to promote student’s on-task behavior during independent seatwork.”) was defined as “praise contingent on demonstration of a specific teaching behavior” (Scheeler et al., 2004, p. 399). Last, *questioning feedback* (e.g., “How often are the students able to earn points for demonstrating the desired behaviors?”) was construed as a sentence posed in interrogative form in order to get information or to clarify specific teaching behaviors (*Random House Unabridged Dictionary*, 2006). When providing delayed feedback to participants, we scheduled a videoconference through Skype and relied on the five steps or stages (i.e., preconference, observation, analysis/interpretation/strategy, postconference, and critique) of the Glickman, Gordon, and

Ross-Gordon (2008, 2009, 2012) clinical model of supervision. We turned to this approach when a teacher was not responding to immediate virtual feedback and appeared to need additional assistance in translating evidence-based concepts into real world practice.

*Understanding school culture.* The virtual coach must be familiar with any systems-wide policies, relevant curriculum, and school- or district-level initiatives that affect the process of planning and creating a positive learning climate in each mentee’s classroom. Tailoring the immediate feedback offered through virtual coaching to align with such initiatives allowed for personalized scaffolding *in situ*. For example, the 28 participating teacher trainees taught in different urban, suburban, and rural school districts, some of which had adopted PBIS system-wide and some of which had not. If a teacher trainee, like Kalli, worked in a building that had adopted school-wide PBIS, then the virtual coach provided specific feedback on the trainee’s fidelity in planning for and carrying out tiered behavioral tactics at the classroom level (e.g., “Be sure not only to thank students by name and present a ‘gotcha ticket,’ but also to describe the ‘3 R’s’—respectful, responsible, and resourceful—behaviors they are exhibiting.”). By contrast, if the teacher trainee’s building did not utilize a PBIS approach, then virtual coaching feedback was aimed more generally at defining, teaching, and supporting desired student behavior (e.g., “Let’s try stating a clear expectation: ‘When I give you the signal, please display your boards, with the writing toward me, under your chin, quiet and still,’ giving them one or two practice rounds and praising those who demonstrate the desired behaviors.”). In this way, virtual coaching can work with, rather than against, the school’s culture or climate, making the experience even more effective.

*Exhibiting technology know-how.* Because virtual coaching adapts



previous face-to-face models (Hudson et al., 2005) for Web-based work, virtual coaches and mentors must be comfortable using advanced online technology, including a good understanding of videoconferencing platforms, such as Skype, ooVoo, or Google Hangouts, as well as Bluetooth earpieces and Webcams. Occasional technological difficulties (e.g., glitches in the quality of audio and video feeds, Internet failures) are to be expected and a virtual coach's ability to provide basic troubleshooting is particularly useful in overcoming the most common problems. In our work (see Rock et al., 2012), we have found problems typically arise about a third of the time in three areas—audio, video, or Internet.

### Virtual Coaching in Action

To investigate the efficacy of the previously described virtual coaching model, we conducted research with two cohorts of teachers-in-training. Participants in Cohort 1 were enrolled in Years 1 and 2, whereas participants in Cohort 2 were enrolled in Years 3 and 4. Participants ranged in age from 23 to 46 and varied in ethnicity, gender, and years of experience. More information regarding participant demographics can be found in previous publications (see Rock et al., 2009; Rock et al., 2012). In both cohorts, the teachers in training were practicing teachers by day who were enrolled in a 24-month federally funded personnel development program to earn a master's degree and state certification in elementary special education. Classes took place in the evening or on weekends as well as online. During fall and spring semesters, each participant received weekly or biweekly distance supervision and virtual coaching in his or her classroom through virtual coaching technology. After connecting online and exchanging cheerful greetings, the teacher engaged in 30-minute class-wide, small group, or

individualized instruction across content areas while the virtual coach provided immediate feedback in one or more of the five classroom management practices described previously (see also Simonsen et al., 2008).

### Outcomes: Past and Present

#### *Past Implementation Results*

Relying on mixed methods research, our past investigations have supported the effectiveness of virtual coaching in changing teachers' classroom practices. Cohort 1 findings were reported in Rock et al. (2009), whereas Cohort 2 findings were published in Rock et al. (2012). Across both cohorts, matched-pairs *t* tests and Dunn-Bonferroni corrections confirmed that while participants were enrolled and receiving virtual coaching support, their use of evidence-based classroom management practices (see Rock et al., 2009; Rock et al., 2012) increased significantly. Specifically, the use of high-access instructional strategies (e.g., thumbs up when you know, partner read-aloud, think-write-pair-share; Feldman & Denti, 2004) and teacher praise increased, whereas use of low-access instructional strategies (e.g., round robin read-aloud, once-and-done hand raising; Feldman & Denti, 2004) and redirects/reprimands decreased. In Cohort 1, these changes were accompanied by a statistically significant improvement in classroom students' academic engagement. In Cohort 2, our results differed (i.e., student engagement was high initially and remained constant throughout), likely because we collected baseline data in a more intrusive manner (i.e., on site, instead of online), which may have resulted in an observer effect. In other words, as we noted in Rock et al. (2012), "the mere presence of the videographer in the classroom may have been intrusive enough to modify the P-12 students' on-task or engaged behavior" (p. 298). Finally, qualitative analyses of participants' written

reflections, in both cohorts, confirmed that although initially the teachers-in-training reported reservations about virtual coaching, they grew quickly to embrace it, viewing it as a powerful tool to promote teaching and learning and desiring more widespread use.

### Recent Survey Findings

Although we had accumulated a great deal of performance-related data on the immediate effects of virtual coaching (e.g., Rock et al., 2009; Rock et al., 2012), we did not know whether participants who had completed their training and were no longer receiving virtual coaching support continued use of evidence-based classroom management practices. To answer this question, in part, we invited teachers in both cohorts who had successfully completed the program to participate in an informal follow-up, Web-based survey, using Qualtrics (see Table 1 for a list of survey items). Sixty-eight percent ( $n = 19$ ) of participants completed the survey.

Survey responses confirmed that 1 year (i.e., Cohort 2) and 3 years (i.e., Cohort 1) after graduation the teachers continued to use the classroom management strategies that had been part of the curriculum during virtual coaching, a result that is higher than what is typically expected through traditional course-based teacher preparation programs (Simonsen, Myers, & DeLuca, 2010). When asked about their students' responsiveness to these practices overall, participants answered that some or most had demonstrated behavioral improvement. Some classroom management strategies were used more than others and mirrored teacher reports regarding which strategies students had responded to the most positively (see Figure 1). This suggests that teachers not only continued use of the practices they had learned through virtual coaching but also did so differentially, according to the degree of effectiveness a given strategy.



**Table 1** SURVEY QUESTIONS

Survey Item	Participant Response Options
Which of the following evidence-based practices have you implemented in your classroom, since your completion of Project XYZ? (Check any that you have implemented)	High classroom structure (e.g., amount of teacher-directed activity) Response cards Specific and/or contingent praise Performance feedback Physical arrangement that minimizes distractions Direct instruction Class-wide group contingencies Differential reinforcement Post, teach, review, and provide feedback on expectations Computer-assisted instruction Behavioral contracting Planned ignoring plus contingent praise and/or instruction of classroom rules Active supervision Class-wide peer tutoring Token economies Response cost Rate of opportunities to respond (OTRs) Guided notes Error corrections Time out from reinforcement
How have your students responded to the evidence-based classroom management practices you put into practice?	(None / A Few / Some / Most) of my students have demonstrated behavioral improvement
Which evidence-based practices do you think your students have responded to the best and the least?	Open-ended participant response
What are your greatest challenges regarding classroom management?	Classroom organization Insufficient planning time Behavior management Implementation of management strategies

*Note.* Classroom management challenges were ranked using a Likert-type rating scale; response options were rated as strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree.

For example, praise was identified as the most effective classroom management strategy and was also among the most frequently used, whereas response cost was noted as the least effective and was used very little. Overall, respondents reported their greatest classroom management challenge was insufficient planning time, an issue that would not likely be ameliorated by more virtual coaching or any other form of professional development. *Figure 2* provides a summary of the percentage of

teachers still using each classroom management strategy.

There are a number of areas of caution in interpreting the results of this survey. First, it relies on teacher self-report, which, although generally considered an accurate reflection of classroom practice (Clunies-Ross, Little, & Kienhuis, 2008), is more subjective in nature and therefore prone to certain kinds of inaccuracies (e.g., participants providing socially desirable responses; Gall, Gall, & Borg, 2007). Although we did draw

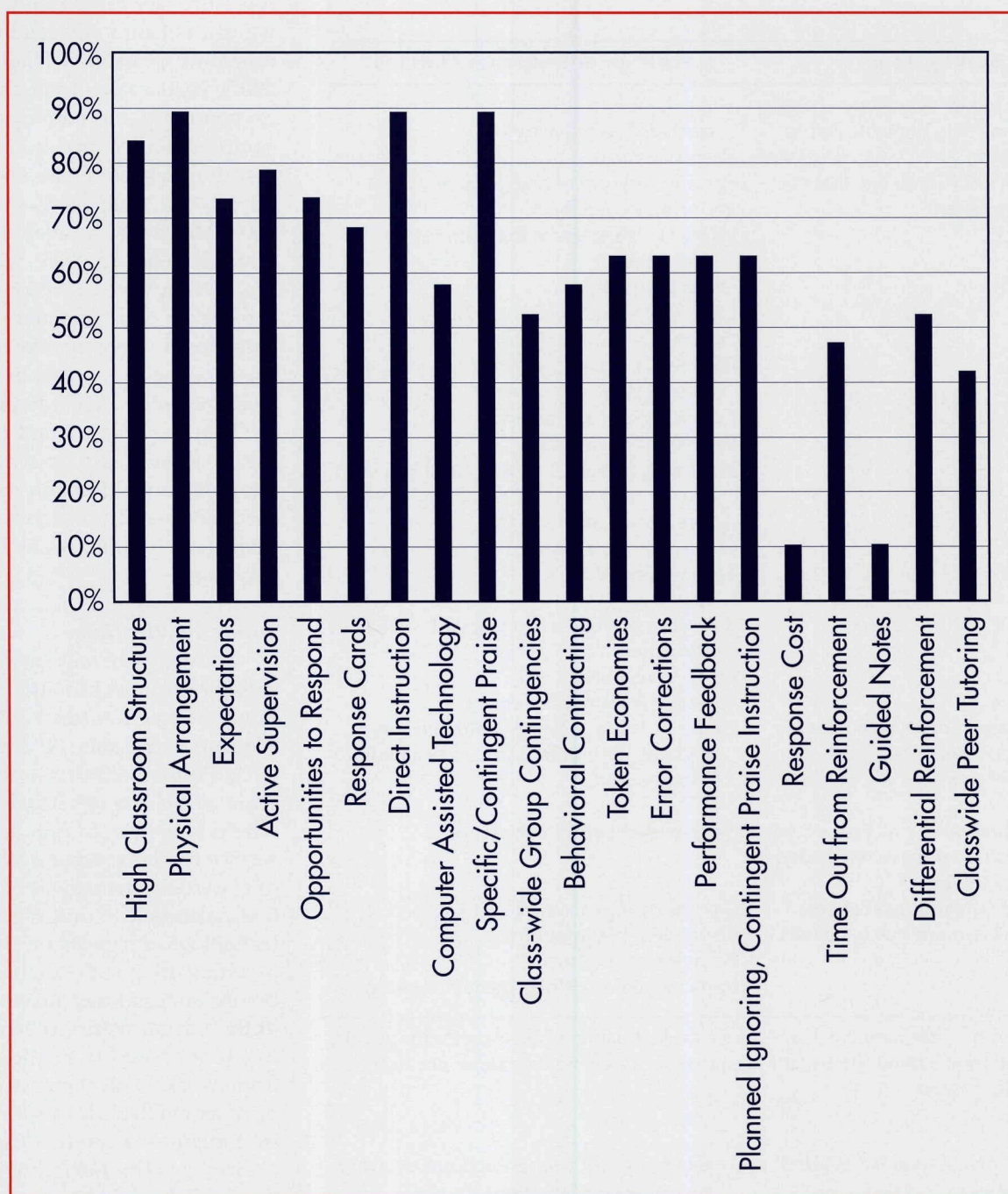
survey content from established literature (see Simonsen et al., 2008), we did not formally establish its reliability or validity (Gall et al., 2007). Participants were chosen based on voluntary and convenience sampling techniques, and the resulting response rate, though adequate (Draugalis, Coons, & Plaza, 2008; Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008), was less than ideal. Nonetheless, we believe that the survey data obtained, when considered in conjunction with our previous performance-based findings (see Rock et al., 2009; Rock et al., 2012), provide important new information regarding ways to support acquisition and use of evidence-based classroom management practices by teachers-in-training.

### *Future Implications*

Drawing not only on our past and present findings but also on relevant literature (see Kaufman & Moss, 2010; Martinussen, Tannock, & Chaban, 2011; Putman, 2009), we think more widespread use of virtual coaching would benefit both pre- and in-service teachers, especially in the area of classroom management. That said, it is important to note that the technological aspects of virtual coaching are just the delivery vehicle. Before undertaking such an endeavor in the virtual world, coaches need to adopt an effective guiding framework. Over the past 5 years, we have assembled and used the six-trait mentoring model described previously. The flexibility inherent in this model makes it uniquely suited for meeting the needs of novice, midcareer, or veteran teachers, all of whom were represented in our virtual coaching research.

We recommend that virtual coaches encourage teachers' use of classroom management and focus their immediate feedback on three key aspects of it. First, like Kaff, Zabel, and Milham (2007), coaches should emphasize strategies that are both easy to implement and are



**Figure 1** REPORTED USE OF EVIDENCE-BASED PRACTICES SINCE COMPLETION OF VIRTUAL COACHING

highly effective. One such practice is specific, contingent teacher praise. Teacher praise is an easy-to-implement strategy that has been shown to transfer well through virtual coaching (see Rock et al., 2009; Rock et al., 2012). It was also viewed as effective by 94% of teachers in our recent Web-based survey.

Second, we recommend focusing specifically on *proactive* classroom

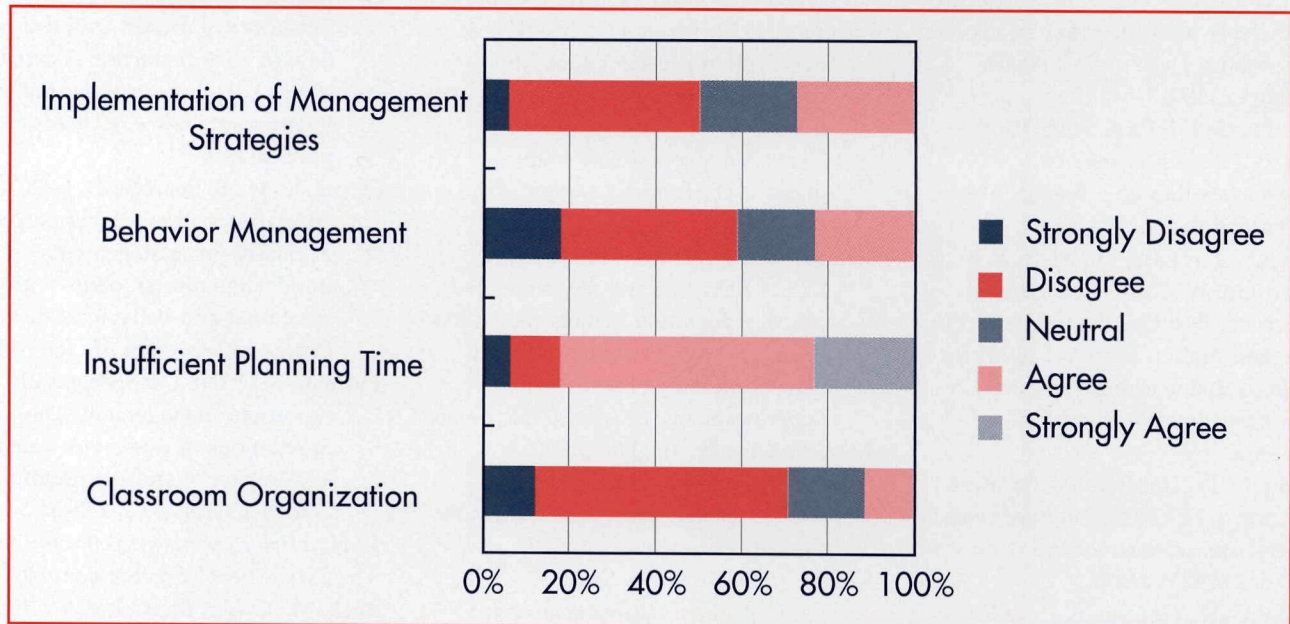
management practices. Such proactive strategies were strongly retained by teachers participating in our Web-based survey, with more than 80% of teachers indicating they still used teacher praise, classroom structure, active supervision, direct instruction, and environmental engineering. Moreover, proactive practices can prevent undesirable student behavior from occurring in

the classroom altogether, the benefits of which are immeasurable (Kaff, Zabel, & Milham, 2007).

Third, recognizing that even the best preventive strategies are not always successful, we recommend that virtual coaches highlight when, where, and how combined approaches to classroom management might be beneficial. For example, in Kalli's impromptu virtual



**Figure 2** REPORTED CHALLENGES TO ONGOING USE OF EVIDENCE-BASED CLASSROOM MANAGEMENT PRACTICES



coaching session, Marcia advised her when to ignore, when to praise, when to redirect, and when to modify instruction—all used in combination within the same coaching session. Simonson et al. (2010) provided additional support for the ways in which virtual coaching can maximize teacher mastery of such strategy combinations in their finding that while teacher training alone did not improve participants' use of prompts, opportunities to respond, and specific praise, the addition of daily performance feedback increased the level, trend, and stability of participant strategy use. Still, more research is needed.

In addition, to achieve maximum benefit, we recommend that virtual coaches conceptualize and carry out support broadly, rather than narrowly. Although we have described a virtual coaching model, with "just in time support" (i.e., immediate feedback) as the focus of this article, the technology used to carry it out, without the Bluetooth for discreet *in situ* coaching, can be used in other ways to support teachers' classroom management practices. For instance, in order to more effectively meet M's long-term academic and

behavioral needs, Kalli had to collaborate regularly with the members of his behavioral support team, but time and scheduling constraints often created roadblocks. Kalli's virtual coach encouraged her to use Skype videoconferencing as an alternative way to exchange information about M's responsiveness to the behavioral intervention plan, thereby facilitating timely communication and shared decision making among team members (e.g., general educator, special educator, parents/guardians, family members, social worker, psychiatrist, psychologist, counselor).

### Concluding Thought

Challenges associated with classroom management continue to correlate with teacher attrition (Gonzalez, Brown, & Slate, 2008; Merrett & Wheldall, 1993). Without effective systems of training and support, Kalli and countless other teachers will leave the profession prematurely, taking their skill and dedication to students with them. Web-based technologies, such as virtual coaching, are a promising solution for developing teachers'

initial and continued use of evidence-based classroom management practices. We think Kalli and M would agree.

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