

The Effects of a Virtual Training and Self-Monitoring on Leading a Meeting

By

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Meeting

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Abstract

Meetings are one of the most common workplace activities in which employees engage. Unfortunately, most meetings are considered ineffective. Not only do ineffective meetings cost organizations money in terms of employee time, but they also impact employee productivity and can lead to turnover. Survey research has revealed what meeting characteristics are necessary for a meeting to be considered effective. However, there is no experimental research on how to teach meeting leaders to effectively lead meetings. With more employees working from home, trainings to enhance employee skillsets are likely to be delivered virtually. The purpose of the current two-experiment study was to evaluate the effects of virtual training and self-monitoring on leading a meeting. Specifically, Experiment 1 evaluated the effects of virtual training in isolation and the added effects of self-monitoring on the integrity with which participants led a meeting. Results revealed that virtual training alone did not produce substantial changes in meeting integrity; self-monitoring was necessary to produce desired improvements. Thus, Experiment 2 evaluated the combined effects of virtual training and self-monitoring on meeting integrity. Participants in Experiment 2 reached mastery criterion within three sessions following the packaged intervention. Social validity was measured in three ways and revealed three general patterns: (1) participants in both experiments found the interventions to be acceptable; (2) meeting attendees in both experiments perceived their supervisor's ability to lead meeting moderately high after intervention; and (3) an external rater perceived improvements in two of four participants meeting integrity following intervention in Experiment 2.

Keywords: leading a meeting, group virtual training, self-monitoring, supervisory skills, employee training, professional development

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Table of Contents

The Effects of a Virtual Training and Self-Monitoring on Leading a Meeting.....	1
Characteristics of Effective Meetings.....	4
Staff Training Procedures	7
Virtual Training	8
Purpose.....	10
Experiment 1	11
Method	11
Participants and Setting.....	11
Recruitment.....	12
Materials	13
Research Assistant Scripts	13
Virtual Training	14
Self-Monitoring Checklist	15
Response Measurement	15
Experimental Sessions	17
Experimental Design and Procedure.....	18
Baseline.....	18
Virtual Training	18
Post-training.....	19
Self-Monitoring.....	20
Generalization Probes	20
Interobserver Agreement and Procedural Integrity.....	21
Social Validity	23
Results and Discussion	23
Percent Integrity.....	24
Social Validity	29
Social Validity Survey.....	29
Perceived Effectiveness Survey.....	30
Discussion	32
Experiment 2.....	35
Method	35
Participants and Setting.....	35
Recruitment.....	36
Materials	36
Actor Scripts.....	36
Virtual Training.....	36
Self-Monitoring Checklist.....	37
Response Measurement	37
Experimental Sessions	37
Experimental Design and Procedure.....	37
Baseline.....	37
Virtual Training.....	38

Post-training.....	39
Generalization Probes.....	40
Interobserver Agreement and Procedural Integrity.....	41
Social Validity.....	42
External Rater Survey.....	42
Results and Discussion.....	42
Percent Integrity.....	42
Social Validity.....	45
Social Validity Survey.....	45
Perceived Effectiveness Survey.....	45
External Rater Survey.....	47
Discussion.....	47
General Discussion.....	53
Contributions to the Literature.....	54
Behavioral Mechanisms.....	60
Limitations.....	62
Conclusion.....	64
References.....	66
Table 1: Experiment 1 Participant Demographics.....	75
Table 2: Video Model Survation and Content.....	76
Table 3: Leading a Meeting Behaviors.....	77
Table 4: Experiment 1 Interobserver Agreement.....	80
Table 5: Experiment 1 Error Analysis.....	81
Table 6: Experiment 1 Social Validity.....	84
Table 7: Experiment 1 Perceived Effectiveness.....	85
Table 8: Experiment 2 Participant Demographics.....	87
Table 9: Experiment 2 Interobserver Agreement.....	88
Table 10: Experiment 2 Error Analysis.....	89
Table 11: Experiment 2 Social Validity.....	91
Table 12: Experiment 2 Perceieved Effectiveness.....	92
Table 13: Experiment 2 External Rater.....	93
Figure 1: Experiment 1 Percent Meeting Integrity.....	94
Figure 2: Supervisors Who Did Not Complete Experiment 2.....	95
Figure 3: Experiment 2 Percent Meeting Integrity.....	96
Appendix A: Recruitment Email.....	97
Appendix B: Informed Consent.....	98
Appendix C: Demographic Questionnaire.....	102
Appendix D: Actor Script.....	103
Appendix E: Guided Notes.....	104
Appendix F: Group Activity.....	107
Appendix G: Self-Monitoring Checklist.....	109
Appendix H: Session Procedural Integrity Checklist.....	110

Appendix I: Virtual Training Procedural Integrity Checklist.....	111
Appendix J: Self-Monitoring Procedural Integrity Checklist.....	112
Appendix K: Social Validity Survey	113
Appendix L: Perceived Effectiveness Survey.....	114
Appendix M: External Rater Survey.....	115

The Effects of a Virtual Training and Self-Monitoring on Leading a Meeting

Meetings are one of the most common workplace activities in which managers and employees engage (Rogelberg et al., 2010). The amount of time spent in meetings has dramatically increased since the 1970s (Keith, 2015). In 2014, 36.5 million meetings were reported to occur each day in the United States (Keith, 2015). Reports suggest that managers attend or lead an average of three meetings per day, spending nearly 23 hr per week in meetings (Keith, 2015; Rogelberg et al., 2007). Employees attend an average of one meeting per day, spending nearly 6 hr per week in meetings (Keith, 2015; Rogelberg et al., 2007). According to the results of an analysis of de-identified, aggregated meta-data from companies across the United States, employees are attending more meetings since the start of the SARS-COVID-2 (Covid-19) pandemic given the transition to remote work environments (DeFilippis et al., 2020).

Meetings are defined as a time where two or more people meet to discuss a topic. Most meetings are pre-scheduled; however, they do not have to be (Hindle 1998; Rogelberg et al., 2006). Meetings are held for several reasons, including to share information (Hindle, 1998; Mroz et al., 2018), foster employee engagement by generating ideas (Allen & Rogelberg, 2013; Hindle, 1998; LeBlanc & Nosik, 2019; Mroz et al., 2018), problem solve issues employees are experiencing (Hindle, 1998; Mroz et al., 2018), provide supervision to employees (Hindle, 1998; LeBlanc & Nosik, 2019; Mroz et al., 2018), and enhance interpersonal relationships among team members (Allen & Rogelberg, 2013; Hindle, 1998).

Unfortunately, many meetings are considered ineffective. Survey results reveal that between 32% and 71% of respondents perceive meetings they attend to be ineffective, wasteful, or unproductive (Keith, 2015; Organization for Economic Cooperation and Development, 2017; Perlow et al., 2017; Rogelberg et al., 2007). Further, nearly half of respondents in one survey

reported complaining about meetings they are required to attend (Rogelberg et al., 2007). Ineffective meetings cost organizations money in terms of employee time and decreased productivity (Chen, 2020). It is estimated that the U.S. spends between \$70 and \$283 billion each year on employee time spent in ineffective meetings (Keith, 2015). Additionally, between 15% and 50% of an employee's productivity is lost to ineffective meetings (Chen, 2020; Rogelberg et al., 2007).

This outcome is problematic for organizations because ineffective meetings affect employee performance; attendance in, behaviors displayed during, and outcomes achieved in meetings; and job satisfaction (Rogelberg et al., 2006). Employee time spent in ineffective meetings could have been devoted to other work-related tasks (Chen, 2020). Therefore, employees may be less likely to complete all their job responsibilities due to unproductive or ineffective meetings. Additionally, meetings often serve the purpose of making important decisions that impact the work of the attendees. When decision-making meetings end without resolving the issue being addressed, attendees leave without knowing the next course of action which can impact their subsequent work. Moreover, employee perception of the quality of their work decreases when critical decisions are delayed or not made (Allen et al., 2008). For example, a direct care employee who attends a team meeting to learn about program modifications may leave an unproductive meeting without knowing the plan changes or expectations for their performance. As a result, the employee may question their ability to effectively work with a learner and learner outcomes may be negatively impacted. Additionally, the employee may be unprepared for their next session due to their inability to complete other work-related tasks (e.g., billing for services, graphing data, gathering stimuli for programming) because of the time spent in the meetings.

Routinely attending ineffective meetings is detrimental to the quality of behaviors attendees display during meetings. Employees are more likely to arrive late to and engage in maladaptive behaviors (e.g., multitasking) in meetings that have a history of being ineffective. Research shows that when employees arrive late with a controllable excuse (e.g., purchased coffee from a café), the interpersonal conflict among team members increases (Mroz & Allen, 2017). If these maladaptive behaviors involving conflict occur during meetings, it may be difficult for a meeting leader to accomplish the purpose of the meeting further contributing to the meeting's ineffectiveness.

Decreased job satisfaction is also a consequence of ineffective meetings. According to the results of a survey of 201 working adults, ineffective meetings contribute to increased stress levels and decreased job satisfaction (Rogelberg et al., 2010). A follow-up survey of 785 U.S. employees revealed that the more time employees spent in ineffective meetings, the greater the decrease in overall job satisfaction (Rogelberg et al., 2010). For example, suppose an employee regularly attends a meeting where employee input is not encouraged or welcomed. The employee may leave the meeting with increased stress levels, due to the lack of ability to contribute to the conversation, which may impact how much they enjoy their job and their desire to stay in that position.

The aforementioned negative ramifications of ineffective meetings affect organizations in the form of turnover as well (Indeed Editorial Team, 2021). The employee turnover rate in the United States increased from 43% in 2016 to 57% in 2020 (Ariella, 2021). Ariella (2021) reported that organizations may spend between \$600,000 and \$2.6 million in turnover costs each year. In addition to costs, the quality of services provided is detrimentally affected by turnover. In addition to high turnover (i.e., low employee retention), organizations are experiencing

difficulty recruiting and hiring employees. According to the Bureau of Labor Statistics (2022), the national workforce experienced 10.6 million job openings in the United States in November 2021. Organizations are attempting different strategies to fill open positions and retain current employees. For example, an analysis of 957 survey responses from organizations across the United States revealed that 79% of organizations are using sign-on bonuses; 57% have adopted retention bonuses (Miller, 2021a). Additionally, organizations have reported providing increased starting wages and more attractive benefits packages (Miller, 2021b). Organizations are faced with substantially rising costs to make available recruitment and retention bonuses, modify benefits, and pay for staff turnover. Among other workplace improvements, it is possible that improving the effectiveness of meetings can aid in circumventing some of these issues.

Characteristics of Effective Meetings

Three surveys have been administered to determine what meeting characteristics contribute to the effectiveness of a meeting. First, Leach et al. (2009) administered a survey to 958 working adults in the United States, United Kingdom, and Australia. Responses were based on pre-scheduled meetings respondents attend in a typical week. The results revealed that having an agenda, beginning the meeting on time, and the quality of the meeting facilities contribute to the perceived effectiveness of a meeting. The same survey was administered to 292 working adults in the United States, United Kingdom, and Australia. Respondents were required to complete the survey within the same workday they attended a meeting and were instructed to answer the survey questions based on the meeting they had just attended. The results suggest that having a high-quality meeting leader who distributes the agenda prior to the meeting, reviews the agenda, addresses the planned items, and facilitates employee involvement in the meeting are components of effective meetings. Cohen et al. (2011) suggested that meeting leaders need to

consider the temporal (e.g., starting on time), physical (e.g., lighting quality in the meeting space), procedural (e.g., setting ground rules), and attendee (e.g., only inviting essential employees) aspects of a meeting. According to their analysis of the survey administered to 367 working adults, Cohen et al. recommended that meeting leaders invite only those employees who need to be present for the discussion, serve refreshments, set ground rules, and end the meeting on time.

Based on previous survey research in this area, three discussion papers present additional suggestions for how to lead effective meetings (Allen et al., 2015; LeBlanc & Nosik, 2019; Mroz et al., 2018). These papers describe the meeting leader's behavior in terms of behaviors that occur before, during, and after the meeting. Before the meeting, the meeting leader should consider the meeting design and prepare for the meeting. These behaviors include deciding the purpose of the meeting (Chen, 2020), who should attend (Allen et al., 2008), and how frequently the meeting should occur (Luong & Rogelberg, 2005). When determining the purpose, meeting leaders must discriminate when an email would be sufficient to relay the necessary information (Chen, 2020). Meeting leaders should also develop an agenda and communicate with the employees they are inviting to the meeting (Eaton, 2011). During the meeting, the meeting leader must lead the discussion surrounding the agenda items, as well as manage employee behavior. Illustrative examples of these behaviors include starting on time (Mroz & Allen, 2017), establishing the tone of the meeting, fostering engagement (Allen & Rogelberg, 2013; Perlow et al., 2017), ensuring all voices are heard (Eaton, 2011), and discriminating when and how to respond to maladaptive behaviors (LeBlanc & Nosik, 2019). After the meeting, the meeting leader should follow up with employees in attendance to increase the likelihood that the action items will be completed. Sending an email of the updated meeting minutes can accomplish this

goal (Eaton, 2011; Cohen et al., 2011; Chen, 2020). Additionally, meeting leaders could consider soliciting feedback on how they could improve the quality of their meetings in the future.

These critical meeting characteristics have been suggested for in-person meetings. However, more meetings have been and continue to be held in remote environments. Although, 76% of survey respondents indicated they prefer to meet in person (Chen, 2020), meetings are likely to continue to be held in a remote or hybrid format (Lund, 2021). Holding meetings virtually may present additional challenges for meeting leaders. First, there is no research to suggest what meeting characteristics are necessary to effectively lead remote meetings. Second, there are competing contingencies for employees who attend remote meetings that are not present during in-person meetings (Ezerins & Ludwig, 2021). For example, it may be easier for employees to multitask during remote meetings due to the difficulty for the meeting leader to identify off-task behavior. Third, Ezerins and Ludwig (2021) argue that workplace incivility (i.e., disrespectful behavior directed toward colleagues) happens more in remote work environments than face-to-face environments. They propose that virtual interactions lack relevant social stimuli that are present in in-person communication (e.g., facial expressions, body language). It is unknown whether meeting leaders have the skills necessary to address problems that arise in remote meetings, which may contribute to meetings continuing to be led ineffectively.

There is minimal research on various aspects of leading effective meetings. The bulk of the literature is comprised of survey research based on self-report and discussion articles that synthesize proposed characteristics of effective meetings (e.g., Allen et al., 2012; Rogelberg et al., 2007). Although this work is valuable, it is not experimental. To date, there is only one experiment that has evaluated an intervention to reduce employee tardiness to meetings (Fienup et al., 2013). The researchers conducted an assessment to determine barriers to arriving to

meetings on time. Based on assessment results, the researchers introduced a packaged intervention consisting of a: (a) prompt 24 hr prior to the meeting, (b) decreased meeting duration (i.e., meetings transitioned to 50 min to allow for transition time), and (c) probabilistic incentive for on-time arrival (i.e., two employees per month earned a \$25 gift card). According to Fienup et al., the intervention decreased tardiness to meetings.

There is a need for experimental research to improve meeting effectiveness. It would be helpful for researchers to experimentally determine the most critical behaviors meeting leaders need to perform to facilitate meeting effectiveness. Moreover, research is needed to assess the most effective and cost-efficient ways for organizations to teach meeting leaders how to effectively lead meetings. This research is timely due to the increased amount of time employees spend in meetings. Organizations are experiencing significant financial costs due to lost productivity associated with time spent in ineffective meetings.

Staff Training Procedures

Fortunately, research has identified best-practice employee training procedures. Behavioral skills training (BST; Miltenberger, 2003) has been found to be effective in teaching a variety of workplace skills (e.g., how to receive feedback [Ehrlich et al., 2020], implementation of behavioral interventions [Sarokoff & Sturmey, 2004]). This training package includes instructions, modeling, rehearsal, and feedback until the employee demonstrates the trained skill. However, BST is resource intensive to implement and, as a result, organizations and supervisors often fail to offer best-practice trainings to their employees (e.g., Blackman et al., 2022; DiGennaro Reed & Henley, 2015). To address this issue, researchers have evaluated ways to make training more resource efficient for both the trainee and trainer (Erath & DiGennaro Reed, 2020). Video modeling (e.g., Vladescu et al., 2012) and computer-based training (e.g., Pollard et

al., 2014) can effectively teach employees various job responsibilities and complex professional skills. In addition, virtual training involving the full package of BST has been shown to effectively teach employees to respond to ethical boundary crossings (Schulz, 2021). That is, teaching employees how to communicate an ethical boundary and respond when it is violated.

Virtual Training

It is likely that much of the U.S. workforce will continue to work remotely after the pandemic. Data from Upwork, a company that employs freelancers (i.e., employees who earn wages on a per-job or per-task basis), suggest that 22% of the workforce (i.e., 36.2 million U.S. workers) will work remotely full-time in 2025. According to data analyzed from a survey of 2,025 full-time workers in the United States, 80% of respondents are expecting to work from home at least three days per week after the pandemic (Owl Labs, 2020). These statistics represent an 87% increase in the number of days employees will work from home when compared to pre-pandemic levels (Apollo Technical, LLC, 2022). Mercer, a Human Resource and workplace benefits consulting firm, surveyed 800 employers and found that 94% of respondents report being more productive when working from home and that they experience better work-life balance (Maurer, 2020). This increased productivity is reported to be due to decreased distractions, drive time, and minutes spent engaging in small talk with colleagues, which led to an increase in the amount of time available to engage with loved ones (Apollo Technical, LLC, 2022).

With more employees working from home, group trainings to enhance employee skillsets are likely to be delivered virtually (Hyder, 2021). This shift has already started. Although some resources on how to effectively develop and deliver group virtual employee trainings were available prior to the pandemic (e.g., Amara & Atia, 2016), several companies are now creating

and publishing these tools (e.g., Colman, 2020). A recent study evaluated the effects of a virtual work-life balance training on employee performance (Wolor et al., 2020). The authors used self-report measures to evaluate their results. To date, no published studies have evaluated the effects of group virtual trainings on subsequent employee performance on the behavior trained.

Evaluating the effects of group virtual training, an antecedent training procedure, is worthwhile as the data will inform employers whether this format of training effectively changes attendee performance on the trained skill. The results will also provide insight for the leaders of professional Continuing Education Unit (CEU) webinars that are provided each month. Research supports the use of written and vocal instructions, video models, and guided notes with antecedent trainings (Austin et al., 2002; Reid et al., 1989). Training content could be formatted using Microsoft PowerPoint, or a similar software (e.g., Keynote). The slides should contain written instructions that specify the target behaviors being vocally described (enhanced written instructions that include diagrams and pictures could also be adopted; Graff & Karsten, 2012). Additionally, research supports the use of video models that depict an actor performing the target behaviors (Reid et al., 1989). Guided notes include handouts that outline the information covered in the training with fill-in-the-blank spaces to prompt attendees to write the information as the training is delivered. They are a form of active learner responding, which research has shown assists with higher recall of information provided (Austin et al., 2002).

Despite adopting research-supported practice to develop a group virtual training, the training may not produce attendee behavior change. Identifying effective procedures to supplement group virtual training that may be feasibly implemented following training is a worthwhile endeavor. One resource-efficient strategy worthy of investigation is self-monitoring. Self-monitoring is an antecedent procedure in which an employee records the occurrence and

nonoccurrence of their own behavior (Olson & Winchester, 2008). Recording may occur while engaging in the behavior or immediately following the behavior (Hickman & Geller, 2003). Specifically, self-monitoring can function as a discriminative stimulus (i.e., provides information about the availability of a natural reinforcer) or a motivating operation (i.e., alter the value of the reinforcer and increase the likelihood of the behavioral occurrence; Olson & Winchester, 2008). Most studies that have used self-monitoring have adopted it as part of a packaged intervention (e.g., Burg et al., 1979; Hickman & Geller, 2003); however, three studies have evaluated the effects of self-monitoring alone. Mixed effects were documented when self-monitoring alone was used to increase behavior intervention plan integrity (Mouzakitis et al., 2015), employee adherence to consumer schedules (Richman et al., 1988), and staff-consumer interactions (Ruby & DiGennaro Reed, 2021). That is, performance improved for some but not all participants. Packaged interventions containing self-monitoring have shown performance improvements. Thus, incorporating self-monitoring as a supplemental intervention following group training may produce desired trainee outcomes and is a worthwhile area of study. The data will inform employers and professionals who lead CEU trainings whether this antecedent procedure aids in changing performance of those who attend group virtual trainings.

Purpose

There is a need to experimentally determine how to teach employees to lead effective meetings due to the negative ramifications that employees and organizations experience when attending ineffective meetings. Moreover, both employees and employers would benefit from research evaluating the effects of group virtual training given the remote nature of work in the United States presently and anticipated in the future. To maximize efficiency, developing a training package that produces desired outcomes without ongoing feedback would also be

beneficial. The purpose of the current two-experiment study is to evaluate the effects of group virtual training and self-monitoring on leading a meeting. Specifically, Experiment 1 evaluated the effects of virtual training in isolation and the added effects of self-monitoring on performance when leading a meeting. Experiment 2 evaluated the combined effects of virtual training and self-monitoring on performance when leading a meeting.

Experiment 1

Method

Participants and Setting

Nine supervisors were recruited for Experiment 1. Three potential participants did not begin participation after providing consent due to workplace constraints. Therefore, six supervisors participated in this experiment. Two participants worked at a behavioral healthcare organization that provided services to individuals with intellectual and developmental disabilities. Four participants worked at a business office that provided financial services (e.g., payroll, accounting) to school districts. Participants included five women and one man between 28 to 56 years ($M = 40.8$). Five participants self-identified as White. All six participants reported earning a Bachelor's degree. Participants earned \$15 per session for their participation. More information regarding participant demographics is located in Table 1.

All sessions were conducted and recorded via Zoom (Version 5.8.3), a videoconferencing software. Most participants completed sessions in their private office space at their place of employment. On one occasion, Theresa held a session in their car. Maci completed most of their sessions in their bedroom. To the experimenter's knowledge, participants were the only individuals present during sessions.

Recruitment. Before recruiting participants for the experiment, approval was obtained from the university's Human Research Protection Program (study # 00146693). Human Rights Committee approval was also obtained at the behavioral healthcare organization. A recruitment email was sent to supervisors at the behavioral healthcare organization and business office (Appendix A). The email contained information about the purpose of the study and what participation would entail and provided a summary of potential benefits and risks to participation.

After emailing the experimenter to indicate interest in participating, a 30-min Zoom meeting was scheduled to describe the purpose of the study and obtain informed consent. Prospective participants completed an electronic informed consent document (Appendix B) and demographic questionnaire (Appendix C) via Qualtrics Research Suite (Qualtrics; www.qualtrics.com). The experimenter also asked questions about the topics of meetings participants led at their place of employment and about attendees who participated in those meetings. The purpose of gathering this information was to assist the research team in determining how to respond to content provided in sessions. In addition, the experimenter communicated the following expectations in the Zoom meeting:

“Before each session you should reach out to schedule a time for the role play meeting. After you've scheduled the meeting, you should plan to lead the role play meeting for 15 min. Due to the length of the session, please prepare three to five agenda items that represent broadly what you might cover in an actual meeting that you would hold with your employees. We will pretend that this is not a recurring meeting; therefore, you will need to set up the date and time of each session. We will also treat each session like it is the first time you've met with the group before. The research assistants and I will log on

at the time you scheduled the meeting for and you can start whenever you are ready.

After we get off this call, I will send you a list of names of research assistants who will be joining us for our role play meetings, as well as the Zoom log in information. Do you have any questions?”

Finally, the experimenter assigned a ClinCard to each participant for payment for participation. ClinCards are reloadable debit cards the University of Kansas makes available for researchers when payment is provided to participants.

Materials

Research Assistant Scripts. Five scripts (see example in Appendix D) were created for research assistants (hereafter, actors) to use during experimental sessions. Each script programmed for one occurrence of each common meeting attendee behavior (i.e., interpersonal conflict, interruptions, off-task behavior, dominating a conversation, lack of responding, appropriate meeting participation) and one technology issue. The order with which the scripts were selected for each session was randomly determined using a random number generator (<https://www.random.org/>). The actor assigned to each of the four roles in the script was also randomly assigned.

Prior to the onset of experimental sessions, 10 graduate and undergraduate students who were enrolled in research hours were trained to be actors. Training occurred on two separate days, each lasting less than one hour. Each actor attended one training. Training consisted of: (a) a description of the seven common meeting attendee behaviors, (b) a review of a meeting script, and (c) rehearsal with feedback until the actors followed their assigned script with 100% accuracy for two role-play meetings. Actors may not have practiced all meeting behaviors; however, they observed each of them at least two times.

Virtual Training. The materials for the virtual training included a computer, access to the internet and Zoom software, a PowerPoint presentation, video models, guided notes, and a group activity. The PowerPoint presentation described the behaviors comprising effectively leading meetings as outlined by LeBlanc and Nosik (2019) and provided a rationale for their importance. The behaviors that comprised the dependent variable were described in groups: (a) preparing for the meeting, and (b) opening; (c) managing; and (d) closing the meeting. After describing each group of behaviors, the experimenter presented a video model of those behaviors. Each video model contained on-screen text (e.g., schedule the meeting, greet attendees as they arrive) when each behavior was demonstrated. The experimenter presented six video models (range, 45 s–12 min 41 s) totaling 22 min 19 s for one training and 18 min 34 s for the other training. Two, one, one, and two videos were presented to capture the preparing for, opening, managing, and closing the meeting behaviors, respectively. Table 2 provides information about the content and duration of each video model for the two trainings. The meeting topic differed across the two trainings to ensure relevance to the participants' place of employment. The same behaviors were displayed in the video models, but the content differed. One topic involved the use of remote viewing software to observe staff performance (behavioral healthcare organization). The second topic involved updates to the school business software that the organization used (business office).

During the training, participants completed three pages of guided notes (Appendix E), which prompted participants to write relevant content from the training in a handout. They also completed a two-page group activity (Appendix F), which contained six scenarios that participants may need to address when leading a meeting (e.g., attendee dominating a conversation, attendee being off task). The scenarios in the group activity were individualized to

participants' place of employment. The same meeting behaviors were addressed across group activities; however, the content of the scenario changed (e.g., working with direct support professionals versus school district personnel).

Self-Monitoring Checklist. A one-page self-monitoring checklist (Appendix G) specified the behaviors that comprised the dependent variable. The checklist was separated into two sections. The first section listed the behaviors involved with preparing for a meeting. The second section listed the behaviors involved with leading a meeting. The checklist provided space for participants to mark Y (yes) or N (no) for each behavior.

Response Measurement

The primary dependent variable was meeting integrity, defined as the accuracy with which participants planned and led a meeting during a role play with actors. Thirty-two behaviors comprised the dependent variable and were grouped into two categories: planning the meeting and leading the meeting (Table 3). Planning the meeting consisted of: (a) agenda development (i.e., the agenda included items to discuss, time estimations, the date and time of the meeting, and a placeholder for attendance), (b) pre-meeting communication (i.e., the appropriate attendees were invited to the meeting, those who did not need to attend were not invited, confirmation of the date and time of the meeting was sent, the log in information was sent, attendees were notified if they needed to prepare content for the meeting), and (c) arranging sufficient environment/equipment (i.e., there were no wifi interruptions during the meeting, the meeting was held in a distraction-free environment, the participant sat in an upright position and looked at the camera/screen throughout the meeting). To permit measurement of pre-meeting communication, the experimenter provided the participant with the names of the actors and the login information for their role play meetings. Doing so allowed the experimenter to determine

whether pre-meeting communication occurred, the appropriate attendees were invited to each session, and the meeting minutes were sent following the meeting. With respect to arranging a sufficient environment/equipment, it should be noted that participants were not penalized for wifi interruptions out of their control. For example, if the participant led the meeting from their car and had connectivity issues, their performance would be scored as incorrect. However, if the participant led the meeting in a distraction-free environment and the connection lagged for a few seconds, their performance would be scored as correct.

Leading the meeting consisted of: (a) opening (i.e., greeted attendees, started the meeting on time, praised punctuality, shared the meeting minutes, established rules, and reviewed agenda items to be discussed), (b) managing (i.e., invited discussion from attendees, prompted input if an attendee was dominating a conversation, prompted input if no one was responding, responded to off task behavior, responded to interruptions, responded to interpersonal conflict, responded to technology issues, praised appropriate contributions, discussed the planned agenda items, and addressed what attendees were asked to prepare for), and (c) closing (i.e., summarized the discussion by restating decisions made, ended the meeting on time, and sent out meeting minutes that covered what was discussed). Data were collected during session or via video recording.

A behavior was considered correct if the participant accurately performed it as described in Table 3. A behavior was considered incorrect if the participant did not accurately perform that behavior. A behavior was scored as omitted if the participant did not perform that behavior when the behavior should have been performed. A behavior was scored as not applicable if the participant did not have the opportunity to engage in that behavior during the session. Percent meeting integrity was calculated by dividing the number of behaviors performed correctly by the total number of scored behaviors (correct plus incorrect plus omitted) and multiplying by 100.

An error analysis was conducted to determine the component integrity for each behavior for each participant across each phase of the experiment (excluding generalization probes). For each phase, percent component integrity for each behavior comprising the dependent variable was calculated by dividing the number of sessions in which the behavior was correctly performed by the total number of opportunities to engage in that behavior in that phase and multiplying by 100.

Experimental Sessions

Each experimental session consisted of an approximately 15-min ($M = 15$ min 35 s; range, 6 min 2 s–22 min 43s) meeting led by participants. During the recruitment meeting, the participant selected a day and time for sessions to be scheduled each week. The experimenter and three actors who were scheduled to be present at that session logged on to the meeting in accordance with the time listed on their script and immediately began acting (i.e., assumed the role of the actor they were assigned). That is, the experimenter and actors logged onto session regardless of whether the participant engaged in pre-meeting communication. The experimenter and actors did not prompt participants to begin or end the role play; that is, the meeting role play started immediately upon logging into Zoom. Participants led the meeting based on what they had prepared and were not guided by the experimenter to address any particular topic. Based on the duration of the role play and actor responding in sessions, it is possible that participants did not have the opportunity to respond to each of the programmed behaviors outlined in the script. For example, if the meeting was abruptly ended by the participant, the actor who was programmed to dominate a conversation may not have had the opportunity to do so.

Experimental Design and Procedure

A nonconcurrent multiple baseline design across participants was used to evaluate the effects of the virtual training and self-monitoring interventions on percent meeting integrity. The analysis consisted of three phases: (1) baseline, (2) post-training, and (3) self-monitoring.

Baseline. The purpose of this phase was to assess participant performance prior to implementing an intervention. Each session began when it was the time the meeting was scheduled to begin (e.g., 2:00 p.m.) or when the participant signed onto the Zoom call, whichever occurred later. Because participants had access to attendee information and the research schedule was set during the recruitment call, no prompts were provided for sessions to occur. The session ended when the participant vocally ended the meeting (e.g., “that is all I had for today, I will see you all next time!”). The experimenter did not provide any other information or feedback about performance. This phase continued until data were stable (i.e., there was little to no variability) or showed a decreasing trend (i.e., data were not increasing) based on visual inspection.

Virtual Training. Two trainings were scheduled at a mutually agreeable time for participants and after the completion of baseline. Theresa and Maci attended the training with three colleagues who worked at their place of employment but did not participate in the study. Dayton, Leigh, Christina, and Sara attended the training as a group as they worked at the same place of employment.

Prior to the training, the experimenter emailed a fillable PDF of the guided notes and group activity to the participants and instructed them to bring these documents to the virtual training. The experimenter also emailed a PDF of the LeBlanc and Nosik (2019) discussion article and their suggested meeting agenda as a Word document. During the 90-min virtual

training, the experimenter instructed participants to keep their camera on for the entirety of the training. All participants complied with this request. The experimenter used screen sharing to display a PowerPoint presentation containing written text and video models. The experimenter vocally described content as they advanced the slides. Participants completed the guided notes during the presentation. After delivering the presentation, the experimenter placed participants into breakout rooms containing two or three people and instructed them to complete the group activity in a collaborative manner using the handout sent to them prior to the training.

Participants were in their breakout rooms for 10 min, during which the experimenter visited each room to assess participation. Participants then returned to the main Zoom room to review the answers to the group activity. The experimenter asked the participants to volunteer their answers while reviewing the activity as a group. Throughout the training, the experimenter posed six questions to which the participants could respond. The average number of responses per participant was 7.6 (range, 2–11). The experimenter also presented six opportunities for participants to ask questions during the training. In one training, one participant asked one question. At the conclusion of the training, participants were instructed to send the completed guided notes and group activity to the experimenter via electronic mail. Once the experimenter received the guided notes and group activity, it was checked for completion. All participants completed the guided notes and group activity. Maci did not submit her guided notes or group activity following the training; therefore, the experimenter sent an email requesting they be sent. The experimenter and Maci arranged for the guided notes and group activity to be picked up from Maci's office. The experimenter picked them up.

Post-training. The purpose of this phase was to evaluate the effects of the virtual training on meeting integrity. The participants did not receive any supplemental information or feedback

prior to, during, or after sessions. This phase continued until participants met the stability criterion of three consecutive sessions within 10% of the median of those three data points with no increasing trend (Ledford et al., 2017). To evaluate if the criterion was met, I (a) multiplied the median by .1, (b) added and subtracted that value from the median to create a range, and (c) determined whether the data points fell within that range. For example, if the median was 80, the range would be 72–88. If all three data points were within this range the data were considered stable.

Self-Monitoring. The purpose of this phase was to evaluate the added effects of self-monitoring on meeting integrity. Prior to the introduction of this phase, the experimenter met with each participant during a 5-min phone call to describe the procedures in this phase. During the phone call, the experimenter reviewed each of the items on the checklist and described the expectations for completing and emailing the checklist. That is, participants were required to email a completed preparation checklist (i.e., the first section of the self-monitoring checklist) to the experimenter prior to each session. Because participants completed the leading a meeting checklist (i.e., the second section) during each session, participants were required to email the completed checklist to the experimenter after each session. Participants were instructed to use these checklists for all experimental sessions following the phone call. Participants did not receive any supplemental information or feedback prior to, during, or after sessions. This phase continued until the stability criterion was met, the participant requested to end their participation, or the semester ended.

Generalization Probes. Participant performance leading a meeting with colleagues was measured during two generalization probes¹. During the recruitment meeting, the experimenter

¹ Dayton did not lead meetings with their staff; therefore, there are no generalization probes for this participant.

indicated they would attend two of the meetings the participant led at their place of employment. The participant independently selected the topic, day, and time of the meeting the experimenter attended. The first probe was scheduled during the recruitment call in baseline. The participant told the experimenter when their next staff meeting was scheduled, and the experimenter adjusted their schedule to be present for the meeting. The second probe was scheduled following post-training or self-monitoring depending on participant availability. The experimenter emailed the participant to ask to be invited to their next staff meeting. For both probes, participants provided the experimenter with the login information for their meetings. The experimenter asked for the login information, via email, if they did not receive it at least two days prior to the predetermined meeting. At the time of the meeting, the experimenter logged on without enabling their camera or audio. The experimenter did not contribute to the meeting. Participants did not receive any supplemental information or feedback.

Interobserver Agreement and Procedural Integrity

An independent observer recorded data for an average of 40.8% of sessions for each phase for each participant to measure interobserver agreement. An agreement was scored when both observers recorded the participant's behavior in the same way (i.e., as correct, incorrect, not applicable, omitted). A disagreement was scored when both observers did not record the participant's behavior identically. Interobserver agreement was calculated by dividing the number of behaviors with agreement by the total number of behaviors and multiplying by 100. Interobserver agreement averaged 88.1% across all participants and phases (range, 84.4%–90.6%; Table 4). Interobserver agreement for Christina's first baseline session was 68.8%. Retraining on definitions for each behavior occurred after that session.

An independent observer assessed experimenter and confederate actor integrity (Appendix H) for 100% of sessions. Experimenter integrity data were collected on whether the experimenter: (a) followed the script (e.g., did not prompt the start of the session) and (b) did not provide feedback during the session. Actor integrity data were collected on whether the actor: (a) logged onto the meeting at the appropriate time (i.e., on time, at the assigned time) and (b) engaged in each of their assigned meeting behaviors (e.g., dominating a conversation, making an appropriate contribution). Actors were assigned to engaged in two to four behaviors per session. Experimenter and actor integrity was calculated by dividing the number of behaviors implemented correctly by the total number of behaviors and multiplying by 100. Average integrity was 95.8% (range, 95.0%–97.4%).

An independent observer also measured experimenter integrity during the virtual training (Appendix I). Data were collected on whether the experimenter: (a) used the PowerPoint presentation, (b) covered all content included in the PowerPoint presentation, including video models, (c) facilitated the group activity, and (d) provided six opportunities for participants to respond to and ask questions. Percent integrity was calculated by dividing the number of behaviors implemented correctly by the total number of behaviors and multiplying by 100. Integrity was 100% for both trainings.

An independent observer assessed integrity during the phone calls in which the experimenter introduced the self-monitoring checklist (Appendix J). Integrity data were collected on whether the experimenter described: (a) the self-monitoring phase, (b) the items on the checklist, (c) the expectation for completing the checklists, and (d) the expectation for emailing the checklists to the experimenter. Percent integrity was calculated by dividing the number of

behaviors implemented correctly by the total number of behaviors and multiplying by 100.

Integrity was 100% for all participants who experienced this phase.

Social Validity

Participants completed a 12-item social validity survey via Qualtrics (Appendix K). The items were adapted from the Intervention Rating Profile-15 (IRP-15; Martens et al., 1985) and asked them to rate the acceptability of the virtual training and self-monitoring intervention using a 6-point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*). Higher scores indicate higher acceptability. Mean ratings were calculated for each item by dividing the sum of the individual item ratings by the number of participants who completed the survey ($n = 5$).

After each generalization probe, the experimenter sent the meeting attendees (i.e., participants' colleagues who attended the meeting) a 16-item survey via Qualtrics (Appendix L). The items were adapted from the Perceptions of Supervisory Support Scale (Fukui et al., 2014) and asked attendees to rate the participants' ability to effectively lead a meeting using a 6-point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*). Higher scores indicate higher perceived effectiveness. Mean ratings were calculated for each item by dividing the sum of individual item ratings by the number of respondents. A change score was calculated to determine changes in perceived effectiveness after participants received training. Change scores were summarized for each item for each participant and calculated by subtracting the ratings mean for the second generalization probe from the ratings mean for the first generalization probe.

Results and Discussion

Percent Integrity

Figure 1 depicts the percent meeting integrity for each participant by phase. Table 5 summarizes the error analysis data by phase. During baseline, Dayton's percent meeting integrity averaged 51.6% (range, 43.8%–58.1%). The error analysis revealed that they omitted nine behaviors during this phase (i.e., agenda development [time estimates, date/time, attendance]; opening [praise punctuality, establish rules, review items to be discussed]; managing [redirect when no one responds]; closing [summarize discussion, send out minutes]). They also performed 11 behaviors incorrectly during this phase (i.e., premeeting communication [send login information]; opening [greet attendees, shares agenda]; managing [redirect when dominating, redirect off task behavior, respond to interruptions, respond to interpersonal conflict, respond to technological issues, praise contributions, progresses through agenda]; closing [ends on time]). Following the virtual training, their performance gradually increased and stabilized ($M = 83.0\%$; range, 65.6%–90.7%). During this phase, they omitted one behavior, which was redirecting when no one responds. They also incorrectly performed 11 behaviors (i.e., agenda development [date/time, attendance]; opening [praise punctuality, shares agenda, establish rules, review items to be discussed]; managing [redirects off task behavior, responds to interpersonal conflict]; closing [all]). With the introduction of the self-monitoring intervention, Dayton's percent meeting integrity increased to 96.8% (range, 96.8%–96.9%). During this phase, they omitted one behavior, which was redirecting when no one responded. Dayton did not lead meetings; thus, I did not conduct generalization probes with this participant.

During baseline, Theresa's percent meeting integrity averaged 48.9% (range, 33.3%–60%). The error analysis revealed that they omitted nine behaviors during this phase (i.e., agenda development [all]; opening [praise punctuality, shares agenda; establish rules]; closing

[summarize discussion, sends out minutes]). In addition, Theresa incorrectly implemented 13 behaviors (i.e., environment/equipment [wifi interruptions, held meeting in distraction free environment]; opening [greet attendees, start on time, review items to be discussed]; managing [redirect when dominating, redirect when no one responds, respond to off task behavior, respond to interruptions, respond to interpersonal conflict, respond to technological issues, praise contributions]; closing [end on time]). Following the virtual training, their performance increased and stabilized ($M = 78.3\%$; range, 77.4%–80%). During this phase, Theresa omitted three behaviors (i.e., opening [establish rules, review items to be discussed]; closing [summarize discussion]). They also incorrectly performed eight behaviors (i.e., premeeting communication [invite those who need to be present, do not invite those who do not]; opening [start on time, share agenda]; managing [redirect when no one responds, respond to off task behavior, respond to technological issues]; closing [end on time]). The virtual training effectively taught Theresa to create an agenda and praise punctuality (percentages increased from 0 to 100% for both behaviors). With the introduction of the self-monitoring intervention, Theresa's percent meeting integrity increased to an average of 92.2% (range, 90.6%–93.8%) across two consecutive sessions. Only two sessions were conducted in self-monitoring as the semester ended and confederate actors were no longer available. During this phase, they omitted two behaviors (i.e., opening [share agenda]; closing [summarize discussion]) and incorrectly implemented one (i.e., redirect when no one responds). Theresa demonstrated a 27.3 percentage point increase in meeting integrity from the baseline generalization probe to the probe conducted at the conclusion of self-monitoring.

During baseline, Maci's percent meeting integrity was low ($M = 38.8\%$; range, 30%–48.1%). The error analysis revealed that they omitted 13 behaviors during this phase (i.e., agenda

development [all]; opening [praise punctuality, share agenda, establish rules, review items to discuss]; managing [redirect when no one responds, respond to off task behavior, praise contributions]; closing [summarize discussion, send out minutes]. In addition, Maci incorrectly performed 10 behaviors (i.e., environment/equipment [held meeting in distraction free environment, had good posture, looked at camera]; pre-meeting communication [sent confirmation, sent login information]; opening [greet attendees, start on time]; managing [redirect when dominating, respond to interpersonal conflict, proceed through agenda]). Following the virtual training, their performance improved to 57.7% for one session. The participant withdrew after one session in the post-training phase due to scheduling conflicts. Given the single data point, the error analysis data are not summarized in detail.

During baseline, Leigh's percent meeting integrity averaged 53.8% (range, 41.7%–61.3%). The error analysis revealed that they omitted nine behaviors (i.e., agenda development [all]; opening [praise punctuality, establish rules]; managing [redirect when no one responds]; closing [summarize discussion, send out minutes]). Additionally, they incorrectly performed 11 behaviors during this phase (i.e., premeeting communication [send confirmation]; opening [greet attendees, start on time, share agenda, review items to discuss]; managing [redirect when dominating, respond to off task behavior, respond to interruptions, respond to technological issues, praise contributions]; closing [end on time]). Following the virtual training, their performance immediately improved and stabilized ($M = 82.2\%$; range, 65.5%–96.4%). During this phase, they omitted one behavior (i.e., sent out minutes) and incorrectly performed seven behaviors (i.e., opening [start on time, praise punctuality, review items to discuss]; managing [redirect when no one responds, praise contributions]; closing [summarize discussion, end on time]). Leigh demonstrated a 23.8 percentage point increase in meeting integrity from the

baseline generalization probe during to the probe conducted during post-training. The effects of generalization following the self-monitoring intervention are unknown. With the introduction of the self-monitoring intervention, Leigh's percent meeting integrity increased to 84.4%. Only one session was conducted in self-monitoring as Leigh indicated they needed to focus on work-related tasks and take time off due to family Covid-19 exposures. Given the single data point, the error analysis data are not summarized in detail.

During baseline, Christina's percent meeting integrity averaged 42.4% (range, 32.1%–60%). The error analysis revealed that they omitted 10 behaviors (i.e., agenda development [time estimations, attendance]; premeeting communication [sent login information]; opening [praise punctuality, shared agenda, established rules]; managing [redirect when dominating, redirect when no one responds]; closing [summarize discussion, send out minutes]). Additionally, they incorrectly performed 14 behaviors (i.e., agenda development [items to discuss, date/time]; environment/equipment [wifi interruptions] pre-meeting communication [sent confirmation]; opening [greet attendees, start on time, review items to be discussed]; managing [respond to off-task behavior, respond to interruptions, respond to technological issues, praise contributions]; closing [end on time]). Following the virtual training, their performance stabilized within the range of baseline sessions ($M = 59.3%$; range, 46.1%–63.3%). During this phase, they omitted nine behaviors (i.e., agenda development [all]; opening [praise punctuality, share agenda]; managing [redirect when no one responds]; closing [summarize discussion, send out minutes]). Additionally, they incorrectly performed eight behaviors (i.e., participants [invited those who needed to be there, did not invite those who did not]; premeeting communication [sent confirmation, sent login information]; opening [establish rules, review items to discuss]; managing [respond to off task behavior, praise contributions]). With the introduction of the self-

monitoring intervention, Christina's percent meeting integrity improved slightly and stabilized ($M = 79.1\%$; range, 76.7%–80.6%). Christina omitted two behaviors (i.e., agenda development [time estimation, attendance]). Additionally, they incorrectly performed nine behaviors (i.e., agenda development [date/time]; participants [invited those who needed to be there]; opening [start on time, share agenda, review items to discuss]; managing [redirect when no one responds, praise contributions]; closing [summarize discussion, send out minutes]). Christina demonstrated a 16.9 percentage point increase in meeting integrity from the baseline generalization probe to the probe conducted at the conclusion of self-monitoring.

During baseline, Sara's percent meeting integrity averaged 53.3% (range, 34.5%–64.5%). The error analysis revealed that they omitted seven behaviors (i.e., agenda development [time estimations, attendance]; opening [praise punctuality, establish rules, review items to be discussed]; closing [summarize discussion, send out minutes]). Additionally, they incorrectly performed 13 behaviors (i.e., agenda development [items to discuss, date/time]; premeeting communication [sent confirmation]; opening [greet attendees, start on time, share agenda]; managing [redirect dominating, redirect when no one responds, respond to off task behavior, respond to interruptions, respond to technological issues, praise contributions]; closing [send on time]). Following the virtual training, their performance improved slightly and stabilized ($M = 76.6\%$; range, 68.9%–80.6%). During this phase, they omitted five behaviors (i.e., agenda development [attendance]; opening [praise punctuality, review items to discuss]; closing [summarize discussion, send out minutes]). Additionally, they incorrectly performed four behaviors (i.e., agenda development [time estimations, date/time]; managing [redirect when no one responds, praise contributions]). Sara demonstrated a 17.4 percentage point increase in meeting integrity from the baseline generalization probe to the probe conducted at the conclusion

of post-training. Due to challenges with Sara's schedule, a generalization probe was not arranged after self-monitoring; thus, the extent to which generalization occurred at the conclusion of this phase is unknown. With the introduction of the self-monitoring intervention, Sara's percent meeting integrity improved and stabilized across two sessions ($M = 87.1\%$). Sara omitted two behaviors (i.e., agenda development [attendance]; opening [review items to discuss]). Additionally, they incorrectly performed three behaviors (i.e., agenda development [date/time]; closing [summarize discussion, end on time]).

Social Validity

Social Validity Survey. Five participants completed the social validity survey (Maci did not receive a survey given they discontinued participation). Table 6 summarizes the results of the survey. Overall, participants liked the procedures used ($M = 5.4$) and reported they would be beneficial for teaching employees how to lead a meeting ($M = 5.4$). Participants indicated the virtual training was acceptable ($M = 5.4$), beneficial ($M = 5.4$), and effective ($M = 5.2$). Participants also reported the self-monitoring checklist to be acceptable ($M = 5.2$), beneficial ($M = 4.8$), and effective ($M = 5.4$).

Participants had the opportunity to answer three open-ended questions. When asked what components of the training they liked most, participants indicated: (a) the open discussion about how to respond to certain situations that may arise during meetings ($n = 3$) and (b) the use of the checklist ($n = 2$). When asked what components of the training they disliked, three participants indicated they did not like the number of role-play meetings that were required for participation in the study. Two participants indicated there were not any training procedures they disliked. When asked to provide additional comments, one participant reported they were able to determine what the common meeting behaviors were after the first few meetings. Two

participants commented that the training and checklist helped guide them through and maintain good meeting methods. One indicated the webinar was very beneficial.

Perceived Effectiveness Survey. Table 7 summarizes the perceived effectiveness ratings for four participants for whom I conducted generalization probes. Four respondents (66.7%) who attended Theresa's baseline generalization probe meeting responded to the survey. Three respondents (42.9%) who attended Theresa's self-monitoring generalization probe meeting responded to the survey. The respondents varied across the two probes. The mean rating across all survey items was 4.66 during baseline and 5.31 during self-monitoring. The mean change score across all items was .65. Respondents reported during baseline that Theresa could allow more input from staff when scheduling the meeting, planning what items to discuss, and during the meeting. When provided the opportunity to write additional comments, respondents indicated that Theresa is good at leading meetings and is receptive to feedback; however, she does not allow time for staff to bring up concerns they would like to discuss. Respondents reported during self-monitoring that there is nothing Theresa needs to do to improve her meetings. When provided the opportunity to write additional comments, respondents indicated that Theresa leads meetings very well and that their employees feel comfortable talking with her.

Six respondents (60%) who attended Maci's baseline generalization probe meeting responded to the survey. The mean rating across all survey items was 3.56 during baseline. No generalization probe was conducted following virtual training due to participant withdrawal. Respondents reported during baseline that Maci does not consider their employee's work and provides suggestions without consulting them. Respondents indicated that Maci should be more understanding that their plans may not work in practice and they should listen more. When provided the opportunity to write additional comments, respondents indicated that Maci is new to

the supervisory position and has not yet earned employee respect. Respondents also reported they felt Maci behaved unprofessionally during meetings and they were not provided the opportunity to provide their input.

Four respondents (66.7%) who attended Leigh's baseline generalization probe meeting responded to the survey. Seven respondents (77.8%) who attended Leigh's post-training generalization probe meeting responded to the survey. Different department personnel attended the two generalization probe meetings; therefore, respondents were not the same across meetings. The mean rating across all survey items was 4.82 during baseline and 4.69 during post-training. The mean change score across all items was -2.06. Respondents reported during baseline that it was their first meeting with Leigh and although it was short, the information was relevant to what they needed to discuss. Respondents reported during post-training that it was their first meeting with Leigh and that meetings should be scheduled more regularly. When provided the opportunity to write additional comments, respondents indicated that Leigh's meeting was well organized, and attendees appreciated receiving an agenda a head of time so they could plan their contributions.

Three respondents (33.3%) who attended Christina's baseline generalization probe meeting responded to the survey. Five respondents (41.7%) who attended Christina's self-monitoring generalization probe meeting responded to the survey. The mean rating across all survey items was 4.52 during baseline and 5.09 during self-monitoring. The mean change score across all items was .57. Respondents reported during baseline that although Christina did a good job, they should lead more meetings. When provided the opportunity to write additional comments, respondents indicated that it is difficult for them to determine when it is appropriate time to ask a question in the meeting, but they feel comfortable sharing their input. Respondents

reported during self-monitoring that they would like the team to participate more in meetings, even though Christina is doing a great job leading. When provided the opportunity to write additional comments, respondents indicated they liked receiving the agenda ahead of time.

One respondent (50%) who attended Sara's meeting prior to intervention responded to the survey. One respondent (50%) who attended Sara's post-training generalization probe meeting responded to the survey. The mean rating across all survey items was 5.19 during baseline and 5.19 during self-monitoring. The mean change score across all items was 0. The respondents reported during baseline that the meeting went well, and Sara does not need to improve. No comments were provided following the post-training generalization probe meeting.

Discussion

The purpose of Experiment 1 was to evaluate the isolated effects of virtual training and the added effects of self-monitoring on percent meeting integrity. The findings suggest that group virtual training improved performance above baseline levels, to some degree, for five of six participants. However, self-monitoring was required for all participants, who completed the experiment, to display high levels of integrity. There were modest improvements in percent meeting integrity when participants led meetings with their employees following one or both interventions. Moreover, the social validity data reveal participants found the interventions to be effective and acceptable; however, they reported that the duration to participate was longer than they expected. The perceived effectiveness data reveal that meeting attendees rated their supervisor's ability to lead meetings moderately high. Although these data are difficult to interpret, at least some improvements were reported following intervention for all participants who led meetings.

This experiment was the first to experimentally evaluate the effects of group virtual training on the professional skill of leading a meeting. Moreover, this study attempted to identify techniques that could be provided by organizational trainers or adopted to provide professional CEU. That is, CEU providers could incorporate the components of the virtual training (e.g., video models, guided notes, group activity) in their webinars and distribute a self-monitoring checklist. The present findings suggest substantial improvements in meeting integrity with these interventions without the need for experimenter or supervisory feedback.

Despite these beneficial outcomes, several limitations could be addressed in future research. First, some participants received virtual training at the same time as other participants which limits the experimental control demonstrated in the current design. Specifically, Theresa and Maci attended one training and Dayton, Leigh, Christina, and Sara attended the other training. Because of this, the interventions were staggered by manipulating the number of sessions in baseline, rather than staggering the introduction of training. In future research, all participants should attend a different group training, with other people (i.e., colleagues who are not participants in the study) but no other participants, to allow for a true stagger of the independent variable.

Second, I was unable to apply the stability criterion in the self-monitoring phase for three of five participants due to attrition. Most participants began the experiment with two scheduled sessions per week. However, these participants quickly decreased their involvement to once per week due to time constraints. During post-training, three participants asked how much longer I expected their participation to take as they had other work-related responsibilities to complete. The social validity results revealed participants did not expect to spend as much time preparing for sessions and meeting with the experimenter and actors as was required in this experiment. On

average, participants completed 10 sessions with the research team. With sessions held once per week, and figuring in holidays, this experiment took nearly four months to complete. It is critical to increase the efficiency of the measurement process, so participation does not interfere with participant work tasks and to reduce attrition. In future research, the virtual training and self-monitoring interventions should be combined to decrease the number of sessions necessary to participate in the experiment. Additionally, this modification would allow for an evaluation of a potentially more robust intervention package.

Due to the novelty of the research question, a mastery criterion was not established for this experiment. The data from this experiment suggest what level of performance is possible following self-monitoring. Therefore, future research should evaluate the feasibility of adopting a mastery criterion of 80% for two consecutive sessions. To assess the validity of this criterion, researchers could ask external raters to rate participant meetings. Specifically, raters could rate one session from baseline and one from post-training. An interesting analysis would involve comparing whether the ratings from an external rater capture the behavior change demonstrated in the time-series analysis.

Previous survey research and discussion articles informed the behaviors that comprised the dependent variable, which I operationalized for the task analysis. After conducting Experiment 1, several steps were redundant and incorporating all the steps seemed unnecessary to effectively lead a meeting. Specifically, requiring participants to both share the meeting agenda before or during the meeting and review the items to be discussed when opening the meeting is redundant. Moreover, summarizing the discussion at the end of the meeting may not be necessary given the short duration of the meetings. Future research should adjust the task analysis to reduce these redundancies.

The purpose of Experiment 2 was to address the above-described limitations. Specifically, to reduce the number of sessions participants must complete, I evaluated the combined effects of a group virtual training and self-monitoring on percent meeting integrity. In addition, I ensured participants did not complete training simultaneously, incorporated a mastery criterion, and modified the dependent variable to reduce redundancies.

Experiment 2

Method

Participants and Setting

Thirteen supervisors were recruited to participate in Experiment 2. Three supervisors did not begin sessions after consent was provided due to workplace conflicts. Four supervisors did not participate in training due to high baseline performance (i.e., near 80%). Two supervisors participated in training but did not complete the study due to repeated no-call, no-show sessions or cancellations. Specifically, these two supervisors completed nine sessions (BL: seven sessions; post-training: two sessions) over a six-week period. They indicated frequent emergencies arose at work and home or they were sick with Covid-19. The experimenter interpreted these missed sessions as indicating a lack of assent to continue in the experiment. Figure 2 summarizes the data for the supervisors with high baseline performance or who did not complete the study. Therefore, four supervisors participated in this experiment. One participant worked at a behavioral healthcare organization that provided services to individuals with intellectual and developmental disabilities. Two participants worked at a business office that provided financial and technological services to school districts. One participant worked in an administrative office at a Mid-western University. Participants included four women between 29 to 58 years ($M = 43.3$). All participants self-identified as White. Participants reported attending

some college to obtaining a master's degree. Participants earned \$15 per session for their participation. More information regarding participant demographics is located in Table 8.

Most sessions were conducted and recorded via Zoom (Version 5.8.3), a videoconferencing software. One participant (Susie) conducted their sessions via Microsoft Teams. The experimenter recorded these sessions using the screen and audio recording function in QuickTime Player. Most sessions were completed in the participants' private office space at their place of employment. During these sessions, to the experimenter's knowledge, participants were the only individuals present in the room.

Recruitment. This experiment falls under the Human Research Protection Program and Human Rights Committee approvals described in Experiment 1. The same recruitment email was sent to supervisors at a behavioral healthcare organization and business office, and to administrative personnel at the university. After emailing the experimenter to indicate interest in participating, a 30-min Zoom meeting was scheduled to describe the purpose of the study and obtain informed consent. The same information described in Experiment 1 was provided.

Materials

Actor Scripts. The same five scripts described in Experiment 1 were used. Two additional actors were trained prior to the onset of experimental sessions using the same procedures described in Experiment 1. Both actors were undergraduate students who were enrolled in research hours.

Virtual Training. The same virtual trainings described in Experiment 1 were used. A modification to the discussion regarding creating and sending agendas was made due to difficulties with these behaviors in Experiment 1. Specifically, the experimenter suggested that participants use Google Docs, rather than Word, to create and share their agenda. This

recommendation was made to decrease the response effort of engaging in subsequent leading behaviors, such as sending the meeting minutes following the meeting.

Self-Monitoring Checklist. The same self-monitoring checklist described in Experiment 1 was used.

Response Measurement

The primary dependent variable was revised slightly from Experiment 1. Participants were not required to engage in *both* sharing their screen and reviewing items to discuss while opening the meeting. Rather, they were expected to engage in one behavior or the other. If the participant performed neither behavior, the step was scored as zero out of one. If they performed one or both of the behaviors, the step was scored as one out of one. Additionally, the behavior of summarizing the discussion was omitted. Therefore, the maximum number of behaviors the participant was expected to perform during each session was 30. The same scoring and error analysis described in Experiment 1 were conducted.

Experimental Sessions

The experimental sessions were the same as in Experiment 1. Each experimental session consisted of an approximately 15-min ($M = 14$ min 36 s; range, 23 min 38 s–9 min 13 s) meeting led by participants.

Experimental Design and Procedure

A nonconcurrent multiple baseline design across participants was used to evaluate the effects of the virtual training plus self-monitoring intervention on percent meeting integrity. The analysis consisted of two phases: (1) baseline and (2) post-training.

Baseline. The purpose of this phase was to assess participant performance prior to implementing an intervention. Each session began when it was the time the meeting was

scheduled to begin (e.g., 2:00 p.m.) or when the participant signed onto the Zoom call, whichever occurred later. The session ended when the participant vocally ended the meeting (e.g., “that is all I had for today, I will see you all next time!”). The experimenter did not provide any other information or feedback about performance. This phase continued until data were stable or showed a decreasing trend based on visual inspection.

Virtual Training. The experimenter led the same virtual training described in Experiment 1. Participants did not attend the same training. The training was scheduled at a mutually agreeable time for each of the participants and after the completion of baseline. To ensure a group format, training attendees included graduate and undergraduate students, who were not actors in the participant’s research sessions, or non-participating employees at the participants’ organization.

Prior to the training, the experimenter emailed a fillable PDF of the guided notes and group activity to the attendees, including the participant, and instructed them to bring the documents to the virtual training. The experimenter also emailed a PDF of the LeBlanc and Nosik (2019) discussion article and their suggested meeting agenda as a Word document. During the 90-min virtual training, the experimenter instructed the attendees to keep their camera on for the entirety of the training. All participants complied with this request. The experimenter used screen sharing to display a PowerPoint presentation containing written text and video models. The experimenter vocally described content as they advanced the slides, while the attendees completed the guided notes. After delivering the presentation, the experimenter placed attendees into a breakout room containing two people and instructed them to complete the group activity in a collaborative manner using the handout sent to them prior to the training. The attendees were in their breakout rooms for 10 min, during which the experimenter visited each room to assess

participation. The attendees then returned to the main Zoom room to review the answers to the group activity. The experimenter asked the attendees to volunteer their answers while reviewing the activity as a group. Throughout the training, the experimenter posed six questions to which the attendees could respond. The average number of responses per participant was 4.3 (range, 1–7). The experimenter also presented six opportunities for the attendees to ask questions during the training. Two of the participants asked one or more questions in the training ($M = 2$; range, 1–3). At the conclusion of the training, attendees were instructed to send the completed guided notes and group activity via electronic mail to the experimenter. All participants sent the completed guided notes and group activity to the experimenter following the group training.

Participants received an email from the experimenter following the group training to schedule a 5-min phone call so the experimenter could introduce self-monitoring. Prior to the phone call, the experimenter emailed a fillable PDF of the self-monitoring checklist to the participant. During the phone call, the experimenter described each of the items on the self-monitoring checklist and the expectation for completing and emailing the checklist. That is, participants were required to email a completed preparation checklist (i.e., the first section of the self-monitoring checklist) to the experimenter prior to each session. Because participants completed the leading a meeting checklist (i.e., the second section) during each session, they were required to email the completed checklist to the experimenter after each session. Participants were instructed to use these checklists for all experimental sessions following the phone call.

Post-training. The purpose of this phase was to evaluate the effects of the virtual training with self-monitoring on meeting integrity. The participants did not receive any information or feedback prior to, during, or after sessions related to their meeting integrity. If a participant did

not email the self-monitoring checklist before a session (first section of the checklist) or within five hours after a session (second section of the checklist), the experimenter would have provided a prompt via email. This procedure was designed to ensure the integrity of the independent variable. Prompts to receive the completed checklist were not required in this experiment. If a participant submitted a self-monitoring checklist below 80% accuracy for two out of three consecutive sessions, the experimenter would have provided feedback on the accuracy of the self-monitoring data collection. Similarly, if meeting integrity was below 80% for two out of three consecutive sessions, the experimenter would have provided feedback on participant performance. In both situations, the feedback would have been provided via a phone call during which the experimenter would have summarized information about each step on the checklist the participant scored incorrectly and each behavior the participant incorrectly implemented or omitted in the meeting. This feedback was not required in this experiment. This phase continued until the participant met the mastery criterion of 80% across two consecutive sessions.

Generalization Probes. Participant performance leading a meeting with colleagues was measured during two generalization probes². During the recruitment meeting, the experimenter indicated they would attend two of the meetings the participant led at their place of employment. The participant independently selected the topic, day, and time of the meeting the experimenter attended. The first probe was scheduled during the recruitment call in baseline. The participant told the experimenter when their next staff meeting was scheduled, and the experimenter adjusted their schedule to be present for the meeting. The second probe was scheduled following post-training. The experimenter emailed the participant to ask to be invited to their next staff

² Susie and Fay did not lead regular meetings at their organizations; therefore, generalization probes were not conducted.

meeting. For both probes, participants provided the experimenter with the login information for the meetings. The experimenter asked for the login information, via email, if they did not receive it at least two days prior to the predetermined meeting. At the time of the meeting, the experimenter logged onto the meeting without enabling their camera or audio and did not contribute during the meeting. Participants did not receive any supplemental information or feedback.

Interobserver Agreement and Procedural Integrity

An independent observer recorded data for an average of 41.7% of sessions for each phase for each participant to measure interobserver agreement. The same scoring as described in Experiment 1 was used. Interobserver agreement averaged 88.7% across all participants and phases (range, 77.4%–100%; Table 9). For one session agreement was below 80%.

An independent observer assessed experimenter and actor integrity for 100% of sessions. The same scoring described in Experiment 1 was used. Average integrity was 93.7% (range 76.9%–100%). For one session integrity was below 80%. In that session, three actors did not engage in one of their assigned behaviors. Specifically, one actor did not respond combatively to a comment made in the meeting and two actors responded to the first question posed by the participant when the script indicated they should have waited for the participant to prompt participation. There was not an opportunity for the participant to respond to an interpersonal conflict; therefore, that item was scored as not applicable. The participant had an opportunity to prompt attendee engagement, so that error did not impact the scoring for the session.

An independent observer measured experimenter integrity during each of the virtual trainings and self-monitoring phone calls. The same scoring described in Experiment 1 was used. Integrity was 100% for each virtual training and self-monitoring phone call.

Social Validity

Participants completed the same 12-item social validity survey described in Experiment 1. The same scoring described in Experiment 1 was used. After each generalization probe, the experimenter sent the meeting attendees the same 16-item survey described in Experiment 1. The same scoring described in Experiment 1 was used.

External Rater Survey. An external rater was asked to complete a nine-item survey via Qualtrics (Appendix M). The rater was identified because they were a co-author of a published article about effective meetings. After agreeing to serve as a rater, I uploaded written instructions and eight videos to OneDrive. The written instructions included the link for the rater to complete the survey and the items they were asked to score. Each video was randomly labeled as session one through eight. The external rater completed the survey for one baseline and one post-training session for each participant. The items were adapted from the effective communication literature (e.g., Laske & DiGennaro Reed, in press; Mancuso & Miltenberger, 2016) and asked raters to rate the efficacy of participants leading a meeting using a five-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). Higher scores indicate higher efficacy. A change score was calculated to determine changes in efficacy after participants received training. Change scores were summarized for each item for each participant and were calculated by subtracting the rating on the post-training session from the rating on the baseline session.

Results and Discussion

Percent Integrity

Figure 3 depicts the percent meeting integrity for each participant by phase. Table 10 summarizes the error analysis data by phase. During baseline, Kelly's percent meeting integrity was moderately low ($M = 45.5\%$; range, 42.9%–48.1%). The error analysis revealed that they

omitted eight behaviors during this phase (i.e., agenda development [time estimate]; opening [praise punctuality, establish rules, review items to be discussed]; managing [redirect when someone is dominating, redirect off-task behavior, respond to interruptions]; closing [send out minutes]). They also incorrectly performed nine behaviors during this phase (i.e., environment/equipment [sat in an upright position and looked at the screen]; opening [greet attendees, start meeting on time]; managing [redirect when no one responds, respond to interpersonal conflict, respond to technological issues, praise contributions]; closing [end meeting on time]). Following the intervention, their performance increased to above criterion levels and they met the mastery criterion within two sessions ($M = 92.7\%$; range, 92.3%–93.1%). During this phase, they incorrectly performed five behaviors (i.e., opening [praise punctuality, establish rules, review items to be discussed]; managing [respond to off-task behavior]; closing [end on time]). Kelly demonstrated a 29.7 percentage point increase in meeting integrity from the baseline generalization probe to the probe conducted at the conclusion of post-training.

During baseline, Susie's percent meeting integrity averaged 62.2% (range, 60.7%–63%). The error analysis revealed that they omitted nine behaviors during this phase (i.e., agenda development [time estimations, date/time, attendance]; opening [praise punctuality, establish rules]; managing [redirect when no one responds, respond to off-task behavior, praise contributions]; closing [send out minutes]). In addition, Susie incorrectly performed four behaviors (i.e., opening [start on time]; managing [respond to interruptions, respond to interpersonal conflict, respond to technology issues]). Following the intervention, their performance increased to above criterion levels and they met the mastery criterion within two sessions ($M = 83.3\%$; range, 81.5%–85.2%). During this phase, they omitted two behaviors (i.e., managing [redirect when no one responds, praise contributions]). In addition, Susie incorrectly

performed five behaviors (i.e., opening [start on time, establish rules]; managing [respond to respond to interpersonal conflict, respond to technology issues]; closing [send out minutes]).

During baseline, Fay's percent meeting integrity averaged 67.5% (range, 62.1%–72.4%). The error analysis revealed that they omitted six behaviors during this phase (i.e., agenda development [time estimations, date/time, attendance]; opening [share screen, establish rules]; closing [send out minutes]). In addition, Fay incorrectly performed nine behaviors (i.e., opening [greet attendees, start on time, praise punctuality, review items to discuss]; managing [prompt discussion, redirect when no one responds, respond to off-task behavior, respond to interpersonal conflict, praise contributions]). Following the intervention, their performance increased to above criterion levels and they met the mastery criterion within two sessions ($M = 98.2%$; range, 96.6%–100%). During this phase, they incorrectly performed one behavior which was praising punctuality when opening the meeting.

During baseline, Debbie's percent meeting integrity averaged 65.4% (range, 60.7%–68%). The error analysis revealed that they omitted eight behaviors during this phase (i.e., agenda development [attendance]; opening [praise punctuality, share agenda, establish rules, review items to discuss]; managing [respond to off-task behavior, praise contributions]; closing [send out minutes]). In addition, Debbie incorrectly performed five behaviors (i.e., opening [greeting attendees, start on time]; managing [redirect when no one responds, respond to interpersonal conflict, respond to technology issues]; closing [end on time]). Following the intervention, their performance increased to above criterion levels and they met the mastery criterion within three sessions ($M = 81.9%$; range, 78.6%–85.7%). During this phase, Debbie omitted four behaviors (i.e., opening [share screen, establish rules]; managing [redirect when no one responds]; closing [send out minutes]). They also incorrectly performed four behaviors (i.e.,

agenda development [attendance]; opening [start meeting on time, review items to be discussed]; managing [praise contributions]). Debbie demonstrated a 25.8 percentage point increase in meeting integrity from the baseline generalization probe to the probe conducted at the conclusion of post-training.

Social Validity

Social Validity Survey. All participants completed the social validity survey. Table 11 summarizes the results of the survey. Overall, participants liked the procedures used ($M = 6$) and reported they would be beneficial for teaching employees how to lead a meeting ($M = 5.8$). Participants indicated the virtual training was acceptable ($M = 5.8$), beneficial ($M = 5.8$), and effective ($M = 6$). Participants also reported the self-monitoring checklist to be acceptable ($M = 6$), beneficial ($M = 5.8$), and effective ($M = 5.8$).

Participants had the opportunity to answer three open-ended questions. When asked what components of the training they liked most, participants indicated: (a) the self-monitoring checklist was the most helpful tool ($n = 2$), and (b) the structure of the training where suggestions from a research article and real-life scenarios were discussed ($n = 2$). When asked what components of the training they disliked, one participant indicated they did not like the number of role-play meetings that were required for participation in the study. Three participants indicated there were not any training procedures they disliked. When asked to provide additional comments, all four participants relayed that the training was very helpful, and they were grateful to learn this skill. Two participants reported that they feel more confident when leading meetings since incorporating these strategies into their meetings.

Perceived Effectiveness Survey. Table 12 summarizes the perceived effectiveness ratings for Kelly and Debbie, the two participants who led meetings as part of their workplace

duties. Two respondents (66.7%) who attended Kelly's baseline generalization probe meeting responded to the survey. Two respondents (50%) who attended Kelly's post training generalization probe meeting responded to the survey. The mean rating across all survey items was 5.84 during baseline and 4.88 during post training. The mean change score across all items was -.96. One respondent reported during baseline that Kelly could provide more staff-specific praise when discussing agenda items and to lead the meeting in a less distracting environment. When provided the opportunity to write additional comments, one respondent indicated that Kelly has potential but that they need to gain confidence. One respondent reported during post-training that Kelly should acknowledge them when they arrive late. When provided the opportunity to write additional comments, one respondent indicated that they are proud Kelly leads meetings.

Six respondents (85.7%) who attended Debbie's baseline generalization probe meeting responded to the survey. Two respondents (25%) who attended Debbie's post training generalization probe meeting responded to the survey. The mean rating across all survey items was 5.42 during baseline and 5.53 during post training. The mean change score across all items was .11. Respondents reported during baseline that Debbie should come to the meeting with an agenda ($n = 2$) and be more aggressive in delivering the content to ensure team members do not second-guess decisions made. One respondent indicated that Debbie leads meeting perfectly. When provided the opportunity to write additional comments, one respondent indicated that they find the team meetings to be very helpful, as working from home and keeping up to date on projects can be difficult. No comments were provided following the post-training generalization probe meeting.

External Rater Survey. Table 13 summarizes the external rater scores for all participants. For Kelly, the mean rating across all survey items was 2.5 during baseline and 4.9 during post training. The mean change score across all items was +2.4. The external rater noted that Kelly was late to the meeting in baseline and was not able to navigate the meeting environment to share information with attendees. For Susie, the mean rating across all survey items was 3.5 during baseline and 2.7 during post training. The mean change score across all items was -1.3. The external rater did not leave any comments regarding Susie's performance. For Fay, the mean rating across all survey items was 2.8 during baseline and 5 during post training. The mean change score across all items was +2.8. The external rater noted during the post-training session that the participant monitored attendee performance and answered questions in meaningful ways. Overall, the rater indicated it was an amazing meeting. For Debbie, the mean rating across all survey items was 4.7 during baseline and 3.8 during post training. The mean change score across all items was -1.3. The external rater noted during the post-training session that Debbie was good at monitoring the behavior of attendees, but it didn't seem like the agenda was communicated prior to the meeting.

Discussion

The purpose of Experiment 2 was to evaluate the combined effects of group virtual training and self-monitoring on percent meeting integrity. The findings reveal immediate and substantial improvements at or above criterion levels following introduction of the packaged intervention. The effects of the intervention generalized, for both participants who participated in the generalization probes, during a meeting with their employees. Moreover, participants found the packaged intervention to be effective and acceptable. The perceived effectiveness data reveal that meeting attendees rated their supervisor's ability to lead meetings moderately high. Ratings

decreased following Kelly's post-training session and increased slightly following Debbie's post-training session. The external rater data revealed improvements during post-training for two participants.

This experiment was the first to evaluate the effects of this packaged intervention to identify an antecedent training approach that could be adopted by organizational trainers or CEU presenters to improve attendee meeting integrity. These data suggest that supervisors can demonstrate high meeting integrity after attending a group virtual training and using a self-monitoring checklist during subsequent meetings. Combining these interventions may be a cost-effective approach for addressing meeting integrity as feedback or other consequence-based interventions (e.g., incentives) were not necessary for participants to reach mastery.

This experiment included four procedural modifications that were informed by the results of Experiment 1. First, all participants attended different trainings which allowed for true stagger within the multiple baseline design. This modification enhanced experimental control. Second, a mastery criterion was established. All participants met the mastery criterion within three sessions without additional intervention components. Third, redundant behaviors within the dependent variable were removed from the task analysis. Lastly, the same meeting attendees were surveyed following each generalization probe in an attempt to decrease variability that may have occurred when surveying different meeting attendees in Experiment 1.

The perceived effectiveness results were variable across and within participants for both experiments. Three variables may have contributed to these results. First, there were 16 items on the perceived effectiveness questionnaire that attendees were asked to rate; however, only seven asked about areas targeted for improvement with the intervention (e.g., my supervisor starts and ends team meetings on time). The other nine items were not directly addressed in training but

were included on the survey to assess potential collateral effects on attendee perception (e.g., I leave team meetings feeling energized). An analysis of the results in Experiment 2 revealed that survey items that inquired about behaviors taught in the training averaged 5.5 in baseline and 5.4 in post-training. Survey items that inquired about behaviors not taught in training averaged 5.5 in baseline and 5.1 in post-training. An analysis of survey items scored as 1–3 (strongly disagree to slightly disagree) revealed a decrease in the percentage of these responses for items that inquired about behaviors targeted for improvements and those not taught in training. Specifically, the percentage of disagree responses on items targeted for improvement was 3.6% in baseline and 0% in post-training. Similarly, the percentage of disagree responses for items not taught in training was 4.2% in baseline and 0% in post-training.

An analysis of the results in Experiment 1 revealed that survey items that inquired about behaviors taught in the training averaged 4.6 in baseline and 5.4 in post-training. Survey items that inquired about behaviors not taught in training averaged 4.1 in baseline and 4.6 in post-training. An analysis of survey items scored as 1–3 (strongly disagree to slightly disagree) revealed a decrease in the percentage of these responses for items that inquired about behaviors targeted for improvements and those not taught in training. Specifically, the percentage of disagree responses on items targeted for improvement was 14.3% in baseline and 0.8% in post-training. Similarly, the percentage of disagree responses for items not taught in training was 24.7% in baseline and 17.9% in post-training. These results suggest there may be an indirect benefit of the intervention to behaviors that were not explicitly taught in both experiments.

Second, the duration between generalization probes was short (i.e., five weeks for Kelly and seven weeks for Debbie). It is unknown whether the participant had any meetings with their staff following intervention but prior to the post-training meeting the experimenter attended. It is

possible that staff did not experience a meeting where the participants performance improved enough for them to perceive changes that impacted their scoring on the perceived effectiveness survey. Similarly, the duration between baseline and post-training generalization probes may be too short to impact the ratings of survey items inquiring about behaviors not addressed in training. For example, an employee's relationship with their supervisor or colleagues may not be improved after attending one or a small number of team meetings during which the supervisor more effectively leads the meeting. More time participating in effective meetings may be necessary. Relatedly, it is quite possible that ratings would not change at all for some survey items as they may not be associated with meeting effectiveness (e.g., I leave team meetings feeling energized).

Lastly, data were gathered from a small number of attendees who may have interpreted the items on the survey differently. Attendees were not provided with information about how the experimenter defined the behaviors on the survey. For example, one attendee may perceive a meeting starting 5 min late as on time, while another attendee may not. This difference in perception may have impacted how attendees scored that item. This outcome is possible for all survey items. Additionally, there may have been subjectivity related to how attendees used the scoring system (e.g., the difference between strongly agree and agree). Even if the same attendee scored the survey in baseline and post-training and the participant behaved similarly in both meetings, the attendees scoring may have been different. Finally, attendees may have had different lengths of exposure to the participants' meetings. For example, an attendee who has been with the organization for two weeks may have perceived the team meeting as "helping them feel like they are part of a team" differently than someone who has been on that team for two

years. These collective potential differences in attendee perception may explain the variability observed in the data.

The external rater results revealed improvements during post-training for only two participants. It is unclear why participant meeting integrity increased following the packaged intervention and the external ratings did not reflect those changes. Each of the statements included on the external rater survey can be paired with behavior(s) that comprise the dependent variable. For example, the statement “the participant was oriented to attendees during the meeting” captured the behaviors of the participant looking at the camera/screen and sitting upright during the meeting. An analysis of the results revealed that participant performance in session did not always match issues flagged by the external rater.

There are several potential explanations for the variability observed with these data. Although the experimenter attempted to quantify perception of changes across sessions, there was subjectivity that may have influenced the external rater’s responses. First, like the perceived effectiveness survey, the external rater used a Likert-type scale to rate the items on the survey. There may have been differences in the way the external rater used the scoring system (e.g., the difference between strongly agree and agree). Although the same external rater scored all sessions, scoring occurred across multiple days which may have impacted the way the scoring system was used.

There may have been some differences in the way the external rater and I interpreted each item on the survey. For example, the item “the participant was oriented to attendees during the meeting” was paired with the in-session behaviors of sitting upright and looking at the screen. Because the external rater did not have access to the operational definitions, for the behaviors that comprised the dependent variable, each item may have been perceived differently.

Further, each item on the survey was paired with a different number of behaviors. For example, the item “the participant held the meeting in an appropriate environment” was paired with one behavior (i.e., held the meeting in a distraction-free environment), whereas the item “the participant appropriately managed attendee behavior” was paired with six behaviors (i.e., redirecting dominating and no one responding, and responding to off-task behavior, interruptions, interpersonal conflict, and technology issues). Not only could the external rater have viewed the items differently, but the rater may also have attended to behaviors that were not captured in the dependent variable (e.g., use of filler words or pausing between agenda items). Currently, there is no validation of what behaviors comprise an effective meeting which makes it possible that the behaviors paired with each item do not adequately capture what the external rater was conceptualizing as an effective meeting.

Finally, characteristics of the sessions may have impacted external rater responding. All sessions were conducted as role-play meetings. These meetings may not have perfectly simulated meetings in the natural environment. Similarly, there are many different types of meetings that participants could have led with various topographies and functions, all of which could effectively guide their team to some desired outcome. Some participants led meetings to train their staff on various job responsibilities, while other participants led meetings to discuss project updates. These differences may have impacted external rater perceptions and ratings.

Similar to Experiment 1, attrition occurred in this experiment. Seven supervisors did not remain in the experiment due to high baseline performance or the inability to devote time to research activities. Two additional participants were dropped from the experiment due to repeatedly canceling or missing sessions without contacting the experimenter. Three potential variables could have impacted participant attendance. First, participant compensation may not

have been high enough. It is possible that compensation was less than what participants made as part of their salary. If this were the case, the compensation may have negatively affected one's motivation to attend sessions. Second, other work-related tasks may have interfered with research sessions. Although sessions were only 15 min, more time and effort outside of session was required for participants to prepare for the meeting and complete the self-monitoring checklist. These additional tasks may have taken more time than participants expected or could afford given their work loads. In fact, participants reported having to respond to client emergencies or prepare for trainings at their organizations as reasons for rescheduling sessions. Moreover, participation in this study and the group virtual training was not mandated by their employer, which may have impacted the motivating operations for participating. In addition to the professional barriers to attending sessions, there were personal situations that impacted attendance. Specifically, one participant reported needing to reschedule sessions due to being infected with Covid-19, another indicated they needed to pick their sick child up from school, and another took a week-long vacation in the middle of participation. Future research should identify the barriers to participation so that additional research can be conducted on this topic.

General Discussion

The purpose of both experiments was to evaluate the effects of group virtual training and self-monitoring on percent meeting integrity. Specifically, Experiment 1 assessed the isolated effects of a group virtual training and combined effects of self-monitoring on meeting integrity. Results of Experiment 1 revealed that self-monitoring was necessary to observe near or above 80% levels of performance. Experiment 2 evaluated the combined effects of group virtual training with self-monitoring. Results of Experiment 2 revealed participants reached mastery criterion within three sessions following the packaged intervention.

Both experiments measured generalization of performance to the participants' workplace. There were modest improvements in percent meeting integrity when participants led meetings with their employees across both experiments. Only one participant's (Kelly) performance was above 80% during meetings with their staff during post-training. Both experiments also measured social validity in multiple ways. The social validity data revealed that participants found the intervention to be effective and acceptable. The perceived effectiveness data revealed that meeting attendees rated their supervisor's ability to lead meetings moderately high after post-training or self-monitoring (depending on the experiment). The external rater data in Experiment 2 revealed improvements during post-training for two of four participants.

Contributions to the Literature

This study contributes to the literature in five ways. First, these experiments were the first to evaluate the effects of group virtual training and self-monitoring on relevant workplace behavior. The results of Experiment 1 indicate that group virtual training alone may not produce high levels of performance. This finding is worrisome as there has been a dramatic increase in the number of virtual training opportunities provided to employees in the past two years (Wood, 2022). Hyder (2021) suggested that trainings will continue to be delivered virtually in the coming years. Moreover, recent survey data revealed an increase in the reported occurrence of initial and ongoing training delivered virtually within our field (Blackman et al., 2022). Thus, identifying the conditions under which group virtual training produces behavior change is a worthwhile area of investigation. These experiments suggest that for the present target behavior—meeting integrity—self-monitoring in addition to group virtual training was necessary to produce desired increases in performance. The findings suggest that organizational trainers and presenters of CEU content should consider disseminating a self-monitoring checklist to

supplement their group virtual training when behavior change is desired. That is, when the goals of group virtual training are to increase *skills/behaviors* and not just disseminate information to increase *knowledge*, supplemental self-monitoring checklists may be necessary to achieve the goals of training.

Due to the novelty of this intervention package, future research could extend this line of research in several ways. First, the intervention evaluated in Experiment 2 could be replicated to provide stronger evidence of the effectiveness of this intervention package to improve meeting integrity. Moreover, the intervention could be extended to meeting integrity of in-person meetings or to other dependent variables. For example, supervisors would benefit from training on how to deliver and receive feedback, respond to workplace bullying, and engage in effective supervision practices, among other skills. Assessing the effects on other dependent variables will provide researchers and practitioners with information about what behaviors this intervention would be appropriate to address. Perhaps there are skills that are paired with emotional responding or are more complex than leading a meeting for which this intervention would not be effective for (e.g., conflict resolution, engaging in difficult conversations).

A second contribution is that these experiments were the first to experimentally evaluate the effects of an intervention to teach supervisors how to lead meetings. Equipping supervisors with the skills to lead more effective meetings has numerous benefits for employees and organizations. For example, employees are likely to be more productive following the meeting and their job satisfaction may increase when they attend meetings where decisions are made (e.g., Rogelberg et al., 2006). Additionally, more appropriate in-meeting behaviors are displayed by attendees when the meeting is led more effectively (Mroz & Allen, 2017). Although a tertiary effect, teaching supervisors how to perform this skill could decrease turnover among their team.

The resources spent providing this training to supervisors is much less than what organizations are currently spending to recruit and retain supervisors and their teammates (Miller, 2021a; Miller, 2021b).

There are modifications that can be made to actor behavior to ensure sessions are more representative of what participants experience with their staff in meetings in their natural environment. Scripts were created to guide actor behavior in session to allow participants the opportunity to experience multiple common meeting behaviors each session. It is likely these behaviors do not all happen during meetings in the natural environment, especially with such a short meeting duration. For example, it is unlikely that a brief 15-min meeting would involve interpersonal conflict, an interruption, off-task behavior, a technology issue, lack of responding from attendees, appropriate participation, and an attendee dominating the conversation. Additionally, actors were randomly assigned to engage in behaviors during each of the meetings and did not engage in the same attendee meeting behaviors across all sessions. Further, due to actor schedules, different groups of actors attended participant sessions (i.e., the same four actors were not consistent for an entire participant's time in the experiment). The session configuration may be different than what is experienced in the natural environment. That is, the same group of attendees are typically at team meetings and the same attendees likely engage in the same common attendee behaviors across meetings (e.g., the same person may commonly dominate the conversation, the same person may regularly arrive late and interrupt the leader). Future research should assign actor behavior in accordance with more natural conditions that the participant may experience with their staff. That is, researchers could ensure the same actors were present in all participant meetings and perform the same attendee behaviors during those meetings.

Researchers could also query attendees about challenges they experience with staff behavior and develop actor scripts that better simulate these challenges.

A third contribution is that the entire study was conducted remotely, including requiring supervisors to lead remote meetings. Demonstrating these effects in a completely remote environment is important as survey data suggests that much of the U.S. workforce will continue to work remotely in the coming years (Owls Lab, 2020). Given this shift in remote work settings, supervisors will be expected to lead meetings virtually. Training supervisors how to lead meetings remotely is a worthwhile endeavor as attendees may engage in more off-task behavior and workplace incivility during virtual meetings (Ezerins & Ludwig, 2021). The current intervention successfully taught participants how to respond to these problematic behaviors in a remote environment thus equipping them with the skills necessary to address them in the future.

Fourth, these experiments provide our field with information on how supervisors can effectively lead meetings. One benefit of assessing the effects of a self-monitoring checklist is that it can now be used as a resource by supervisors to guide their behavior when leading a meeting. Not only does this task analysis aid supervisors in learning the skill themselves, but it also serves as a resource for their supervisors to measure their integrity when leading meetings. Additionally, the error analyses revealed important information about what behaviors supervisors still struggle to implement following intervention. This information can assist supervisors in being proactive by focusing on how to effectively engage in those behaviors. These error analyses can also be used to inform modifications that can be made in subsequent trainings.

Across both experiments, the error analyses revealed common patterns of responding across participants. During baseline, participants generally engaged in pre-meeting communication, led the meeting in a distraction free environment, greeted attendees when they

arrived at session, allowed for discussion during session, and ended the meeting on time. These behaviors maintained during post-training sessions as well. If these behaviors are generally performed by supervisors who leading meetings, then it may be unnecessary to include in the dependent variable. Removing these items would reduce the response effort of the observer and meeting leader (when completing the self-monitoring checklist), as well as reduce training time if the training does not target commonly performed behaviors. Following training, integrity improved across participants for many of the behaviors taught; however, there were several behaviors following the intervention that participants continued to perform incorrectly. These behaviors included praising punctuality (Experiment 2), establishing rules (Experiment 2), reviewing items to discuss (both experiments), ending the meeting on time (Experiment 1), and redirecting the conversation when no one responded to a posed question (Experiment 1). There are differences across experiments regarding what behaviors were omitted or incorrectly implemented following training. Most participants in Experiment 1 attended the same trainings which may explain similarities across their meeting integrity errors following training. It is possible that I placed inadvertent emphasis on certain items due to questions that were asked from attendees. Another plausible explanation is that these behaviors may not be necessary for a meeting to be considered effective (e.g., including time estimations on the agenda) or were redundant with other behaviors accurately displayed (e.g., sharing the agenda and reviewing the items to discuss). Future research should determine what behaviors are critical for a meeting to be considered effective. If those results reveal these behaviors are necessary, modifications can be made to the group virtual training to ensure clarification of their importance and rationale for engaging in these behaviors.

Finally, social validity was measured in three ways and those data were gathered from three different groups of individuals. Social validity ratings were obtained from participants, at the conclusion of their participation, on components of the independent variable. This type of social validity is commonly used within the field. The findings revealed that participants found the intervention to be effective and acceptable. Social validity ratings were also obtained from attendees at the participants' meetings, following each generalization probe, on their perceived effectiveness of their supervisor's performance leading meetings. The findings revealed that meeting attendees rated their supervisor's ability to lead meetings moderately high after post-training or self-monitoring. Evaluating attendee perceived effectiveness is important as they are the ones that are impacted by the quality of their supervisor's meetings.

Lastly, an external rater was asked to rate the perceived effectiveness of participant performance during one baseline and post-training session in Experiment 2. The findings revealed improvements during post-training for two of four participants. Receiving input on the effectiveness of participant performance from someone who is not aware of or involved in the experiment may reveal important data on what behaviors are necessary for a meeting to be considered effective.

As previously noted, there are several potential reasons for the variability observed within the perceived effectiveness and external rater data. Those explanations provide suggestions for future research. Related to perceived effectiveness data from meeting attendees, future research should increase the duration between generalization probes to ensure staff have time to take note of the improved performance of participants and any associated collateral effects or benefits of meeting effectiveness. Related to external rater data, researchers should provide the external rater with to the operational definitions and how the survey items relate to

targeted behaviors. Providing this information may decrease the potential subjectivity that may have occurred in Experiment 2. Additionally, external raters could assist in determining what behaviors comprise an effective meeting (See the limitations section for a discussion on how this may occur).

Behavioral Mechanisms

There are several potential reasons why the group virtual training and self-monitoring intervention increased meeting integrity. The virtual training was an antecedent intervention that contained written and vocal instructions, rationale, and video modeling on how to perform the skill. These components were designed to teach the participant what behaviors comprised the dependent variable. Specifically, the model may have fostered imitative responses in session. The training may have evoked the creation of self-generated rules. A rule functions as a discriminative stimulus to engage in a behavior to access some consequence (Baum, 1995; Skinner, 1974). A discriminative stimulus signals the availability of a reinforcer because of the history of engaging in that behavior in the presence of that stimulus in the past (Cooper et al., 2007). In this situation, the experimenter indicated what behaviors comprise a more effective meeting. This information may have created a rule that evoked the occurrence of the behaviors taught in the training. Although there was no programmed reinforcer, a participant's history of reinforcement for compliance with rules may explain why they engaged in the behaviors taught in the training.

The self-monitoring checklist was an antecedent intervention that outlined the behaviors the participant should perform for their meeting to be considered effective. The checklist was separated into two sections: planning for and leading the meeting. There were 12 behaviors that participants could have completed outside of the meeting (e.g., creating an agenda, engaging in

pre-meeting communication, sending the minutes) and 18 behaviors in Experiment 2 (20 in Experiment 1) that participants could have performed during the meeting (e.g., greeting attendees, managing attendee behavior, ending the meeting on time). It is possible that self-monitoring functioned differently depending on *when* the behavior could have occurred. If the participant had the opportunity to engage in the behavior outside of the session, self-monitoring may have functioned as a prompt. A prompt is a supplemental antecedent stimulus that increases the likelihood the behavior will occur in the presence of that discriminative stimulus (Cooper et al., 2007). If the participant engaged in the behavior during the session and had the checklist visible, the checklist may have functioned as a discriminative stimulus or a prompt. If the participant engaged in the behavior during the session and did not have the checklist visible, they may have completed the checklist after the session by remembering the activities that took place during the session. Although all participants sent the experimenter a completed checklist following the meeting, it is unknown whether they used the checklist to guide their behavior in session. The error analysis data reveal that the behaviors that were most frequently performed incorrectly in the self-monitoring (Experiment 1) or post-training (Experiment 2) phase were behaviors participants were expected to perform within the session.

An interesting phenomenon was revealed when analyzing participant self-monitoring checklists. At least two participants (Sara and Debbie) did not perform behaviors they could have prior to submitting their self-monitoring checklist to the experimenter. For example, participants submitted the checklist accurately scoring that they did not send out the meeting minutes following the meeting. However, while self-monitoring they could have engaged in that behavior and then subsequently submitted the checklist. It is unclear why the self-monitoring checklist did not prompt or evoke the behavior of disseminating meeting minutes. These data suggest that the

checklist may not have functioned as a prompt or discriminative stimulus for all behaviors. Future research should determine whether this phenomenon is prevalent within the self-monitoring literature and determine potential functions for this behavior.

The self-monitoring checklist may have also evoked the creation of a rule for what behaviors to perform in subsequent meetings, as described above, or shaped participant performance and functioned as a reinforcer after it was used for several sessions (Doucette et al., 2021). Shaping is a process where the antecedent stimulus remains the same; however, the response is differentially reinforced (Cooper et al., 2007). A reinforcer is a consequence that increases the likelihood of engaging in that behavior in the future (Cooper et al., 2007). This explanation is particularly possible for the in-session behaviors. Specifically, recording *yes* for a step may have reinforced performing the behaviors for that step. Likewise, recording *no* for a step may have simultaneously punished the omission or inaccurate implementation of that behavior and also served as a discriminative stimulus for the behaviors the participant needed to perform during subsequent sessions.

Limitations

There were three limitations worthy of note. First, this study did not evaluate what components are necessary for a meeting to be considered effective. The checklist created for these experiments was based on published survey research and discussion articles. However, behaviors listed on the checklist were not validated prior to beginning the experiments. Experiment 2 attempted to address redundancies in the recommendations that have been provided, but neither experiment included validation of the behaviors. Future research should experimentally evaluate what components are necessary to effectively lead a meeting. To accomplish this, first researchers may ask national experts who lead regular meetings or conduct

research in leadership or organizational behavior management to indicate the relevance and importance of each of the behaviors that currently comprise the dependent variable. It is possible that all the current behaviors in the dependent variable are relevant for a meeting to be considered effective but may not be equally important. This process of determining the critical components of a procedure is not novel to the field. Carr et al. (2013) sent the Performance Diagnostic Checklist – Human Services to 11 behavior analysts and asked them to review and pilot each item and provide feedback on improvements. Determining the critical behaviors to leading an effective meeting is an important next step in this research, especially because the perceived effectiveness and external rater data did not always match participant meeting integrity. Gathering information about the importance of each behavior may guide the development of a weighting scale. In the current measurement system, all behaviors were weighted equally even though they may not be equally important for leading an effective meeting. Perhaps commonly performed behaviors (e.g., greeting attendees) could receive 1 point and more important or difficult behaviors could be weighted differently (e.g., score of 2 or more points). To calculate the percent meeting integrity, observers could sum the points earned, divide by the total points possible, and multiply by 100. This type of measurement system has precedence. For example, Ehrlich et al. (2020) and Walker and Sellers (2021) assigned weighted points to each item on a checklist that scored how to effectively receive feedback. Future research on this type of measurement system is warranted.

Using the information gathered from the above-described vetting process, subsequent research can determine whether improvements in meeting integrity actually lead to more effective meetings. It is possible that participants meet criterion, but their attendees do not benefit from attending or participating in higher-quality meetings. For example, attendees may

not be more productive or engage in less problematic behaviors in meetings despite their supervisor leading more effective meetings. To assess this outcome, researchers could evaluate markers of productivity or satisfaction, among others, to determine whether higher meeting integrity has the beneficial outcomes on attendee behavior as survey research and discussion articles suggest.

Second, the effects of the self-monitoring checklist in isolation are unknown. It is possible that the group virtual training is unnecessary to produce high levels of performance. Although I was interested in determining a way to make organizational trainings and CEU presentations more effective, future research should assess the effects of self-monitoring alone. This research would extend the current experiments and contribute to the wider self-monitoring literature as few studies have evaluated the effects of self-monitoring alone (Mouzakitis et al., 2015; Richman et al., 1988; Ruby & DiGennaro Reed, 2021). Determining that self-monitoring checklist alone produces desired behavior change would be a resource-efficient alternative to the current intervention package.

Third, maintenance data were not collected in these experiments and generalization data were collected for only some participants, which may be considered a limitation. Because this study is the first to evaluate this intervention package and dependent variable, the primary goal was to assess the utility of this intervention for teaching the skill of leading a meeting. Future research should extend the current findings by assessing maintenance and generalization.

Conclusion

These findings lend support to the use of group virtual training and self-monitoring to teach supervisors how to effectively plan for and lead meetings. These data are timely given the frequency with which trainings and meetings are held in remote environments. Further

refinement and extension of these procedures will assist organizational trainers and presenters of CEU content in determining the most effective and cost-efficient way to train supervisors how to engage in this important skill.

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Table 1*Experiment 1 Participant Demographics*

Participant	Age	Gender	Race/ Ethnicity	Education level (degree)	Professional development workshops
Theresa	40	Woman	Pacific Islander	Bachelors	SS, TP, EC
Maci	36	Woman	White	Bachelors	SS, TP, EC
Dayton	56	Man	White	Bachelors	Purchasing workshops
Leigh	41	Woman	White	Bachelors	Monthly leadership trainings
Christina	28	Woman	White	Bachelors	None
Sara	44	Woman	White	Bachelors	None

Note. SS = supervisory skills; TP = becoming a trusted professional; EC = effective communication

Table 2*Video Model Duration and Content*

Video Model #	Duration Training 1	Duration Training 2	# Behaviors Displayed	Categories of Behaviors Displayed
1	4 min 44 s	2 min 52 s	6	Schedule meeting, create written agenda
2	2 min 16s	1 min 39 s	7	Confirm meeting, consider meeting environment
3	1 min 31 s	1 min 31 s	6	Opening behaviors
4	12 min 41 s	10 min 27 s	10	Managing behavior
5	45 s	1 min 1 s	3	Closing behaviors
6	1 min 19 s	1 min 4 s	1	Sending out meeting minutes

Table 3*Leading a Meeting Behaviors*

Item	Definition
Agenda development	
Agenda item(s)	The written agenda contained at least one item to discuss.
Time estimation(s)	The written agenda contained a time estimation for the entire meeting or each agenda item.
Date and time	The written agenda contained the day and time of the meeting.
Attendance	The written agenda contained a place for the names of the attendees to be added.
Pre-meeting communication	
Invited appropriate	The participant invited all attendees whose information was provided to attend the session.
Did not invite inappropriate	The participant did not invite attendees whose information was not provided to attend the session.
Confirmed the date and time	The participant confirmed the date and time of the meeting, via email, prior to the meeting start.
Provided log in information	The participant sent the Zoom log-in information, via email, prior to the meeting start.
Notified what to prepare for	The participant notified attendees, via email, if they needed to be prepared to present something at the meeting or look over materials for discussion.
Environment/equipment	
No internet interruptions	The participant had no identifiable internet disruptions during the meeting.
Distraction free environment	The participant had no distractions in their environment during the meeting.
Sat in an upright position	The participant sat in an upright position throughout the meeting.
Looked at the camera/screen	The participant looked at the camera or screen throughout the meeting.
Opening	
Greeted attendees	The participant verbally greeted at least two attendees individually or the whole group at the beginning of the meeting (e.g., “Hi, Abby and Megan,” “Good afternoon, everyone!”).
Started on time	The participant started the meeting within 1 min of the assigned start time.

Item	Definition
Praised punctuality	The participant stated they appreciated attendees being on time (e.g., “I know you all have busy schedules, I appreciate you being on time today”).
Shared meeting minutes	The participant shared the agenda and determined whether to view as a group (i.e., using screen share) or individually (e.g., on attendee own computer using Google Sheets) during the meeting.
Established rules	The participant established ground rules within the first 5 min of the meeting (e.g., “Please remember to be respectful of everyone’s comments during the meeting. Additionally, please silence your phone so we have everyone’s attention during the meeting”).
Reviewed items to discuss	The participant stated what the agenda item(s) were prior to discussing the first item.
Managing Discussion	The participant presented the opportunity for attendees to engage in discussion about agenda items.
Dominating conversations	The participant prompted an attendee to provide their input or redirected the conversation when an attendee is dominating the conversation, using a professional tone.
No one responding	The participant prompted an attendee to provide their input if no attendee responded to a question posed or an attendee had not yet spoken in the meeting, using a professional tone.
Off-task	The participant responded to distractions by redirecting off-task behavior, using a professional tone (see Table 1 in LeBlanc and Nosik [2019] for examples).
Interruptions	The participant responded to any interruptions, using a professional tone (see Table 1 in LeBlanc and Nosik [2019] for examples).
Interpersonal conflict	The participant responded to any interpersonal conflict or combative responses that occurred between attendees, using a professional tone (see Table 1 in LeBlanc and Nosik [2019] for examples).
Tech issues	The participant responded to any technology issues, using a professional tone (see Table 1 in LeBlanc and Nosik [2019] for examples).
Praise	The participant provided praise for at least one appropriate contribution (e.g., “That is a really great point, thank you for bringing it up”).

Item	Definition
Discussed item(s) on agenda	The participant led discussion for the item(s) listed on the agenda. If time did not allow for all items to be discussed, the participant addressed which items would be covered in the next meeting.
Reviewed what prepared for	If the participant asked attendees to be prepared to present something or look over materials for discussion, those items were addressed.
Closing	
Summarized discussion	The participant summarized the discussion by mentioning what was discussed during the meeting, restating any decisions that were made, and reminding attendees of tasks assigned.
Ended on time	The participant ended the meeting within 2 min of the assigned end time.
Sent out meeting minutes	The participant provided access to update meeting minutes encompassing what was discussed within 6 hr of the meeting.

Note. Summarized discussion was not included in the dependent variable in Experiment 2.

Additionally, the participant was only required to engage in one of the following behaviors:

shared meeting minutes and reviewed items to discuss.

Table 4*Experiment 1 Interobserver Agreement for All Participants*

Participant	Baseline	Post-training	Self-monitoring	Mean Agreement
Theresa	90.6%	84.4%	96.9%	90.6%
Maci	88.2%	91.2%	-	89.7%
Dayton	87.5%	81.3%–93.8%	93.8%	89.1%
Leigh	90.6%	84.4%	100%	89.8%
Christina	68.8%–90.6%	84.4%–90.6%	87.5%	84.4%
Sara	81.3%–87.5%	90.6%	93.8%	88.3%

Note. The cells with one percentage depict IOA for the single session agreement was scored in that phase. The cells with a range depict IOA for the multiple sessions agreement was scored in that phase. No phase required more than two sessions to be scored given the total number of sessions in that phase.

Table 5*Experiment 1 Error Analysis*

	Baseline					
	Theresa	Maci	Dayton	Leigh	Christina	Sara
Agenda development						
Agenda item(s)	0	0	100	0	50	50
Time estimation(s)	0	0	0	0	0	0
Date and time	0	0	0	0	25	0
Attendance	0	0	0	0	0	0
Pre-meeting communication						
Invite appropriate	100	100	100	100	50	100
Don't invite inappropriate	100	100	100	100	50	100
Confirmation	100	0	100	66.7	25	83.3
Log in information	100	33.3	66.7	100	0	100
Notify to prepare	NA	NA	100	100	100	100
Environment/equipment						
No wifi interruptions	66.7	100	100	100	75	100
Distraction free environment	66.7	66.7	100	100	100	100
Sat upright	100	66.7	100	100	100	100
Looked at the screen	100	66.7	100	100	100	100
Opening						
Greeted attendees	66.7	66.7	66.7	66.7	50	83.3
Started on time	33.3	66.7	100	66.7	25	50
Praised punctuality	0	0	0	0	0	0
Shared agenda	0	0	0	0	0	16.7
Established rules	0	0	0	0	0	0
Reviewed agenda	0	0	0	66.7	75	0
Managing						
Discussion	100	100	100	100	100	100
Dominating	66.7	50	33.3	50	0	33.3
No one responding	33.3	0	0	0	0	33.3
Off task	33.3	0	33.3	66.7	0	0
Interruptions	66.7	100	66.7	66.7	50	66.7
Interpersonal conflict	66.7	33.3	0	100	100	100
Tech issues	66.7	100	66.7	33.3	66.7	66.7
Praise	66.7	0	33.3	33.3	25	16.7
Discussed agenda	100	66.67	66.7	100	100	100
Reviewed prepare	NA	NA	100	100	100	100
Closing						
Summarized agenda	0	0	0	0	0	0
Ended on time	33.3	100	0	66.7	75	50
Sent out minutes	0	0	0	0	0	0

Table 5 Continued

	Post-training					
	Theresa	Maci	Dayton	Leigh	Christina	Sara
Agenda development						
Agenda item(s)	100	0	100	100	0	100
Time estimation(s)	100	0	100	75	0	66.7
Date and time	100	0	80	75	0	0
Attendance	100	0	80	75	0	0
Pre-meeting communication						
Invite appropriate	66.7	100	100	100	75	100
Don't invite inappropriate	66.7	100	100	100	75	100
Confirmation	100	100	100	100	50	100
Log in information	100	0	100	100	25	100
Notify to prepare	100	NA	100	100	100	100
Environment/equipment						
No wifi interruptions	100	100	100	100	100	100
Distraction free environment	100	100	100	100	100	100
Sat upright	100	100	100	100	100	100
Looked at the screen	100	100	100	100	100	100
Opening						
Greeted attendees	100	100	100	100	100	100
Started on time	66.7	0	100	75	100	100
Praised punctuality	100	100	60	75	0	0
Shared agenda	33.3	0	0	75	0	100
Established rules	0	0	20	100	50	100
Reviewed agenda	0	0	60	25	75	0
Managing						
Discussion	100	100	100	100	100	100
Dominating	100	100	100	100	100	100
No one responding	0	NA	0	25	0	33.3
Off task	66.7	NA	80	100	50	100
Interruptions	100	NA	100	100	100	100
Interpersonal conflict	100	100	80	100	100	100
Tech issues	66.7	NA	100	100	100	100
Praise	100	0	100	75	66.7	33.3
Discussed agenda	100	100	100	100	100	100
Reviewed prepare	100	NA	100	100	100	100
Closing						
Summarized agenda	0	100	60	33.3	0	0
Ended on time	66.7	100	80	50	100	100
Sent out minutes	NA	0	60	0	10	0

Table 5 Continued

	Self-Monitoring					
	Theresa	Maci	Dayton	Leigh	Christina	Sara
Agenda development						
Agenda item(s)	100	-	100	100	100	100
Time estimation(s)	100	-	100	100	0	100
Date and time	100	-	100	100	33.3	0
Attendance	100	-	100	100	0	0
Pre-meeting communication						
Invite appropriate	100	-	100	100	66.7	100
Don't invite inappropriate	100	-	100	100	100	100
Confirmation	100	-	100	100	100	100
Log in information	100	-	100	100	100	100
Notify to prepare	100	-	100	100	100	100
Environment/equipment						
No wifi interruptions	100	-	100	100	100	100
Distraction free environment	100	-	100	100	100	100
Sat upright	100	-	100	100	100	100
Looked at the screen	100	-	100	100	100	100
Opening						
Greeted attendees	100	-	100	100	100	100
Started on time	100	-	100	100	66.7	100
Praised punctuality	100	-	100	100	100	100
Shared agenda	0	-	100	100	33.3	100
Established rules	100	-	100	100	100	100
Reviewed agenda	100	-	100	0	66.7	0
Managing						
Discussion	100	-	100	100	100	100
Dominating	100	-	100	100	100	100
No one responding	50	-	0	0	66.7	100
Off task	100	-	100	100	100	100
Interruptions	100	-	100	0	100	100
Interpersonal conflict	100	-	100	100	100	100
Tech issues	100	-	100	100	100	100
Praise	100	-	100	100	33.3	100
Discussed agenda	100	-	100	100	100	100
Reviewed prepare	100	-	100	100	100	100
Closing						
Summarized agenda	0	-	100	0	66.7	50
Ended on time	100	-	100	0	100	50
Sent out minutes	100	-	100	100	33.3	NA

Note. Values represent the mean integrity percentage for each behavior organized by participant

and phase. Generalization probe data are not depicted.

Table 6*Experiment 1 Social Validity Results*

Question	Mean	Range
The professional development workshop would be an acceptable way to help employees learn how to lead a meeting.	5.4	4–6
Most employees would find the professional development workshop beneficial to learn how to lead a meeting.	5.4	5–6
The professional development workshop would be effective in teaching employees how to lead a meeting.	5.2	5–6
I would suggest attending the professional development workshop to better teach other employees how to lead a meeting.	5.2	5–6
The professional development workshop will not result in negative side effects for the employee attending the workshop or those they interact with on a regular basis.	5.4	5–6
The professional development workshop is a fair way to teach employees who want to improve their ability to lead a meeting.	5.8	5–6
The self-monitoring checklist would be an acceptable way to help employees learn how to lead a meeting.	5.2	4–6
Most employees would find the self-monitoring checklist beneficial to learn how to lead a meeting.	4.8	4–6
The self-monitoring checklist would be effective in teaching employees how to lead a meeting.	5.5	5–6
I would suggest the use of the self-monitoring checklist to better teach other employees how to lead a meeting.	5.0	4–6
I like the procedures used (e.g., guided notes, group discussion, thought activities) to assist in teaching me how to lead a meeting.	5.4	4–6
Overall, the procedures used will be beneficial for teaching employees how to lead a meeting.	5.4	5–6

Note: 1 (*strongly disagree*) to 6 (*strongly agree*)

Table 7*Experiment 1 Perceived Effectiveness Results*

Question	Theresa			Maci			Leigh		
	BL	SM	Δ	BL	PT	Δ	BL	PT	Δ
My supervisor leads a well-organized team meeting.	5.5	5.7	+0.17	4	-	-	4.8	5.6	+0.82
My supervisor starts and ends team meetings on time.	5	5.7	+0.67	4.2	-	-	4.3	5.4	+1.18
My supervisor coordinates with staff to schedule team meetings.	5.3	5.7	+0.42	2.8	-	-	5.3	5	-0.25
My supervisor effectively handles disruptions during team meetings.	5	5.7	+0.67	4	-	-	5.3	5.4	+0.18
My supervisor effectively handles differing opinions or conflict during team meetings.	4.5	5.7	+1.17	3.5	-	-	5.3	5.4	+0.1
My supervisor encourages participation in team meetings.	4.5	5.7	+1.17	3.3	-	-	5.3	5.7	+0.46
Team meetings have enhanced my relationship with my supervisor.	4.8	5.3	+0.58	3.5	-	-	5	4.8	-0.17
Team meetings have enhanced my relationship with my coworkers.	4.3	5	+0.75	4.8	-	-	4.8	3.9	-0.89
Team meetings help me feel like I am a part of a team.	4.8	4.7	-0.08	4.2	-	-	4.5	4	-0.5
Team meetings help me get my questions answered.	4.5	5.7	+1.17	3.3	-	-	4.8	4.7	-0.04
I am comfortable discussing my concerns in team meetings.	4.5	4.7	+0.17	3	-	-	4.8	4.3	-0.46
I feel safe being open and honest in team meetings.	4.5	4.3	-0.17	3.2	-	-	4.8	4.3	-0.42
I leave team meetings feeling energized.	4	5.3	+1.33	3.2	-	-	4	3.3	-0.71
I leave team meetings understanding goals and next steps.	5.3	5.7	+0.42	3.8	-	-	5.3	5.3	+0.04
I leave team meetings with ideas/suggestions to help my work.	4	5.7	+1.67	3.3	-	-	4.8	4.6	-0.18
I look forward to team meetings.	4	4.3	+0.33	2.8	-	-	4.5	3.3	-1.21

Table 7 Continued

Question	Christina			Sara		
	BL	SM	Δ	BL	PT	Δ
My supervisor leads a well-organized team meeting.	5	5.8	+0.67	5	6	+1
My supervisor starts and ends team meetings on time.	5.3	5.6	+0.17	6	6	-
My supervisor coordinates with staff to schedule team meetings.	5	5.6	+0.5	5	5	-
My supervisor effectively handles disruptions during team meetings.	5.3	5.6	+0.17	6	6	-
My supervisor effectively handles differing opinions or conflict during team meetings.	5	5.8	+0.6	5	5	-
My supervisor encourages participation in team meetings.	5	4.8	-0.17	5	5	-
Team meetings have enhanced my relationship with my supervisor.	4	5.2	+1.17	5	5	-
Team meetings have enhanced my relationship with my coworkers.	4	4.8	+0.83	5	5	-
Team meetings help me feel like I am a part of a team.	4.7	5.2	+0.5	5	5	-
Team meetings help me get my questions answered.	4.7	5.2	+0.5	5	5	-
I am comfortable discussing my concerns in team meetings.	4.3	5.2	+0.83	6	5	-1
I feel safe being open and honest in team meetings.	4.3	5.2	+0.83	5	5	-
I leave team meetings feeling energized.	3	4	+1	5	5	-
I leave team meetings understanding goals and next steps.	5	5.2	+0.17	6	5	-1
I leave team meetings with ideas/suggestions to help my work.	5	5	-	5	5	-
I look forward to team meetings.	2.7	3.8	+1.33	4	5	+1

Note: 1 (*strongly disagree*) to 6 (*strongly agree*). BL = baseline; PT = post-training; SM = self-

monitoring; Δ = mean change. Dayton did not hold meetings; therefore, there is not

generalization probe data for this participant.

Table 8*Experiment 2 Participant Demographics*

Participant	Age	Gender	Race/ Ethnicity	Education level (degree)	Professional development workshops
Kelly	29	Woman	White	Some College	Shadow training
Susie	39	Woman	White	Some College	Software training
Fay	47	Woman	White	Master's	Supervisory skills training
Debbie	58	Woman	White	Associates	Software training

Table 9*Experiment 2 Interobserver Agreement for All Participants*

Participant	Baseline	Post-training	Mean Agreement
Kelly	87.1%	83.8%	85.5%
Susie	87.1%	96.8%	91.9%
Fay	77.4%–87.1%	90.3%	84.9%
Debbie	87.1%–90.3%	100%	92.5%

Note: The cells with one percentage depict IOA for the single session agreement was scored in that phase. The cells with a range depict IOA for the multiple sessions agreement was scored in that phase. No phase required more than two sessions to be scored given the total number of sessions in that phase.

Table 10*Experiment 2 Error Analysis*

	Baseline				Post Training			
	Kelly	Susie	Fay	Debbie	Kelly	Susie	Fay	Debbie
Agenda development								
Agenda item(s)	100	100	100	100	100	100	100	100
Time estimation(s)	0	0	0	100	100	100	100	100
Date and time	100	0	0	100	100	100	100	100
Attendance	100	0	0	0	100	100	100	66.7
Pre-meeting communication								
Invite appropriate	100	100	100	100	100	100	100	100
Don't invite inappropriate	100	100	100	100	100	100	100	100
Confirmation	100	100	100	100	100	100	100	100
Log in information	100	100	100	100	100	100	100	100
Notify to prepare	NA	NA	100	NA	100	NA	100	NA
Environment/equipment								
No wifi interruptions	100	100	100	100	100	100	100	100
Distraction free environment	100	100	100	100	100	100	100	100
Sat upright	0	100	100	100	100	100	100	100
Looked at the screen	0	100	100	100	100	100	100	100
Opening								
Greeted attendees	0	100	75	80	100	100	100	100
Started on time	0	66.7	75	20	100	50	100	66.7
Praised punctuality	0	0	25	0	50	100	50	100
Shared agenda	100	100	0	0	100	100	100	0
Established rules	0	0	0	0	50	50	100	0
Reviewed agenda	0	100	75	0	0	100	100	33.3
Managing								
Discussion	100	100	75	100	100	100	100	100
Dominating	0	100	100	100	100	100	100	100
No one responding	0	0	25	33.3	100	0	100	0
Off task	0	0	0	0	50	100	100	100
Interruptions	0	66.7	100	100	100	100	100	100
Interpersonal conflict	0	0	50	0	NA	0	100	100
Tech issues	0	66.7	100	75	100	50	100	100
Praise	50	0	50	0	100	0	100	66.7
Discussed agenda	100	100	100	100	100	100	100	100
Reviewed prepare	NA	NA	100	NA	100	NA	100	NA
Closing								
Ended on time	0	100	100	100	50	100	100	100
Sent out minutes	0	0	0	0	100	50	NA	0

Note. Values represent the mean integrity percentage for each behavior organized by participant and phase. Generalization probe data are not depicted.

Table 11*Experiment 2 Social Validity Results*

Question	Mean	Range
The professional development workshop would be an acceptable way to help employees learn how to lead a meeting.	5.8	5–6
Most employees would find the professional development workshop beneficial to learn how to lead a meeting.	5.8	5–6
The professional development workshop would be effective in teaching employees how to lead a meeting.	6	6
I would suggest attending the professional development workshop to better teach other employees how to lead a meeting.	5.8	5–6
The professional development workshop will not result in negative side effects for the employee attending the workshop or those they interact with on a regular basis.	5.8	5–6
The professional development workshop is a fair way to teach employees who want to improve their ability to lead a meeting.	5.8	5–6
The self-monitoring checklist would be an acceptable way to help employees learn how to lead a meeting.	6	6
Most employees would find the self-monitoring checklist beneficial to learn how to lead a meeting.	5.8	5–6
The self-monitoring checklist would be effective in teaching employees how to lead a meeting.	5.8	5–6
I would suggest the use of the self-monitoring checklist to better teach other employees how to lead a meeting.	5.8	5–6
I like the procedures used (e.g., guided notes, group discussion, thought activities) to assist in teaching me how to lead a meeting.	6	6
Overall, the procedures used will be beneficial for teaching employees how to lead a meeting.	5.8	5–6

Note: 1 (*strongly disagree*) to 6 (*strongly agree*)

Table 12*Experiment 2 Perceived Effectiveness Results*

Question	Kelly			Debbie		
	BL	PT	Δ	BL	PT	Δ
My supervisor leads a well-organized team meeting.	6	5.5	-.5	4.8	5.5	.7
My supervisor starts and ends team meetings on time.	6	6	-	5.7	5	-.7
My supervisor coordinates with staff to schedule team meetings.	5.5	5	-.5	5.7	6	.3
My supervisor effectively handles disruptions during team meetings.	4.5	5	.5	5.5	6	.5
My supervisor effectively handles differing opinions or conflict during team meetings.	5.5	5	-.5	5.3	5.5	.2
My supervisor encourages participation in team meetings.	6	5	-1	5.7	5.5	-.2
Team meetings have enhanced my relationship with my supervisor.	6	4.5	-1.5	5.3	5.5	.2
Team meetings have enhanced my relationship with my coworkers.	6	4.5	-1.5	5.2	5.5	.3
Team meetings help me feel like I am a part of a team.	6	5	-1	5.7	5.5	-.2
Team meetings help me get my questions answered.	6	5	-1	5.7	5.5	-.2
I am comfortable discussing my concerns in team meetings.	6	4.5	-1.5	5.5	5.5	-
I feel safe being open and honest in team meetings.	6	4.5	-1.5	5.5	5.5	-
I leave team meetings feeling energized.	6	4.5	-1.5	4.8	5	.2
I leave team meetings understanding goals and next steps.	6	5	-1	5.7	5.5	-.2
I leave team meetings with ideas/suggestions to help my work.	6	4.5	-1.5	5.2	5.5	.3
I look forward to team meetings.	6	4.5	-1.5	5.5	6	.5

Note: 1 (*strongly disagree*) to 6 (*strongly agree*). BL = baseline; PT = post-training; Δ = mean

change. Susie and Fay did not hold meetings; therefore, there are no generalization probe data for these participants.

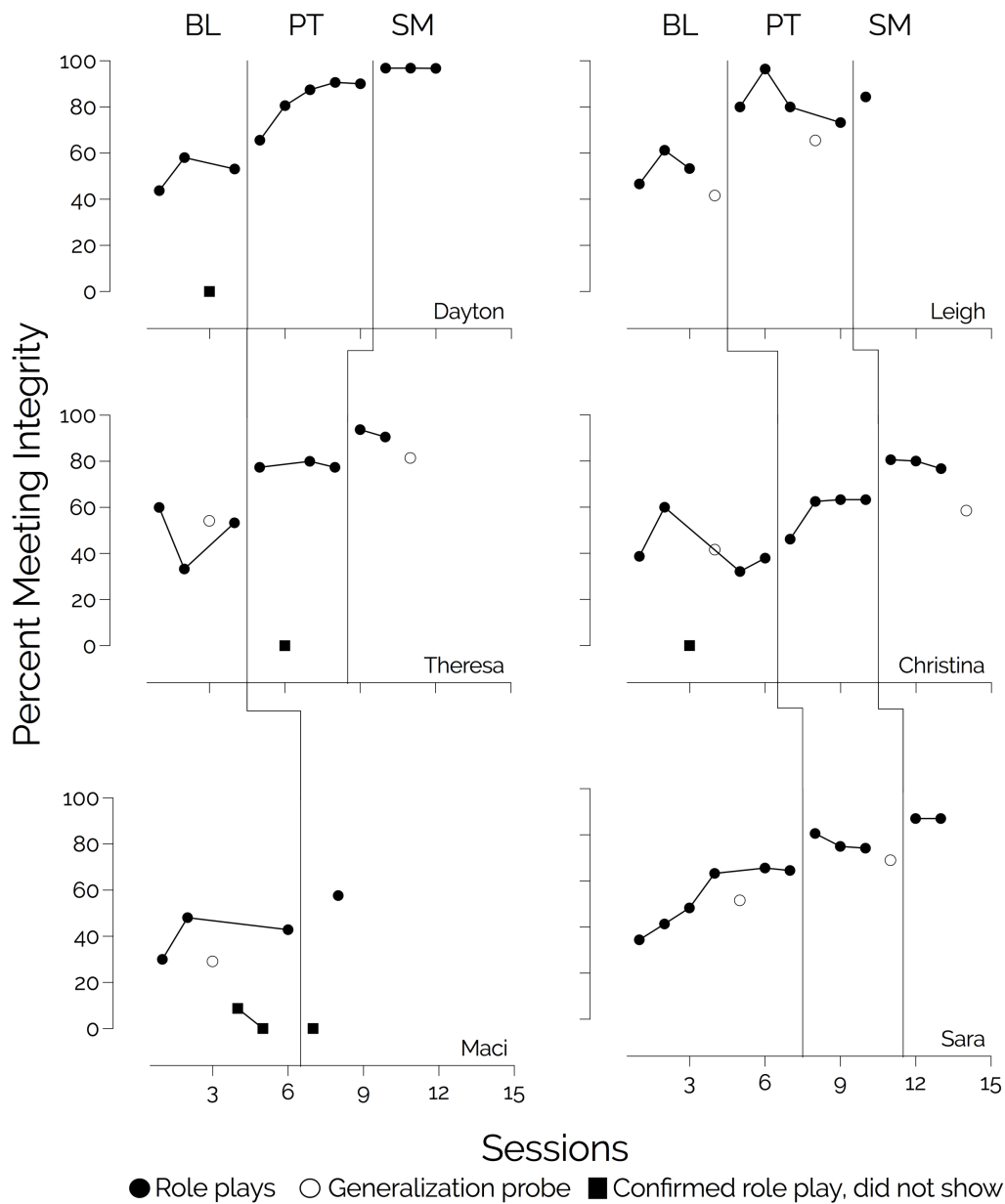
Table 13*Experiment 2 External Rater Results*

Question	Kelly			Susie			Fay			Debbie		
	BL	PT	Δ	BL	PT	Δ	BL	PT	Δ	BL	PT	Δ
The participant was oriented to attendees during the meeting.	1	5	+4	3	1	-2	1	5	+4	5	4	-1
The participant held the meeting in an appropriate environment.	1	5	+4	4	4	-	5	5	-	5	5	-
The participant appeared prepared for the meeting.	1	4	+3	4	4	-	2	5	+3	4	4	-
The participant communicated the purpose of the meeting.	3	5	+2	5	4	-1	5	5	-	5	3	-2
The participant accomplished the objectives of the meeting.	4	5	+1	4	4	-	3	5	+2	5	3	-2
The participant appropriately managed attendee behavior.	1	5	+4	1	1	-	1	5	+4	4	5	+1
The participant encouraged attendee participation.	4	5	+1	2	1	-1	3	5	+2	5	4	-1
The participant valued attendee contributions.	4	5	+1	4	3	-1	4	5	+1	5	5	-
How well did the participant lead the meeting?	2	5	+3	4	2	-2	2	5	+3	5	3	-2

Note: 1 (*strongly disagree*) to 5 (*strongly agree*). BL = baseline; PT = post-training; Δ = mean change.

Figure 1

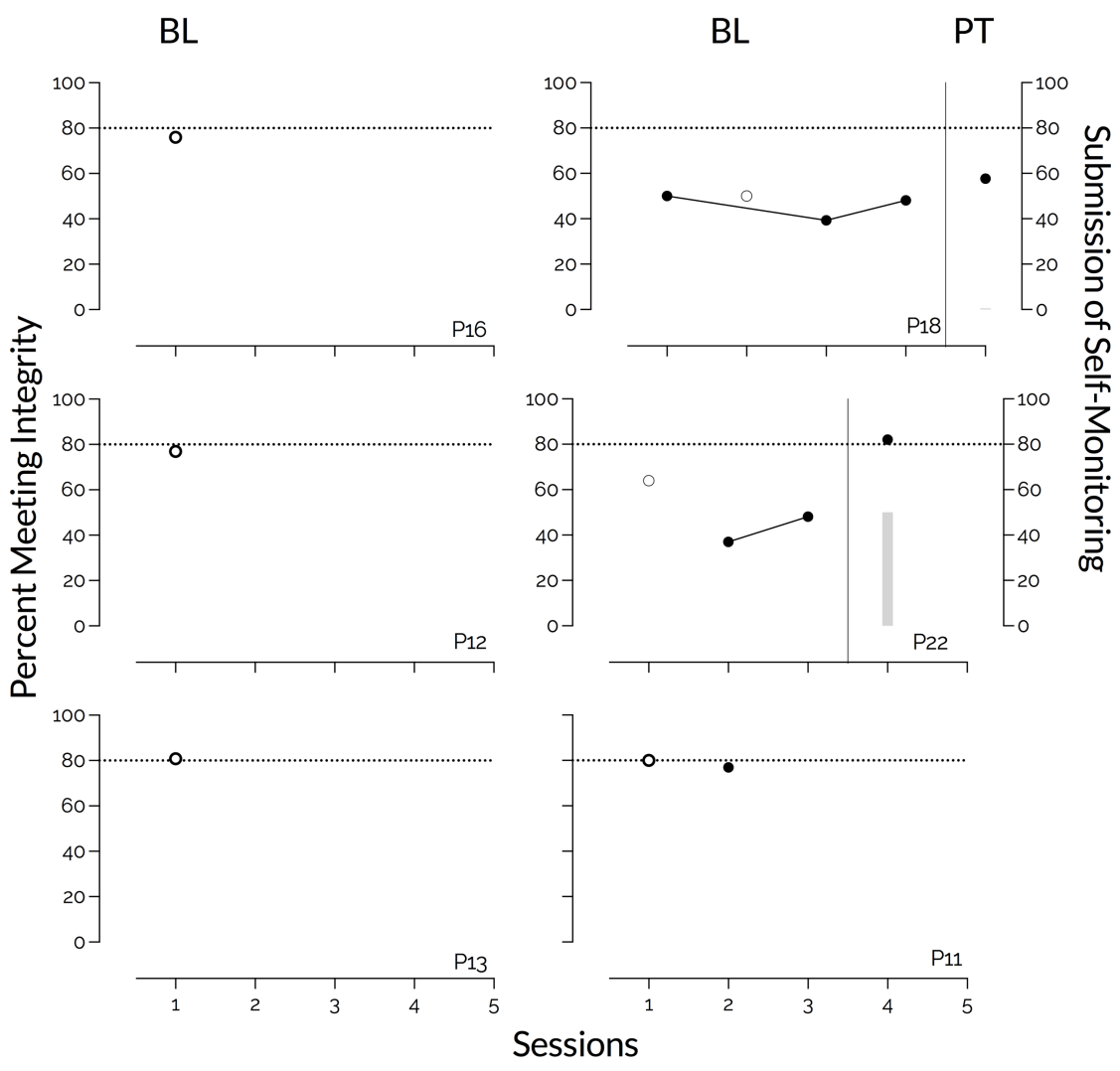
Experiment 1 Percent Meeting Integrity for Each Participant



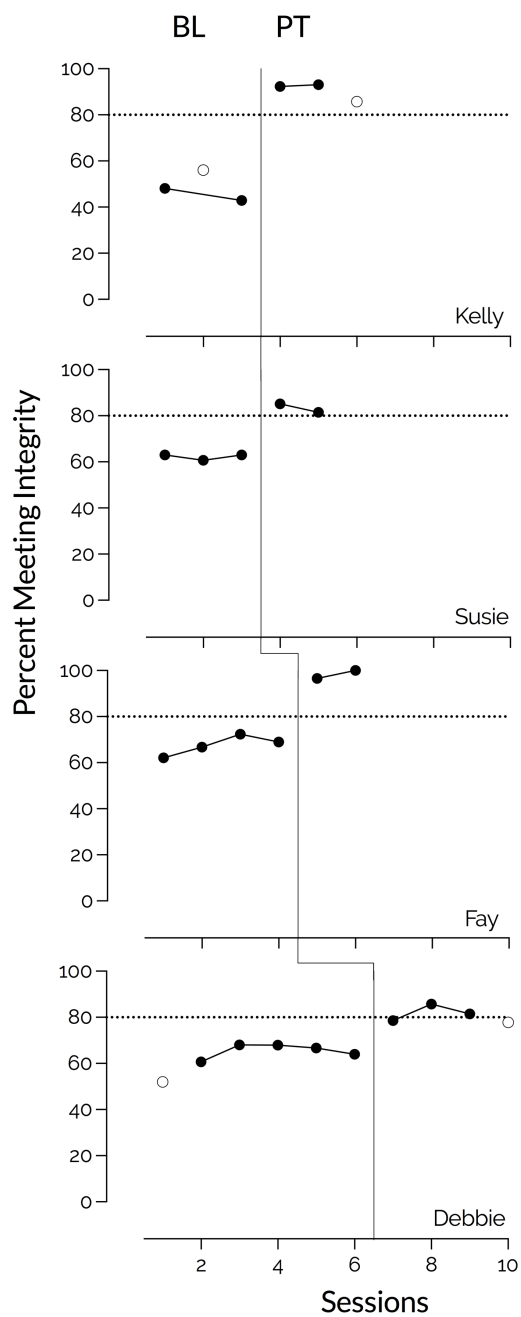
Note. BL = baseline; PT = post-training; SM = self-monitoring.

Figure 2

Supervisors Who Did Not Complete Experiment 2



Note. BL = baseline; PT = post-training. Closed circles denote role plays with the research team. Open circles denote generalization probes. Grey bars denote the independent submission of the self-monitoring checklist.

Figure 3*Experiment 2 Percent Meeting Integrity for Each Participant*

Note. BL = baseline; PT = post-training. Closed circles denote role plays with the research team.

Open circles denote generalization probes.

Appendix A

Recruitment Email



Applied Behavioral Science

Study Title: Effects of professional development workshops on employee performance

Hello,

We want to invite you to participate in a research project entitled, Effects of professional development workshops on employee performance. The purpose of this research is to evaluate the effects of the leading a meeting professional development workshop on employee performance. Our goal is to determine whether this workshop adequately provides employees with the ability to lead meetings of their own.

If you decide to participate in this research, you will be asked to role play leading a meeting with a research assistant prior to and after attending the group workshop. You will also be asked to complete a demographic and acceptability survey during your participation. Research activities will take place via Zoom. Sessions for this study will be scheduled at times most convenient for you. Your participation will take approximately 3-10 hours across multiple Zoom sessions. The workshop will last approximately 60-90 minutes. Each session will last approximately 25-30 minutes. You will earn \$15 for each session you attend. Given the time commitment to participate in this study, you may earn between \$60 and \$180 for your participation.

To help you decide whether to participate, I have included potential benefits and risks to participation. Your participation will benefit you personally, the human service delivery community, and society at large. You will learn how to demonstrate how to effectively lead a meeting which will enhance your professional development skills and directly impact your job tasks and those you supervise. There are minimal risks to participating. You might feel uncomfortable role-playing with a research assistant or receiving information on how to improve performance.

If you would like to participate, receive additional information, or have any questions, please email Abigail Blackman (ablackaman@ku.edu). Please note that participation in these research activities is complete voluntary.

Abigail Blackman, MS, BCBA
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Dole Human Development Center
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Appendix B

Informed Consent

INFORMED CONSENT STATEMENT

TITLE OF STUDY

Effects of professional development workshops on employee performance

KEY INFORMATION

- This project is studying the effects of professional development workshops on employee performance.
- Your participation in this research project is completely voluntary.
- Your participation will take approximately 3-10 hours, which will all be completed across multiple Zoom sessions. No one session will exceed 90 minutes in length.
- You will be asked to role-play how to implement a skill learned in the workshop with a research assistant. That skill will either be how to provide effective feedback or lead a meeting. More detailed information on this can be found below.
- You might feel uncomfortable role-playing with the research assistant.
- By participating you will learn how to competently perform a skill taught in the workshop.
- Your alternative to participating in this research study is not to participate.

INTRODUCTION

The Department of Applied Behavioral Science at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You may refuse to sign this form and not participate in this study. You should be aware that even if you agree to participate, you are free to withdraw at any time. If you do withdraw from this study, it will not affect your relationship with this unit, the services it may provide to you, the University of Kansas, or your employer. Participating in this study will not affect your employment. Therefore, participation in the research activities contained in this consent form are completely voluntary.

PURPOSE OF THE STUDY

The purpose of the current study is to evaluate the effects of professional development workshops on employee performance.

PROCEDURES

By participating in this study, you will be asked to complete a demographic survey. Your demographic survey will be completed via and kept in Qualtrics. Following completion of this survey, you will be asked to role play a skill (how to provide effective feedback or lead a meeting) with a research assistant via Zoom. These sessions will occur prior to and after attending the group workshop. The duration of these sessions will vary, depending how long it takes you to implement the skill. The research assistant(s) will respond in a variety of ways that will give you practice for how to handle different employee situations you may encounter as a supervisor. You will role play with research assistants several times during the study. You will also attend one or multiple group professional development workshops. During the workshop(s) you will be asked to attend for the entire duration with your camera on. You will also be asked to complete guided notes and group



activities. A researcher will be present at the workshop to take data on these behaviors. Being asked to keep your camera on, complete guided notes, and group activities are all behaviors expected as an employee at the organization (not additional requirements as part of your participation). You may receive feedback based on your ability to perform the skill following the workshop(s). Additionally, you will demonstrate your ability to perform the skill with individuals at the organization in which you work prior to and after the workshop. Following participation, you will be asked to complete an acceptability survey. Your acceptability survey will be completed via and kept in Qualtrics. The total duration of time to complete the study will depend on your ability to achieve 100% accuracy on the skill taught. You will not participate for more than 90 minutes in any one session or more than 10 hours total.

The information we gather about you will be de-identified and kept on a secure server. All sessions will be video-recorded. The videos will be stored on a HIPAA-compliant server space. You may ask to have the taping stopped at any time and choose not to participate in the study. Trained research assistants will score the videos. The recordings will be erased after five years from the date of recording. Your video will not be used in any other manner.

RISKS

Minimal risks are anticipated with participation in this study. You might feel uncomfortable role-playing with the research assistant or receiving information about how to improve performance (i.e., gentle feedback). All identifiable information will be removed. We will maintain confidentiality consistent with state and organizational mandatory reporting requirements.

BENEFITS

Your participation will benefit society by providing information about the effectiveness of professional development workshops on employee performance. Additionally, you will benefit by learning how to and demonstrating the skill taught in the workshop. The skills taught will enhance your professional development skills and directly impact your job tasks.

PAYMENT TO PARTICIPANTS

You will be compensated for your participation outside of your typical salary earned as an employee. You will earn \$15 for each session you attend. Given the time commitment to participate, you may earn between \$60 and \$180 for your participation.

Investigators may ask for your social security number in order to comply with federal and state tax and accounting regulations.

PARTICIPANT CONFIDENTIALITY

Your name will not be associated in any publication or presentation with the information collected about you or with the research findings from this study. Instead, the researcher will use a participant number or a pseudonym. Your identifiable information will not be shared unless required by law or you give written permission.

REFUSAL TO SIGN CONSENT AND AUTHORIZATION



You are not required to sign this Consent and Authorization form and you may refuse to do so without affecting your right to any services you are receiving or may receive from the University of Kansas or to participate in any programs or events of the University of Kansas. However, if you refuse to sign, you cannot participate in this study.

CANCELLING THIS CONSENT AND AUTHORIZATION

You may withdraw your consent to participate in this study at any time. You also have the right to cancel your permission to use and disclose further information collected about you, in writing, at any time, by sending your written request to: Florence DiGennaro Reed, PhD, 1000 Sunnyside Avenue Room 4001 Dole Human Development Center, Lawrence, KS 66045.

If you cancel permission to use your information, the researchers will stop collecting additional information about you. However, the research team may use and disclose information that was gathered before they received your cancellation, as described above.



QUESTIONS ABOUT PARTICIPATION should be directed to:

Abigail Blackman, MS, BCBA
 Graduate Student
 Department of Applied Behavioral Science
 4001 Dole Human Development Center
 University of Kansas
 1000 Sunnyside Avenue
 Lawrence, KS 66045
ablackman@ku.edu

Florence DiGennaro Reed, PhD
 Associate Professor and Chairperson
 Department of Applied Behavioral Science
 4001 Dole Human Development Center
 University of Kansas
 1000 Sunnyside Avenue
 Lawrence, KS 66045
fdreed@ku.edu

If you have any questions about your rights as a research participant you may contact the Human Research Protection Program (HRPP) office at (785) 864-7385, write the Human Research Protection Program (HRPP), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email irb@ku.edu.

PARTICIPANT CERTIFICATION:

If you agree to participate in this study please sign where indicated. You may download a copy of the informed consent for your records.

I have read this Consent and Authorization form. I have had the opportunity to ask, and I have received answers to, any questions I had regarding the study and the use and disclosure of information about me for the study.

I agree to take part in this study as a research participant. By my signature I affirm that I am at least 18 years old and that I have received a copy of this Consent and Authorization form.

 Print Participant's Name

 Date

 Participant's Signature



Appendix C

Demographic Questionnaire

Participant ID:

Age:

Gender:

- Male
- Female
- Transgender male
- Transgender female
- Gender variant/non-conforming
- Other: _____
- Prefer not to answer

Race/ethnic background:

- White/Caucasian
- Black/African American
- Hispanic/Latino
- Asian
- Native American
- Pacific Islander
- Mixed
- Other

What is your highest level of education?

- High school/GED
- Some college, but did not obtain a degree
- Associate's degree
- Bachelor's degree
- Master's degree
- Doctorate

If you obtained a degree, what was your major or field of study?

How long have you been employed at your place of employment?

What is your job title?

What professional development workshops have you attended at your place of employment?

Appendix D

Example Confederate Actor Script

*Confederate 1 shows up to the meeting 3 late. Everyone else shows up on time.

Confederate 1

- **No one responding:** Do not respond to the first question that the participant asks once the meeting has started, so they have to prompt responding.
- **Dominant:** the conversation for an agenda item where discussion is welcomed. It may be related to the meeting topic or about something else. Once example includes discussing how X staff continues to show up late for work and that it is impacted when night staff can leave.
- **Off task:** Leave unmuted with background noise, until the participant asks you to mute yourself.

Confederate 2

- **No one responding:** Do not respond to the first question that the participant asks once the meeting has started, so they have to prompt responding.
- Do not speak while confederate 1 is dominating the conversation, unless the participant welcomes others input.
- **Tech issue and interruption:** Log off the meeting at the 7-minute mark. Log back on after 60 seconds. When you log back on, immediately say "I am SO sorry!"

Confederate 3

- **No one responding:** Do not respond to the first question that the participant asks once the meeting has started, so they have to prompt responding.
- **Interpersonal:** Seem frustrated/be combative when confederate 1 talks about staff late arrivals. As a night staff, it doesn't bother me that X staff is later. There is a lot of things that are going on in their life, so let's just give them some grace right now.

Confederate 4

- **No one responding:** Do not respond to the first question that the participant asks once the meeting has started, so they have to prompt responding.
- Do not speak while confederate 1 is dominating the conversation, unless the participant welcomes others input.
- **Reinforce appropriate contributions:** Make appropriate contributions throughout the remainder of the meeting.

Appendix E

Virtual Training Guided Notes

Professional Skills Workshop Leading and Participating in Meetings Guided Notes

Write one or two reasons why this topic is relevant.

Participating in meetings

- Meeting etiquette
 - o Being on _____
 - o Letting others know if unable to attend
 - o Attentiveness during meeting
 - Cell phones
 - _____
 - Messaging

If you multitask during meetings... your team will too.

- Write one or two strategies to help decrease the potential for multitasking in your meetings.

Leading Meetings: Planning

- Purpose of meeting
- Planning the meeting
 - o Components
 - Participants
 - Environment, _____, and meeting format
 - Meeting schedule
 - Common meeting times or at another time?
 - o _____ development
- Write one or two things that should be included on a meeting agenda.

- Provide an example of what an email to schedule or confirm a meeting might look like.

Leading the actual meeting

- Meeting etiquette
 - o Cell phones, computers, messaging
- Opening
 - o Greet attendees
 - o Starts meeting on time
 - o Acknowledges those who are on _____
 - o Shares meeting agenda
 - o Establishes rules and expectations for the meeting
 - o Summarizes the _____ of the meeting
 - o Reviews agenda items to be discussed
 - o Write one or two things that you might include in your rules for meeting participation.

- Managing
 - o Minimizing/controlling external distractions
 - o Observing body language
 - o Soliciting _____ and discussion
 - o Progressing through agenda
 - o Providing _____ for appropriate contributions
 - o Take notes or have a note taker
 - o Write two specific behaviors you may need to manage in a meeting. Provide a suggestion for how to handle each.

- Closing
 - Summarize the _____
 - End on time
 - Send out minutes afterwards

Write the two attendance codes from this workshop below:

--

Appendix F

Virtual Training Group Activity

Professional Skills Workshop
Leading and Participating in Meetings Group Activity

There are a number of attendee behaviors that you may need to respond to when leading a meeting. Read each scenario described below and describe how you would respond if you were leading the meeting. You may use Table 1 to help you determine how to respond.

1. You call an emergency meeting to discuss an issue that occurred in one of the homes you supervise. You have invited all of the managers and direct support professionals (DSP) that work in the home to the meeting. The team lead dominates the conversation by being in the only one to answer questions. You want to make sure that all attendees have the opportunity to share their thoughts. How do you respond?

2. You are providing training to three new DSPs on your team. One DSP has been responding to text messages throughout the meeting. Next time they respond to a text message you attempt to redirect their attention to the training. What did you say?

3. A number of staff got the stomach bug two days before an important behavior intervention plan meeting. Each of the staff are feeling okay but are not cleared to come back to work yet. Therefore, you decide to lead a remote meeting for the first time. You send out a Google Meet invite, but two of the four staff that are supposed to be on the call can't access the call with the information you provided. What do you do?

Appendix G

Self-Monitoring Checklist

Self-Monitoring Checklist

Planning for and Leading a Meeting

Date of meeting: _____

Your initials: _____

Planning the Meeting	
Agenda Development	Y/N
The written agenda includes items to discuss at the meeting.	
The written agenda includes time estimations for the meeting.	
The written agenda includes the date and time of the meeting.	
The written agenda includes a placeholder to take attendance.	
Premeeting communication	
An email was sent to confirm the date and time of the meeting.	
The log in information for the meeting was provided.	
The appropriate individuals were invited to the meeting.	
Individuals who did not need to be at the meeting were not invited.	
Materials that need to be reviewed prior to the meeting were sent. If anyone needs to contribute their thoughts in the meeting, they were told ahead of time.	
Environment/equipment	
The meeting will be held in a location with stable internet connection.	
The meeting will be held in a distraction free environment.	

Send a picture to ablackman@ku.edu of the above completed checklist **prior** to the meeting.

Leading the Meeting	
Opening	Y/N
Greet attendees as they arrive to the meeting.	
Start the meeting on time.	
Provide praise for attendees being on time.	
Share the meeting agenda using screen share.	
Establish rules for the meeting.	
Review the agenda items to be discussed.	
Managing	
Invite discussion from attendees.	
Redirect or prompt input if someone is dominating the conversation.	
Prompt input if no one is responding to an item posed. Each attendee should contribute.	
Redirect off task behavior.	
Respond to interruptions.	
Respond to interpersonal conflict.	
Adjust to technological issues, as they arise.	
Provide praise for appropriate contributions.	
Make progress toward agenda items throughout the meeting.	
Address what you asked the participant to prepare for.	
Closing	
Summarize the discussion and decisions that were made in the meeting.	
End the meeting on time.	
Send out the meeting minutes.	
Other	
I sat upright throughout the meeting.	
I looked at the camera/screen throughout the meeting.	

Send a picture to ablackman@ku.edu of the above completed checklist **after** the meeting.

Appendix H

Session Procedural Integrity Checklist

Participant Code: _____

Date: _____

Condition: BL Post-workshop SM

Session #: _____

Experimenter behavior	Score
The experimenter followed the script during the session, depending on condition.	
The experimenter did not provide feedback during baseline, post-workshop, or self monitoring sessions.	

Scoring: + = correct - = incorrect N/A = not applicable

Confederate behavior	Score
Confederate 1 followed their assigned script.	
Confederate 2 followed their assigned script.	
Confederate 3 followed their assigned script.	
Confederate 4 followed their assigned script.	

Scoring: + = correct - = incorrect N/A = not applicable

Appendix I

Virtual Training Procedural Integrity Checklist

Participant Code: _____

Date: _____

Trainer behavior	Score
The trainer used the PowerPoint presentation developed for the leading effective meeting professional development workshop.	
The trainer covered all of the content included in the PowerPoint presentation.	
The trainer facilitated activities/practice sessions incorporated into the PowerPoint presentation.	
The trainer provided opportunities for discussion when incorporated into the PowerPoint presentation.	

Scoring: + = correct - = incorrect

Appendix J

Self-Monitoring Integrity Checklist

Participant Code: _____

Date: _____

Self-monitoring checklist introduction fidelity

Experimenter behavior	Score
Described that self monitoring is occurring next.	
Described the items on the checklist.	
Described the expectation for completing the checklist.	
Describe the expectation for sending the checklist.	

Scoring:

+ = correct

- = incorrect

Appendix K

Social Validity Survey

The purpose of this questionnaire is to get information about your thoughts with participating in this study. Please indicate your agreement or disagreement with each statement.

1- strongly disagree	2-disagree	3-slightly disagree	4-slightly agree	5-agree	6-strongly agree	
This professional development workshop would be an acceptable way to help employees learn how to lead a meeting.	1	2	3	4	5	6
Most employees would find this professional development workshop beneficial to learn how to lead a meeting.	1	2	3	4	5	6
This professional development workshop would be effective in teaching employees how to lead a meeting.	1	2	3	4	5	6
I would suggest attending this professional development workshop to better teach other employees how to lead a meeting.	1	2	3	4	5	6
This professional development workshop will not result in negative side effects for the employee attending the workshop or those they interact with on a regular basis.	1	2	3	4	5	6
This professional development workshop is a fair way to teach employees who want to improve their ability to lead a meeting.	1	2	3	4	5	6
The self-monitoring checklist would be an acceptable way to help employees learn how to lead a meeting.	1	2	3	4	5	6
Most employees would find the self-monitoring checklist beneficial to learn how to lead a meeting.	1	2	3	4	5	6
The self-monitoring checklist would be effective in teaching employees how to lead a meeting.	1	2	3	4	5	6
I would suggest the use of the self-monitoring checklist to better teach other employees how to lead a meeting.	1	2	3	4	5	6
I like the procedures used (e.g., guided notes, group discussion, thought activities) to assist in teaching me how to lead a meeting.	1	2	3	4	5	6
Overall, the procedures used will be beneficial for teaching employees how to lead a meeting.	1	2	3	4	5	6

What components of the training procedure did you like most?

What components (if any) of the training procedure did you dislike?

Additional comments regarding the training:

Appendix L

Perceived Effectiveness Survey

The purpose of this questionnaire is to get your opinions about your supervisor's effectiveness in leading meetings and your comfortability participating in the meetings they lead. Please indicate your agreement or disagreement with each statement. Note that your answer will be kept confidential and will only be used for research purposes.

1- strongly disagree	2-disagree	3-slightly disagree	4-slightly agree	5-agree	6-strongly agree
My supervisor leads a well-organized team meeting.	1	2	3	4	5 6
My supervisor starts and ends team meetings on time.	1	2	3	4	5 6
My supervisor coordinates with staff to schedule team meetings.	1	2	3	4	5 6
My supervisor effectively handles disruptions during team meetings.	1	2	3	4	5 6
My supervisor effectively handles differing opinions or conflict during team meetings.	1	2	3	4	5 6
My supervisor encourages participation in team meetings.	1	2	3	4	5 6
Team meetings have enhanced my relationship with my supervisor.	1	2	3	4	5 6
Team meetings have enhanced my relationship with my coworkers.	1	2	3	4	5 6
Team meetings help me feel like I am a part of a team.	1	2	3	4	5 6
Team meetings help me get my questions answered.	1	2	3	4	5 6
I am comfortable discussing my concerns in team meetings.	1	2	3	4	5 6
I feel safe being open and honest in team meetings.	1	2	3	4	5 6
I leave team meetings feeling energized.	1	2	3	4	5 6
I leave team meetings understanding goals and next steps.	1	2	3	4	5 6
I leave team meetings with ideas/suggestions to help my work.	1	2	3	4	5 6
I look forward to team meetings.	1	2	3	4	5 6

What do you think your supervisor could do better to effectively lead meetings?

Additional comments regarding your supervisor's ability to lead meetings and your comfortability participating in them:

Appendix M

External Rater Survey

Participant number: _____

Please score each item by circling the number which best describes your agreement or disagreement each statement, with how you feel about the participants leading a meeting ability based on the meeting you just viewed.

	1 - strongly disagree	2 - disagree	3 - neutral	4 - agree	5 - strongly agree
The participant was oriented to attendees during the meeting.	1	2	3	4	5
The participant held the meeting in an appropriate environment.	1	2	3	4	5
The participant appeared prepared for the meeting.	1	2	3	4	5
The participant communicated the purpose of the meeting.	1	2	3	4	5
The participant accomplished the objectives of the meeting.	1	2	3	4	5
The participant appropriately managed attendee behavior.	1	2	3	4	5
The participant encouraged attendee participation.	1	2	3	4	5
The participant valued attendee contributions.	1	2	3	4	5
On a scale of 1 (poor) to 5 (excellent), how well did the participant lead the meeting?	1	2	3	4	5

Additional comments regarding the participant's leading a meeting performance: