

AN EVALUATION OF THE INTERACTIVE EFFECTS OF FEEDBACK SEQUENCE AND
TIMING ON EFFICACY AND PREFERENCE

By

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Abstract

Feedback is an effective method for increasing employee performance in a wide range of settings, although questions remain regarding the most effective characteristics of feedback. Despite the fact that there is little research on the sequence of feedback messages, recommendations advocating a particular sequence are often made in practice. The purpose of the present study was to investigate the efficacy of and preference for feedback sequence (positive-corrective-positive, positive-positive-corrective, corrective-positive-positive, and no feedback), and the influence of feedback timing on efficacy and preference. Undergraduate participants performed four simulated office tasks each associated with a feedback sequence, presented in a counterbalanced fashion. Half of the participants received feedback delivered immediately after each session (post-session feedback) and the other half of the participants received feedback immediately prior to each session (pre-session feedback). The present findings suggest that (1) the sequence of feedback statements differentially influences performance, (2) the timing of feedback does not appear to influence performance unless incorporating a no feedback condition, and (3) participants may have differential preferences for feedback sequences. The results are discussed in terms of potential behavioral processes responsible for the observed effects.

Keywords: *feedback sequence, feedback sandwich, feedback preference*

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An Evaluation of the Interactive Effects of Feedback Sequence and Timing on Efficacy and Preference

Performance feedback (hereafter, feedback) generally refers to the provision of information about previous performance that allows individuals to change their behavior (Daniels & Daniels, 2006). Feedback is used with a wide variety of people and settings including students, athletes, employees, and others. As an employee behavior-change procedure, feedback has a number of advantages. First, feedback interventions are cost effective (Prue & Fairbank, 1981). Among the numerous intervention alternatives, feedback is often the least expensive method to improve employee performance (Daniels & Daniels, 2006). Although it requires time, compared to other resource-intensive interventions (e.g., hiring external consultants, sending employees to professional development seminars, developing training) feedback is relatively inexpensive. Second, feedback interventions can be relatively simple to design as well as implement, and are applicable to any industry, organization, or department. Third, feedback interventions are flexible and can be adapted as an organization changes to survive economically and best serve its customers. Finally, some argue that feedback introduces a positive reinforcement contingency into an environment (i.e., the workplace) that is historically subject to negative reinforcement contingencies associated with deadlines and progressive discipline practices (Prue & Fairbank, 1981). This latter advantage is subject to much debate given that the behavioral function of feedback is unknown and it likely serves multiple functions (Duncan & Bruwelheide, 1986; Peterson, 1982). Quite possibly, delivery of corrective feedback could function to create a negative reinforcement contingency wherein employees improve performance to *avoid* future corrective feedback. Despite disagreement about the function of feedback, these advantages make feedback well suited for use by organizations whose objectives

are to simultaneously manage costs and increase productivity. For this reason, many view feedback as an essential part of performance management and an invaluable tool for changing and maintaining behavior in the organizational setting (Daniels & Daniels, 2006).

These advantages have contributed to the development of performance feedback as a popular behavior change procedure (Daniels & Daniels, 2006). Feedback is among the most common independent variables in both *Journal of Applied Behavior Analysis* as well as *Journal of Organizational Behavior Management* (JOBM) (Balcazar, Shupert, Daniels, Mawhinney, & Hopkins, 1989; Nolan, Jarema, & Austin, 1999; Peterson, 1982; Prue & Fairbank, 1981). In a review of all studies published in JOBM between 1977 and 1986, Balcazar et al. (1989) found that 65% of studies included applications of feedback. In the 10 years following the Balcazar et al. review, Nolan et al. (1999) reported that this number increased to 71%. More recently, JOBM devoted an entire issue to the topic in part because feedback continues to receive much attention and has many practical advantages (Houmanfar, 2013). These examples illustrate the considerable role feedback has in the field of behavior analysis and its sub-discipline of organizational behavior management. The popularity of feedback interventions is due to the advantages afforded by its pragmatic utility and demonstrated effectiveness.

Research has documented the effectiveness of feedback on increasing employee performance. In a review of the literature published between 1985 and 1998, Alvero, Bucklin, and Austin (2001) found that 58% of studies reported consistent effects with the application of feedback, 41% resulted in mixed effects (i.e., performance improvements for some individuals but not others), and only 1% of the studies resulted in no change in performance. These findings led the researchers to conclude that feedback is an effective method for improving performance with a wide range of organizational settings, behaviors, and employees. For example, feedback

has been found to effectively improve customer service of bank tellers (Brown & Sulzer-Azaroff, 1994), performance and safety of a roofing crew (Austin, Kessler, Riccobono, & Bailey, 1996), implementation of a statistical process program (Henry & Redmon, 1990), cleaning in a student-managed bar (Anderson, Crowell, Hantula, & Siroky, 1988), and employee performance at a nursing home (Hawkins, Burgio, Lanford, & Engel, 1992).

In addition, feedback is effective both alone and in combination with other procedures. For example, Brown and Sulzer-Azaroff (1994) provided graphic weekly feedback about group performance and individual performance data to three bank tellers. The graphs depicted the tellers' rates of smiling, greeting, and looking at their customers. In this study, feedback was not combined with any other staff-level interventions. Brown and Sulzer-Azaroff reported an average increase from baseline rates of 196%, 83%, and 30% for smiling, greeting, and looking at customers, respectively. These data demonstrate that feedback can produce performance improvements even when used alone. Feedback is also an effective method for improving performance when used in combination with other behavior change procedures. For example, in addition to receiving graphic daily and weekly performance feedback, members of a roofing crew earned monetary and edible (e.g., lunch) reinforcement contingent on goal achievement involving reduced labor costs (Austin et al., 1996). The feedback and reinforcement procedure resulted in \$9,368 in total savings for a 26-day work period. Subsequently, Austin et al. provided graphic daily feedback and contingent paid time off for adherence to safety protocols for the same roofing crew. They found that the percent of safety behaviors correctly performed by the roofing crew increased from a baseline average of 51% to 90% and 95% during intervention for the ground and roof crew, respectively. Ultimately, the intervention not only increased the performance and safety of the workers but also resulted in monetary savings for the

roofing company and gains for the employees. These examples demonstrate that feedback is indeed an effective method for improving performance.

While feedback typically improves performance, it is not always uniformly effective. As previously mentioned, there are instances in which feedback produces performance improvements for some individuals but not others (e.g., Arco, 1997; Houmanfar & Hayes, 1997; Parsons & Reid, 1995). The literature also contains examples in which feedback does not result in any observable change in performance (e.g., Buller & Bell, 1986). Researchers claim that the inconsistent effects of feedback is a limitation or weakness of this behavior change procedure (Alvero et al., 2001; Balcazar, Hopkins, & Suarez, 1985; Brown, Willis, & Reid, 1981; Duncan & Bruwelheide, 1986; Ford, 1980; Prue & Fairbank, 1981). There may be reasonable explanations for the inconsistent effects of feedback interventions including a general lack of consensus regarding the definition of feedback, debate regarding the behavioral function of feedback, and the many different procedures for delivering feedback. A further discussion of each of these topics follows.

Definitions of feedback. In organizational and research settings, many definitions of performance feedback exist. The definition previously provided – information about performance that allows an individual to adjust his or her performance (Daniels & Daniels, 2006) – is just one example. Other definitions of performance feedback include: knowledge of results (Arps, 1917), information regarding the quantity or quality of past performance (Prue & Fairbank, 1981), information transmitted back to the responder following a particular performance (Sulzer-Azaroff & Mayer, 1991), and information that tells performers what and how well they are doing (Rummler & Branche, 1990). Although an appropriate definition of feedback has been the topic of much debate for many years, there is still no consensus.

Without agreement on the exact definition of feedback, the term can often refer to different procedures (Brown et al., 1981; Peterson, 1982). For example, the term feedback is sometimes synonymous with information about performance, reinforcement or praise, or a combination of information and praise. This distinction is important because researchers have suggested that objective information about performance alone may not be sufficient to improve performance (Balcazar et al., 1985; Daniels & Daniels, 2006; Duncan & Bruwelheide, 1985). Researchers suggest that the addition of supportive statements (Nemeroff & Wexley, 1979), social praise (Runnion, Johnson, & McWhorter, 1978), or consequences (Daniels & Daniels, 2006) would enhance the effectiveness of feedback. Thus, the information described by the feedback may be an important component of its definition.

Several studies support the idea that the addition of praise to objective information may enhance the effectiveness of performance feedback. For example, Brown et al. (1981) compared feedback alone (i.e., information with no approving or disapproving statements) and feedback plus supervisor approval. Brown et al. measured the amount of time direct care staff at a residential facility engaged in on-task (social interaction or directly caring for residents) and off-task behavior. The data indicated that feedback as information alone increased on-task behaviors and decreased off-task behaviors but the gains were temporary and performance quickly returned to near baseline levels. Results also showed that feedback plus supervisor approval resulted in greater and lasting increases in time spent on-task and decreases in off-task behavior. While these findings support the notion that praise enhances feedback, Brown and colleagues did not assess supervisor approval alone. Thus, it remains unclear whether supervisor approval, when provided alone, would result in the observed level of performance or if the effects were contingent on the combination of both feedback as information and supervisor praise. In order to

address the limitation of Brown et al., Johnson (2013) conducted a component analysis to compare the effects of evaluative feedback, objective feedback, both evaluative and objective feedback, and no feedback on the number of checks undergraduate participants correctly completed in a simulated check processing task. Objective feedback referred to information about the number of checks participants correctly completed (e.g., “During your previous session, you correctly completed 72 checks.”). Evaluative feedback statements included information about how well participants were performing the task (e.g., “That’s a really impressive number of checks!”). From baseline, mean performance decreased for the no feedback condition, increased 17% for both the evaluative feedback alone and the objective feedback alone conditions, and increased 30% in the combined evaluative and objective feedback condition. Thus, it appears that the information/content contained in the feedback may differentially effect performance and is one consideration when constructing a definition.

Behavioral function of feedback. There is much debate regarding the behavioral function of feedback (Balcazar et al., 1985; Duncan & Bruwelheide, 1986; Prue & Fairbank, 1981). The most common hypotheses are that feedback functions as a reinforcer or an antecedent. In order for feedback to meet the definition of a reinforcer, and therefore function as such, feedback would need to be given to employees immediately following performance and increase the probability of the behavior in the future (Agnew & Redmon, 1993). This explanation seems plausible because employees often receive feedback following performance, which often results in an increase in performance (Duncan & Bruwelheide, 1986). However, reinforcement does not adequately account for the effects of feedback. According to Michael (1985), “events that are delayed more than a few seconds after the response do not directly increase the frequency of that response” (p. 106). Thus, in research and in practice the delay

between employee behavior and the delivery of feedback is often too great for feedback to function as a reinforcer. Other interpretations hypothesize that feedback serves an antecedent function. Even though employees often receive feedback following performance, it also precedes performance (i.e., an employee who receives feedback at the end of the workday on Thursday may adjust his or her performance on Friday). According to this hypothesis, feedback may evoke behaviors that are likely to be reinforced (i.e., discriminative function) (Duncan & Bruwelheide, 1986). If feedback were to function as a discriminative stimulus, it would need to reliably signal the availability of reinforcement (i.e., behavior would produce reinforcement). Unfortunately, this is not usually the case in organizations. Furthermore, similar to that of reinforcement, this explanation does not adequately account for the long delay between the behavior and receipt of feedback (Agnew & Redmon, 1993).

The inability of reinforcement or antecedent explanations to account for the effects of feedback has led some to hypothesize that, depending on the context and the conditioning history, feedback can serve multiple functions (Duncan & Bruwelheide, 1986; Peterson, 1982). However, the issue remains that feedback does not consistently fit the definitions of reinforcement or discriminative stimulus. This has led many researchers to hypothesize that rules may play a role, particularly when there is a considerable delay between the behavior and delivery of feedback (Agnew & Redmon, 1993; Malott, 1992; Schlinger & Blakely, 1987). Rules are defined as “verbal stimuli that describe behavioral contingencies” (Agnew & Redmon, 1993, p. 67); feedback may function in this manner. Moreover, feedback may function as a contingency-specifying stimulus (CSS) for rule-governed behavior (Agnew & Redmon, 1993). A CSS describes a contingency between some combination of an antecedent, behavior, and consequence that alters the function of these stimuli (Schlenger & Blakely, 1987). That is,

feedback alters the discriminative and reinforcing value of the stimuli associated with performance and strengthen the relation between the stimuli and performance. The function-altering effect of CSSs can account for the way in which feedback appears to function as a reinforcer or discriminative stimulus even when there is a considerable delay.

Characteristics of feedback. A third factor possibly contributing to the inconsistent effects of feedback interventions is the many characteristics of feedback. Also commonly called *dimensions*, characteristics of feedback refer to the type of information within a feedback message, or an aspect of the method used to communicate the feedback message to a recipient. For example, one characteristic that alters the information of the feedback message is whether it describes the performance of an individual or the performance of a group. An example of a characteristic that alters the delivery of a feedback message to the recipient is whether individuals receive feedback publicly in the presence of others or privately during a one-on-one meeting. Researchers have suggested that a classification system organizing the characteristics would increase the effectiveness of feedback (Duncan & Bruwelheide, 1986; Ford, 1980; Prue & Fairbank, 1981). While ultimately a structural approach, there are several benefits of developing a classification system. A classification system can serve as a guide to help researchers develop precise operational definitions of the various procedures currently in use under the broad umbrella of feedback. Such a system has the potential to decrease the ambiguity of procedures and possibly increase the replicability of the procedures and previous findings. In addition, it is likely that the different characteristics of feedback are differentially effective and a classification system will help researchers identify the characteristics of feedback that are associated with consistent improvements in performance.

Comparable to the issues faced by the definition and function of feedback, there is no consensus regarding which characteristics warrant inclusion in the classification system. A lack of consensus is likely due to the numerous classification systems proposed, the different terminology used across classification systems to refer to characteristics, and the additional characteristics that have been recommended for inclusion. A discussion of the classification systems (presented in chronological order) and the ways in which these schemes differ follows.

Ford. In 1980, Ford introduced his original classification system. While the term “characteristics” is used in the present manuscript, Ford’s classification system used the term “dimensions” to describe a continuum between two extremes on which each characteristic may fall. Ford included five dimensions in his classification system. The first dimension described by Ford was the continuum between *individual and group* feedback, which referred to the number of individuals whose performance is described by the feedback. The second dimension is the continuum between *private and public* feedback, defined as the degree to which the performance information is available to others. The third dimension, *personal-mechanical* feedback, refers to the degree to which mechanical devices mediated the feedback received by the employee. *Immediate-delayed* feedback is the fourth dimension and Ford defined this as the contiguity between performance and the delivery of feedback. Finally, Ford’s fifth dimension is the *schedule* of feedback, or the frequency with which employees receive feedback.

Prue and Fairbank. In 1981, Prue and Fairbank described their classification system. While the authors noted that the characteristics likely vary on a continuum, for simplicity they used discrete categorizations resulting in the shift in terminology from the use of the term “dimensions” to “characteristics.” Unfortunately, this distinction remains unclear and researchers have since used these terms interchangeably. The remaining classification systems

all use discrete categories and, as such, the term “dimensions” will be used only to refer to components of Ford’s (1980) classification system. Prue and Fairbank included five characteristics in their classification system and discrete types of each characteristic, referred to as sub-characteristics in the present manuscript. They included the sub-characteristics as a way to define and categorize discrete points on the continuum. The five characteristics included the *recipients*, *mechanism*, *temporal characteristics*, *content*, and *source* of feedback. The *recipients* of feedback refers to whether the feedback is delivered only to the individual (private), or whether feedback is shared with the individual and others (public), previously referred to as the continuum between private and public feedback by Ford. Prue and Fairbank described four *mechanisms*, defined as the means by which the feedback is communicated to the recipient including verbal, written, mechanical, and self-recorded. While Prue and Fairbank again used different terminology, the mechanism is similar to the *personal-mechanical* dimension presented by Ford. The *temporal* characteristics of feedback included (1) the duration of the feedback interaction, previously not mentioned by Ford, and (2) the contiguity between performance and feedback, previously referred to as the continuum between *immediate and delayed* feedback. Additionally, Prue and Fairbank included two new characteristics: *content* and *source*. The *content* of feedback refers to the type of information or comparison made in the feedback message. The *content* consisted of five sub-characteristics: comparing individual performance with his or her previous performance, individual performance with a standard, group performance with its previous performance, group performance with a standard, and the individual’s performance as a percentage of the group performance. Prue and Fairbank defined the *source* of the feedback as the individual delivering the feedback. The *source* of feedback included five sub-characteristics: supervisors, subordinates, co-workers, outside consultants, and

targeted employees. Two dimensions presented by Ford – *individual-group* and *schedule of feedback* – were not included in Prue and Fairbank's classification system. However, by excluding the *individual-group* dimension, the authors confounded who receives the feedback with how public the feedback is delivered in the *recipients* characteristic. For example, feedback could be delivered to an individual *and* others in a group format, but be presented privately (e.g., written feedback passed out to individual employees sitting around a table).

Balcazar, Hopkins, and Suarez. In 1985, Balcazar, Hopkins, and Suarez presented a classification system in order to review and summarize ten years of performance feedback research. The classification system described by Balcazar and colleagues consisted of six characteristics including the *source*, *content*, *mechanism*, *privacy*, *participants*, and *frequency* of feedback, each with its own sub-characteristics. Similar to Prue and Fairbank (1981), the authors defined the *source* as the individual who or device that presented the information to the performer. However, the *source* also contained new sub-characteristics including feedback delivered by researchers, mechanical devices, and customers. In their system, Balcazar and colleagues did not alter the definition of the *content* of feedback, but added two new sub-characteristics: a comparison of individual performance with a standard of group performance and a comparison of group performance with a standard of individual performance. Balcazar and colleagues also omitted the comparison of individual performance as a percent of group performance as a sub-characteristic of the *content*. The *mechanism* was defined as the means used to communicate the feedback information to recipients. In addition to the sub-characteristics presented by Prue and Fairbank, the authors included graphic feedback. Balcazar et al. also included the degree to which feedback information is made available to others in their classification system; however, unlike Prue and Fairbank who referred to this characteristic as

the *recipients* of feedback, the authors used the term *privacy*. The authors also incorporated two characteristics that were not part of Prue and Fairbank's system, but are similar to two dimensions previously presented by Ford (1980). First, Balcazar and colleagues included the *participants*, or the individuals whose performance is described by the feedback. Within this, the authors included feedback depicting the performance of an individual or a group. Second, the authors added the *frequency* of feedback, defined as how often individuals receive feedback. The frequency included feedback delivered daily, weekly, and monthly.

Alvero, Bucklin, and Austin. In 2001, Alvero, Bucklin, and Austin replicated the procedures of Balcazar et al. (1985). Alvero and colleagues reviewed and summarized the performance feedback literature between 1985 and 1998. Similar to Balcazar et al., the classification system consisted of six characteristics of feedback including *participants*, *privacy*, *medium*, *source*, *frequency*, and *content*. The authors did not change the definition or sub-characteristics for the *participants* and *privacy* of feedback from the Balcazar et al. review. While the definition remained the same, the authors changed the terminology used by Balcazar et al. from *mechanism* to *medium* and excluded mechanical feedback as a sub-characteristic. The definitions of the *source*, *frequency*, and *content* of feedback remained unchanged but Alvero et al. included additional sub-characteristics. For the *source*, the authors added receiving feedback from experts. For *frequency*, the authors included receiving feedback on a quarterly basis (i.e., once every three months). Alvero and colleagues also included a comparison between group performance with a different group's performance and information regarding a different group's performance as sub-characteristics of the *content* of feedback.

As previously mentioned, the terminology used to refer to the same characteristic differs between researchers. Balcazar et al. (1985) and Alvero et al. (2001) use the term *privacy* to refer

to Prue and Fairbank's (1981) characteristic *recipients* of feedback. Similarly, Ford's (1980) *individual versus group feedback* was replaced by the term *participants* in Balcazar et al. and Alvero et al. This inconsistency contributes to the lack of consensus regarding which characteristics warrant inclusion in the classification system. Complicating matters further, researchers have suggested additional characteristics (e.g., number of feedback messages; Duncan & Bruwelheide, 1986) that are not yet added to existing classification systems. It remains unclear if these or other features of feedback influence its effectiveness.

Regardless of disagreement or debate regarding feedback's definition, behavioral function, or characteristics, reviews of the literature that adopt a classification system have yielded important findings. For example, Alvero et al. (2001) conducted a review of performance feedback studies published in four journals (*Academy of Management Journal*, *Journal of Applied Behavior Analysis*, *Journal of Applied Psychology*, and *Journal of Organizational Behavior Management*) between 1985 and 1998. The goal of their review was to identify which characteristics of feedback are most commonly used, and subsequently, which are associated with the most consistent desired effects on performance. Their findings demonstrated that feedback produced the most consistent effects when it (1) was delivered by supervisors/managers and researchers (*source*), (2) was presented in a combination of graphic and written or verbal form (*medium*), (3) was provided daily, monthly, and a combination of daily and weekly (*frequency*), (4) depicted performance of a group (*participants*), (5) was public and private (*privacy*), and (6) compared group performance with a standard, group with previous group performance, individual performance with a standard, or individual performance with previous individual performance (*content*). Additionally, the results of their review demonstrated that the characteristics used most often (1) were delivered by supervisors or

managers (*source*), (2) written feedback alone (*medium*), (3) were delivered weekly (*frequency*), (4) depicted performance of an individual (*participants*), (5) were delivered publicly (*privacy*), and (6) contained information about individual performance with a standard or individual performance with his or her previous performance (*content*).

Two limitations warrant caution when making conclusions based on these findings. First, the inclusionary criteria of Alvero et al. (2001) restricted inclusion of studies to those that used the term feedback in the abstract or method section. Thus, their criteria excluded studies that used a feedback procedure but described it using different terminology. It is unclear whether the excluded studies vary systematically from those included in the analysis, which would alter the conclusions of the review. Further, some of the categories with which conclusions about the efficacy of characteristics were drawn contained as few as five studies, limiting the strength of these conclusions. For example, with respect to the *frequency*, the authors reported that consistent effects are associated with delivering feedback both daily and weekly. This conclusion is based on the results of just five studies that provided a combination of daily and weekly feedback.

Nonetheless, these data demonstrate the utility of a classification system to identify the differential effects of each of the six identified characteristics of feedback on performance. For example, the review demonstrated that the most effective characteristics are not the most commonly used. Only two of the 43 sub-characteristics were both most commonly used and most effective (providing feedback that compares an individual's performance to their previous performance and providing feedback that compares an individual's performance to a standard). Thus, a majority of the sub-characteristics described by Alvero et al. (2001) are used most often in research even though more effective means of providing feedback are available. Presumably,

the characteristics used most often in practice are similar to those commonly used in research if OBM interventions are informed by published research. The disparity between the most effective and the most commonly used characteristics may contribute to the inconsistent effects of feedback interventions. Future research involving reviews or component analyses would be valuable in determining which characteristics have the greatest effects on performance.

Feedback Sequence. A feature of feedback that has been neglected as a formal characteristic in all of the aforementioned classification systems is feedback sequencing, which refers to the order in which positive and corrective (sometimes referred to as negative) feedback messages are delivered. Although different sequences are promoted in practice and the published literature as more effective than others, high quality experimental research is lacking. Previous research on feedback sequence has focused primarily on factors *related to* employee performances, but did not *directly measure* employee performance. Stone, Gueutal, and McIntosh (1984) manipulated the feedback sequence of two performance statements (positive-negative and negative-positive). Participants performed a simulated work task in a laboratory setting. Upon completion of the task, all participants received the same feedback statements but the sequence varied so that half of the participants received the positive statement first and half of the participants received the negative statement first. The primary measure was the perceived accuracy of the feedback, defined as the extent to which the recipient believed the feedback to be accurate. The perceived accuracy was assessed by participant responses to a likert-type questionnaire. Stone et al. found that recipients rated the positive-negative sequence as more accurate than the same feedback statements delivered in a negative-positive sequence. Although participants perceived the positive-negative feedback sequence as more accurate, it is unclear

how the perceived accuracy of feedback may affect observable performance on work-related tasks.

Davies and Jacobs (1985) evaluated four feedback sequences including positive-negative-positive (PNP), positive-positive-negative (PPN), negative-positive-negative (NPN), and negative-negative-positive (NNP). In groups of eight, participants engaged in a problem-solving exercise. At the conclusion of the exercise, participants received public feedback from each of the group members corresponding to the assigned feedback sequence. On a scale of 1-9, participants rated the extent to which the feedback was credible, desirable, and whether they experienced a strong or weak emotional reaction to the feedback. Higher scores on the scale indicated higher credibility and desirability, and a stronger emotional reaction. The authors found no significant differences between the PNP and PPN ratings. The PNP ratings were significantly higher than the NPN ratings for credibility and desirability and the NNP for desirability only. The PPN ratings were significantly higher than NNP for credibility and desirability, but there were no significant differences between the PPN and NPN ratings. In addition, there were no significant differences in ratings of strength of emotion across the different sequences. It is important to note that the ratio of positive to negative statements provided varied for each condition. That is, the PNP and PPN sequences contained two positive statements and only one negative statement while the NPN and NNP sequences contained two negative statements and only one positive statement. It is reasonable to expect that participants would rate sequences in which they received 2:1 positive to negative statements higher in credibility and desirability than sequences with a ratio of 1:2 positive to negative statements. Although these studies varied the sequence of feedback, the researchers failed to measure the effects of the different sequences on observable performance.

It is important to evaluate experimentally the effects of the sequence of feedback statements on observable and measurable performance. This area of research is necessary because the feedback sandwich – a method advocating a particular sequence of feedback statements – is often recommended for use in practice. The feedback sandwich was developed by Wyatt Woodsmall while conducting research for the United States Army to teach officers how to deliver effective feedback to new recruits (James & Shepherd, 2001). The feedback sandwich formula involves providing in order a positive statement about specific behaviors the individual performed well, a corrective statement about what behaviors the individual could change or improve, and a second overall positive statement. An example includes “I really like the way you smiled and greeted the customer when she arrived. Unfortunately, you were a bit too quiet so next time you need to speak louder. Overall, though, you’re doing great.” While the feedback sandwich may have some face validity, empirical or experimental evidence supporting the use of this method is lacking.

Even though there is little evidence to support the use of the feedback sandwich, this method has been recommended and adopted in a wide range of settings including the practice of physicians, nurses, coaches, educators, and managers. In an article describing how physicians should deliver feedback, Dohrenwend (2002) recommended that physicians who are uncomfortable delivering negative feedback might want to use the feedback sandwich method. Dohrenwend states, “This technique is fast, efficient and well suited to the time constraints of physician practice.” Glover (2000) supports the use of the feedback sandwich method to increase the learning of nurses practicing in the clinical setting. In addition to the applications mentioned in the medical field, the feedback sandwich is recommended for use in coaching athletes and educating students. Bo Hanson – the director of Athlete Assessments, a coaching

consultant, and four time Olympian – believes the feedback sandwich to be an effective method for delivering feedback and recommends using the technique when working with athletes (Hanson, n.d.). Kimball and Jazzar (2011) advocate the use of the feedback sandwich in higher education. They state that this method “...encourages learners while providing honest, open and direct critique.” More closely related to organizational behavior management, the feedback sandwich has been recommended in the management of employees. On November 28, 2012, *Time Business & Money* published a small business tip of the day endorsing the feedback sandwich as it sends the message to employees that managers recognize their value (Shread, 2012). These examples demonstrate that the feedback sandwich has gained popularity in diverse areas.

There are several reasons the feedback sandwich is widely endorsed. Proponents of the feedback sandwich argue that this method makes corrective feedback more acceptable to the receiver and thus likely more effective (Berger, 2013). They argue that the feedback sandwich provides balanced feedback, and balancing positive feedback with negative feedback reduces discomfort and anxiety for both the individual delivering the feedback as well as the recipient (Schwarz, 2013). Berger (2013) even refers to the feedback sandwich as the “Mary Poppins” version of feedback; providing a positive feedback first is the spoon full of sugar that helps the medicine (i.e., corrective feedback) go down.

While the proposed benefits of the feedback sandwich have led to its popularity, recent skepticism about the feedback sandwich has increased. Less than six months after publishing the small business tip of the day in support of the feedback sandwich, *Time Business & Money* published a management tip of the day arguing the contrary (Harvard Business Review, 2013). Those opposed to the feedback sandwich claim that the method obscures the message (e.g.,

Oestreicher, 2013) or that it devalues the corrective feedback because overall the employees receive more positive statements than negative (e.g., Heathfield, n.d.). Others argue that the method devalues positive feedback because it is paired with corrective feedback, or that employees eventually learn the sequence and do not attend to the first positive statements because they are waiting for the corrective statement (Petty, 2009). Unfortunately, there is little evidence to support or invalidate the helpfulness of the feedback sandwich.

From a behavioral perspective, there may be some possible benefits and disadvantages to using the feedback sandwich. Given the recent literature demonstrating that a combination of praise and information about performance is more effective than either presented alone (see Brown et al., 1981; Johnson, 2013), the feedback sandwich may be an effective method for improving performance given that it contains information about behavior the individual is performing well, how behavior can improve, and a praise statement. However, it is also possible that repeated presentations of the first positive statement of the feedback sandwich cause it to become a conditioned aversive stimulus because it is paired with and signals the corrective statement (an unconditioned aversive stimulus) thereby reducing the potential beneficial effects of the initial positive statement on performance.

Given the lack of methodologically rigorous studies and the frequency with which the feedback sandwich is recommended and possibly adopted, it is important to experimentally evaluate this method of delivering feedback. Arguments presented by proponents and opponents of the feedback sandwich are based on opinion rather than data. Research on the feedback sandwich will allow recommendations to be guided by experimental evidence. The purpose of the current study is to evaluate the efficacy of and preference for the sequence of feedback on work-related task performance. Subsequently, it will also investigate the effects of feedback

timing on efficacy and preference. In the present study, participants performed four simulated office tasks in a controlled laboratory environment. Participants either received feedback on past performance immediately prior to performing the task or immediately following completion of the task. The feedback delivered by the experimenter consisted of a particular sequence of feedback that corresponded to the task. In a subsequent condition, participants selected the task they preferred to perform and then completed the selected task.

Method

Participants and Setting

Participants in the present study were eight undergraduate students (7 females, 1 male) enrolled in an introductory-level applied behavioral science course at a large mid-western university. After obtaining approval from the University's Human Subjects Committee, the experimenter recruited participants through in-class and blackboard announcements. Appendix A provides the script used during announcements. Participants' ages ranged from 18 to 43 ($M = 23$). None of the participants disclosed having a documented disability. In exchange for their participation, participants received 0.5% of extra credit towards their final course grade for each visit to the laboratory. Experimental sessions took place in a small research room measuring 2.21 m by 2.03 m by 2.44 m. The research room contained a table, chair, experimental materials, and one bin located on the center-right of the table for completed products. A one-way mirror separated the research room from an observation room of the same dimensions.

Materials

Tasks. Participants in the present study completed four simulated office tasks: folding brochures, stuffing envelopes, collating packets, and filing timesheets. A local organization provided a double-sided brochure measuring 21.6 cm by 35.6 cm for the folding task. The

experimenter instructed participants to fold the brochure in half and place each one in the completion bin located on the table. The materials for stuffing envelopes included one pink and one purple flyer announcing a community event each measuring 21.6 cm by 10.2 cm and a box of 500 envelopes measuring 24.1 cm by 11.4 cm. The experimenter instructed participants to place one pink flyer and one purple flyer into the envelope and then place the stuffed envelope in the completion bin located on the table. The third simulated office task entailed collating packets. The materials for this task included seven double-sided pages (21.6 cm by 27.9 cm) of a volunteer training manual for a local animal shelter. The experimenter positioned stacks of each page of the packet in two horizontal rows centered in front of the participant (four stacks on the top row, three stacks on the bottom row) as well as a stapler in the open space on the bottom row on the right. Thus, the packet pages and stapler created a two by four grid. The experimenter instructed the participants to gather one page from each stack, staple the packet in the corner, and then place the packet in the completion bin. For the remaining task, the experimenter created four different time sheets for 30 arbitrary “employees”, which yielded 120 time sheets. The time sheets were pseudo-randomized and placed on the table along with a mobile bin containing 30 hanging files, one for each of the arbitrary “employees.” Files were organized in alphabetical sequence by first name in a general sense, but were not alphabetized within each letter category (e.g., all first names beginning with A were first, but were not alphabetized within the “A” group). The experimenter instructed the participants to identify the name on the time sheet and file it in the corresponding folder. Appendices B, C, D, and E contain sample materials for each task. Table 1 provides the instructions delivered to participants for each task.

Experimental Design and Procedure

The effects of four types of feedback sequences on participant performance were evaluated using a multi-element design embedded within an ABC design. During the experimental manipulation, each simulated office task was assigned to a feedback sequence condition, which was counterbalanced across participants. That is, each feedback sequence was associated with a different task for each participant. The order of tasks was also pseudo-randomized and determined by a random number generator in blocks of four sessions.

Upon arriving, the experimenter greeted the participant and asked him or her to sit in the chair at the table in the research room. At this time, participants were also instructed to refrain from using their mobile devices for the duration of the study. Participants provided informed consent (Appendix F) and demographic information (Appendix G) during their first visit prior to beginning the experimental procedure. Eight to 10 sessions were conducted during each visit to the laboratory, which were scheduled 2 to 3 days per week (i.e., 16 to 30 sessions were conducted weekly). A session lasted 5 min and involved the completion of one of the simulated office tasks.

Baseline. The purpose of baseline was to measure performance during all tasks in the absence of feedback as well as to obtain a mean baseline rate for each task. During this phase, the experimenter presented the materials on the tabletop, provided instructions to participants about how to perform each task (Table 1), and asked them to complete the simulated office task for 5 min. Participants were also informed that after 5 min elapsed, they would hear a knock on the window separating the two rooms as an indicator to stop performing the task. During each session, the experimenter observed the participant through the one-way mirror and recorded any unusual behavior that could affect the participant's rate of performance. After 5 min, the experimenter knocked on the window, entered the research room, gathered the session materials,

and then began the next session. Participants did not receive feedback for any of the tasks. Baseline continued until the participant completed each of the four tasks a minimum of three times and rate of performance was stable based upon visual inspection.

Feedback manipulation. The purpose of the feedback manipulation phase was to evaluate the effects of four feedback conditions on participant performance. One of the feedback conditions included a control condition during which the experimenter did not deliver feedback. The remaining three conditions included differing sequences of feedback composed of one specific positive statement (e.g., “I like how you kept the brochures organized in a neat pile”), one general positive statement (e.g., “You are doing a wonderful job”), and one corrective statement (e.g., “Next time, make sure that all of the time sheets are facing forward before filing them”). Specific feedback – both positive and corrective – was defined as feedback that explicitly referenced information about observable behavior relevant to correct performance of the task. The general positive statement was defined as a social praise statement that did not provide information specific to task performance. The three sequences of feedback included (1) the feedback sandwich, or the delivery of a positive statement followed by a corrective statement and another positive statement (PCP); (2) a positive-positive-corrective (PPC) sequence; (3) and a corrective-positive-positive (CPP) sequence. The experimenter selected these particular sequences in order to hold the ratio of positive to corrective statements constant and only vary the sequence in which they were delivered. The specific positive statement was always the first positive statement and the general positive statement was always the second positive statement presented in the sequence. Appendix H lists the feedback statements used in the study, which were composed prior to beginning the experiment. The experimenter did not deliver feedback statements that contained information directly related to the participants’ rate of performance.

Instead, the feedback statements included information about how well the participant completed the task according to the instructions given. All feedback contained accurate information.

Four participants received feedback immediately prior to completing the next session (i.e., pre-session feedback). That is, the experimenter delivered the feedback sequence corresponding to the subsequent task. The feedback statements delivered to participants contained information regarding performance the previous time he or she completed the task. After delivering the feedback, the experimenter placed the materials for the task on the table and left the room for the duration of the session. The remaining four participants received feedback immediately after the completion of each session (i.e., post-session feedback). After immediately signaling the end of a session, the experimenter stood next to the participant and delivered the feedback sequence corresponding to the completed task. After delivering feedback, the experimenter left the room and returned with the materials for the next experimental session. During pre- and post-session feedback delivery, a condition-correlated stimulus (i.e., a colored clipboard) was held in front of the experimenter's body in view of the participant. A different color was associated with each feedback condition. Clipboards were not used during baseline. The feedback manipulation phase continued until the participant completed each of the four tasks a minimum of three times and until stability or a clear pattern (e.g., trend, consistent variability) emerged.

Choice. The purpose of the choice phase was to evaluate participant preference for the feedback conditions using a concurrent chains arrangement. The experimenter placed the materials for each task on colored clipboards (i.e., the condition-correlated stimuli used during feedback manipulation) and centered them horizontally from left to right on the table in front of each participant. The order of the horizontal array varied for each choice presentation such that

the experimenter moved the task placed on the far left to the far right end of the array on the next choice trial while shifting each of the other tasks one position left. The experimenter instructed the participants to “Choose whichever task you would most like to complete next. You may select any task you wish even if you selected it previously.” The participants’ selection response (FR1) comprised the initial link of the concurrent chains arrangement. In the terminal link, participants completed the selected office task for 5 min and received the feedback sequence associated with that task in an identical format as the feedback manipulation phase.

Brief oral interview. The purpose of the brief oral interview was to gain supplemental information that might provide insight into findings and trends observed in the feedback manipulation and choice phases. At the conclusion of the choice phase, the experimenter removed all of the materials from the room and returned with a sheet of questions (Appendix J) and a pen. Seated to the left of the participant, the experimenter informed the participant that there were no right or wrong answers, and if they were unsure, “I don’t know” was an acceptable answer. Participants were then asked a series of questions regarding (1) why they preferred the task(s) selected during the choice phase, (2) if they noticed the varying sequences of feedback, (3) which, if any, feedback sequence they preferred, and (4) if they indicated a preference, why they preferred that sequence.

Dependent Variables and Response Measurement

Three dependent variables were measured during this study: percent change, participant selection responses, and participant verbal responses to the brief oral interview. To evaluate feedback efficacy, the percent change in rate from baseline to the feedback manipulation phase was calculated. This dependent variable was computed after a series of calculations. First, the frequency of permanent products completed at the conclusion of each 5-min experimental

session was converted to a rate/min by dividing the total number of permanent products by 5. Next, the mean rate of stable baseline performance for each task was calculated by summing the observed rate of performance for the last three baseline sessions and dividing by three. Finally, percent change was calculated by subtracting the mean baseline rate/min from the observed rate/min during feedback manipulation, dividing this difference by the mean baseline rate/min, and multiplying by 100 to yield a percentage. To evaluate participant preference, the number of initial link selections in the concurrent chains arrangement during the choice phase was calculated as a second dependent variable. Third, verbal responses to the brief oral interview were hand written by the experimenter.

Data Analysis

Mean Percent Change. For each feedback sequence condition, the mean percent change was calculated by summing the observed percent change for each session in the feedback manipulation phase for that condition and dividing by the number of sessions. In addition, the mean of the last three sessions in the feedback manipulation phase was calculated by summing the observed percent change for each session for that condition and dividing by three.

Nonparametric Statistics. Two nonparametric statistical analyses were used to evaluate whether the percent change in rate of performance from baseline mean was differentially influenced by the feedback sequence. First, a Kruskal-Wallis one-way analysis of variance (ANOVA) by ranks was conducted to examine whether there were statistically significant differences across feedback conditions. Next, a Dunn's (Bonferroni) Multiple Comparison Test was conducted to determine the specific conditions in which performance differed significantly.

Interobserver Agreement and Procedural Fidelity

An independent, second observer recorded data on the mean percent change and participant selection responses for a minimum of 38% of sessions for each condition and for each participant in order to calculate interobserver agreement (IOA). For agreement on participant rate, IOA was calculated by dividing the lower rate by the higher rate and multiplying by 100 to yield a percentage. For agreement on participant preference, IOA was calculated by dividing the number of agreements on tasks selected by the participant by the total number of selections and multiplying by 100 to yield a percentage. IOA averaged 99% (range, 99% - 100%). IOA was not calculated for participant responses during the brief oral interview. The means and ranges of agreement for each participant are summarized in Table 2.

An independent, second observer was also present during a minimum of 38% of the sessions and collected data on the experimenter's implementation of the experimental procedures (i.e., procedural fidelity). To measure procedural fidelity, the observer completed a task analysis of the experimenter's activities during the sessions (Appendix I). Procedural fidelity was calculated by dividing the number of correctly implemented steps by the total number of steps in the procedure and multiplying by 100. Procedural fidelity ranged from 91% to 100% ($M = 99\%$). The means and ranges of fidelity for each participant are summarized in Table 3.

Results

Efficacy

Figures 1 to 4 depict data for the participants receiving pre-session feedback and Figures 5 to 8 depict data for participants receiving post-session feedback. Rate of performance during baseline is depicted in the top panel, and percent change in rate during the feedback manipulation and choice phases is depicted in the bottom panel of each figure. In the bottom panel, a zero percent change represents performance equal to the mean rate for the last three data points during

baseline and is depicted by the dotted horizontal line in all figures. Thus, data points above the dotted horizontal line represent an increase in percent change, and data points below represent a decrease in percent change from the mean baseline rate. Because participants had not yet received feedback during the first session of each task during feedback manipulation, these data are presented separately as denoted by the minor phase change line.

Pre-session feedback. Figures 1 to 4 depict data for the participants receiving pre-session feedback. During baseline, data were stable for all participants by the fourth exposure to each task (i.e., session 16).

Joey. Figure 1 depicts data for Joey. During baseline (top panel), the mean rate per minute for Joey was 2.13 for collating packets, 4.93 for folding brochures, 8.93 for filing time sheets, and 4.47 for stuffing envelopes. During feedback manipulation (bottom panel), performance in the CPP condition was variable and, on average, higher than baseline with an increasing trend ($M = 18.49\%$; range -1.12 to 34.83). Performance during the feedback sandwich condition (PCP) showed some variability and remained above the mean baseline rate ($M = 13.23\%$; range, 4.76 to 23.81). In general, performance in the PPC condition was below the mean baseline rate ($M = -4.65\%$; range, -15.56 to 6.67). With the exception of two sessions, performance in the no feedback condition was stable and above the mean baseline rate ($M = 15.40\%$; range, -18.37 to 34.69). Overall, for Joey, the CPP was the most efficacious and the PPC sequence was the least efficacious.

Cookie. Figure 2 depicts data for Cookie. During baseline, the mean rate per minute for Cookie was 3.13 for collating packets, 5.93 for folding brochures, 6.67 for filing time sheets, and 5.73 for stuffing envelopes. During feedback manipulation, performance in the CPP condition showed some initial variability but remained stable and below the mean baseline rate for the

remainder of the phase ($M = -21.63\%$; range, -25.42 to -8.47). Performance in the PCP condition was variable with an initial decrease to -30 percent, followed by a return to the mean baseline rate and a subsequent decrease below -20 percent ($M = -11.40\%$; range, -29.82 to 5.26). At the start of the phase, performance in the PPC condition was near the mean baseline rate but showed a gradual reduction over time ($M = -20.97\%$; range, -35.48 to 3.23). Performance in the no feedback condition was slightly above baseline mean but gradually decreased and was approximately equal to the baseline mean by the end of the session ($M = 8.58\%$; range, -1.49 to 16.42). In sum, by the end of the feedback manipulation phase all conditions were at or below the mean baseline rate. Overall, the no feedback condition was the most efficacious and the CPP condition was the least efficacious.

Tina. Figure 3 depicts performance for Tina. During baseline, the mean rate per minute for Tina was 3.67 for collating packets, 7.20 for folding brochures, 10.27 for filing time sheets, and 6.87 for stuffing envelopes. During feedback manipulation, performance in the CPP and no feedback conditions showed a similar pattern with an initial decrease and then a return to the mean baseline rate by the end of the phase (CPP: $M = -10.40\%$; range, -24.31 to 4.80; no feedback: $M = -2.52\%$; range, -12.81 to 8.99). Performance in the PCP condition was variable but generally remained near the baseline mean ($M = -3.28\%$; range, -24.05 to 14.90). Performance in the PPC condition was initially near the mean baseline rate with a marked decline in mean percent change over the course of the phase ($M = -37.04\%$; range, -52.78 to -5.55). By the end of feedback manipulation performances in the no feedback, CPP, and PCP conditions were near the mean baseline rate whereas performance in the PPC condition was well below the mean baseline rate. Overall, the no feedback condition was the most efficacious and the PPC sequence was the least efficacious.

Mary-Therese. Figure 4 depicts performance for Mary-Therese. During baseline, the mean rate per minute for Mary-Therese was 2.22 for collating packets, 7.40 for folding brochures, 8.00 for filing time sheets, and 5.27 for stuffing envelopes. During feedback manipulation, performance in the CPP condition was initially near the mean baseline rate with a gradual decrease in percent change towards the end of the phase ($M = -4.27\%$; range, -18.82 to 8.11). In the PCP condition there was a substantial decrease in percent change over the course of the phase ($M = -31.42\%$; range, -51.35 to -8.11). Performance in the PPC condition showed an initial decrease but remained stable and above the mean baseline rate for the duration of the phase ($M = 13.44\%$; range, 5.00 to 30.00). In the no feedback condition performance showed an initial increase, but returned to the mean baseline rate at the conclusion of the phase ($M = 10.27\%$; range, -8.92 to 25.24). Overall, the PPC sequence was the most efficacious and the PCP sequence was the least efficacious.

In sum, these data suggest that the no feedback condition was the most efficacious sequence for two of four participants receiving pre-session feedback. The CPP and PPC conditions each were the most efficacious condition for one of the four participants. For three of four participants, the PPC condition was the least efficacious, resulting in the greatest decrease in percent change. The PCP sequence was the least efficacious for the fourth participant.

Post-session feedback. Figures 5 to 8 depict data for participants receiving post-session feedback. During baseline, the data were stable for all participants by the fourth exposure to each task (i.e., session 16), with the exception of Mary-Angela who reached stability after three exposures to each task (i.e., session 12).

Mary-Angela. Figure 5 depicts data for Mary-Angela. During baseline, the mean rate per minute for Mary-Angela was 3.08 for collating packets, 6.87 for folding brochures, 9.00 for

filing time sheets, and 6.80 for stuffing envelopes. During feedback manipulation, performance in the CPP condition was variable but depicted a positive percent change with an increasing trend ($M = 27.33\%$; range, 11.60 to 39.50). Performance during the PCP condition approximated the mean baseline rate though there was a slight increase at the start of this phase ($M = -0.28\%$; range, -6.80 to 7.80). In the PPC condition, performance was stable and above the mean baseline rate throughout the phase ($M = 15.30\%$; range, 11.90 to 18.70). Except for one session, compared to the mean baseline rate Mary-Angela showed a decrease in percent change during the no feedback condition ($M = -13.25\%$; range, -20.60 to 0.00). In sum, CPP was the most efficacious sequence and the no feedback condition was the least efficacious.

Gina. Figure 6 depicts data for Gina. During baseline, the mean rate per minute for Gina was 2.33 for collating packets, 12.17 for folding brochures, 4.60 for filing time sheets, and 5.13 for stuffing envelopes. It is important to note that during feedback manipulation Gina demonstrated a positive percent change in the CPP condition except during sessions in which she stopped performing the filing task (sessions 16, 18, 21, and 32). Instead of filing, she alphabetized the file folders, which she was never instructed to do. As a result, her performance during those sessions is deflated and shows a negative percent change. Because these sessions do not depict actual performance on the task, these data points are excluded from analysis. During the sessions in which Gina performed the filing task, her performance showed a positive percent change with an increasing trend ($M = 17.39\%$; range, 13.04 to 26.09). Performances during the PCP and PPC conditions were similar in level and trend, generally stable, and below the mean baseline rate (PCP: $M = -15.39\%$; range, -22.75 to -5.58; PPC: $M = -9.78\%$; range, -18.13 to 1.36). Performance during the no feedback condition was below the mean baseline rate and showed a gradual reduction over time ($M = -26.28\%$; range -7.97 to -49.06). Overall, during

the sessions in which Gina performed the filing task, the CPP condition was the most efficacious and the no feedback condition was the least efficacious.

Dina. Figure 7 depicts data for Dina. During baseline, the mean rate per minute for Dina was 2.18 for collating packets, 4.33 for folding brochures, 6.47 for filing time sheets, and 4.60 for stuffing envelopes. During feedback manipulation, performance in the CPP condition was initially variable, but stabilized and remained below the mean baseline rate after the third exposure to the condition ($M = -24.45\%$; range, -34.78 to 4.35). For the PCP condition, performance was below the mean baseline rate at the start of the session (-25.81%) but increased by the third PCP session and remained stable near the mean baseline rate for the remainder of the phase ($M = -9.20\%$; range, 2.01 to -25.81). Performance in the PPC condition was variable with an initial decrease followed by a gradual increase, but remained below the mean baseline rate for the entire phase ($M = -30.71\%$; range, -49.19 to -7.60). Similarly, performance in the no feedback condition was variable and remained below the mean baseline rate ($M = -16.29\%$; range, -26.61 to -8.26). All of the feedback sequences reduced performance relative to baseline; however, the PCP sequence was the most efficacious relative to the other conditions and the CPP sequence resulted in the greatest decrease in percent change.

Veronica. Figure 8 depicts data for Veronica. During baseline, the mean rate per minute for Veronica was 2.93 for collating packets, 2.73 for folding brochures, 8.06 for filing time sheets, and 3.13 for stuffing envelopes. During feedback manipulation, performances in the CPP and no feedback conditions showed some variability but were generally stable and remained near the mean baseline rate (CPP: $M = 1.53\%$; range, -12.09 to 9.98; no feedback: $M = -2.16\%$; range, -8.19 to 4.22). Performance in the PCP condition initially increased to 50 percent above the mean baseline rate but then decreased and stabilized at 20 percent ($M = 31.02\%$; range, 21.41 to

40.58). Performance in the PPC condition was initially stable and low but then showed a gradual decrease over time with performance reaching -38 percent at the conclusion of this phase ($M = -23.94\%$; range, -38.57 to -18.09). Overall, the PCP sequence was the most efficacious, and the PPC sequence was the least efficacious.

In sum, the data indicate that the CPP and PCP conditions were each the most efficacious for two of four participants receiving post-session feedback. The no feedback condition was the least efficacious for two of four participants, while the CPP and PPC conditions were the least efficacious for one participant each.

Summary of pre- and post-session efficacy data. The mean rates of performance for participants receiving pre- and post-session feedback are provided in Tables 4 and 5, respectively. While the overall means provide an important measure, it obscures any trend present in the data and does not accurately depict the steady state data at the end of the phase. In order to incorporate this information, Tables 4 and 5 depict the mean of all data points (ALL) and the mean of the last three steady state data points (SS) during the feedback manipulation phase. For both tables, the green italicized font denotes performance with the highest percent change. The red italicized font denotes performance with the lowest percent change.

For pre-session feedback (Table 4), the no feedback condition resulted in the highest number of participants with improvements ($n = 2$) and the highest aggregated mean across participants. The PPC condition resulted in the highest number of participants with *decreases* in percent change ($n = 2$ the mean of all data points; $n = 3$ for the steady state mean) and the lowest aggregated mean (for ALL and SS) across participants. Overall, the no feedback condition is the most efficacious and the PPC condition is the least efficacious for pre-session feedback. For post-session feedback (Table 5), the CPP ($n = 2$) and PCP ($n = 2$) conditions were the most

efficacious. However, the CPP sequence resulted in the highest aggregated mean across participants. The no feedback condition resulted in the highest number of participants with decreases ($n = 2$), and the lowest aggregated mean across all participants. Overall, the CPP sequence is the most efficacious and no feedback is the least efficacious for post-session feedback. Further, to aid in visual inspection of the data across all participants Figure 9 depicts the means of the last three data points for each participant, grouped by condition and feedback sequence. The no feedback condition resulted in performance improvements for the most number of participants ($n = 4$) all of whom received pre-session feedback. However, the CPP sequence resulted in larger gains in performance, although only for three participants (two of whom received post-session feedback). The PPC and PCP conditions each resulted in performance decreases for 6 participants, although greater decreases in performance were observed in the PPC condition.

Excluding the no feedback condition from analysis yields very different findings. When comparing *only* the conditions during which the experimenter actually provided feedback, the CPP and PPC conditions were the most and least efficacious, respectively, for both the pre- and post-session feedback groups. Thus, the CPP condition produced the highest aggregated mean followed by the PCP condition and, finally, the PPC condition ($CPP > PCP > PPC$).

Preference

Participant preference was assessed during the choice phase using a concurrent chains arrangement in which participants were asked to select whichever task they would most like to complete next.

Pre-session feedback. Figures 1 to 4 depict preference data for the participants receiving pre-session feedback. Table 6 depicts the total number of selections separated by condition and

task for participants receiving pre-session feedback. Table 8 provides the selection responses for both pre- and post-session feedback. Additionally, Table 9 depicts the first selection responses made by all participants.

Joey. Joey (Figure 1) demonstrated a slight preference for the no feedback condition, which he selected for half of the opportunities (i.e., four times). Joey selected the PPC and PCP conditions twice each. His performance in the no feedback and PPC conditions was consistent with performance during the feedback manipulation phase (no feedback: $M = 17.35$; PPC: $M = -5.56$). In the PCP condition, the data demonstrated a steep decrease below the baseline mean ($M = -4.77$). Joey did not select the CPP condition during this phase.

Cookie. Cookie (Figure 2) demonstrated a preference for the PCP and PPC conditions, selecting each three times. Cookie also selected the CPP and no feedback conditions one time each. Her performance (13.43) was within the range of performance she demonstrated during the feedback manipulation phase on the one occasion she selected the no feedback condition. Cookie's performance during the PPC condition was slightly higher ($M = -16.30$) and her performance during the PCP and CPP conditions was lower than that during the feedback manipulation phase (PCP: $M = -27.48$; CPP: -39.59).

Tina. Tina (Figure 3) demonstrated preference for the no feedback condition, selecting this condition four times. Tina also selected the CPP and PPC conditions one time each, but did not select the PCP condition at any time during this phase. Her performance in the no feedback condition was stable and slightly higher than her performance during the feedback manipulation phase ($M = 6.27$). Her performance in the PPC condition was within the overall range during the feedback manipulation phase (-38.89). Tina's performance in the CPP condition was markedly lower during the choice phase (-38.86).

Mary-Therese. Mary-Therese (Figure 4) did not demonstrate a clear preference. She selected the no feedback condition three times, the CPP and PCP conditions two times each, and the PPC condition once during this phase. Her performance during the choice phase in the PPC and no feedback conditions was equal the mean baseline rate, which was slightly lower than mean performance during the feedback manipulation phase (PPC: -2.50; no feedback: $M = -1.01$). Her performance in the PCP and PPC conditions was consistent with mean performance during feedback manipulation (PCP: $M = -33.79$; CPP: $M = -14.42$).

Post-session feedback. Figures 5 to 8 depict preference data for participants receiving post-session feedback. Table 7 depicts the total number of selections separated by condition and task for participants receiving post-session feedback. Table 8 provides the selection responses for both pre- and post-session feedback. Additionally, Table 9 depicts the first selection responses made by all participants.

Mary-Angela. Mary-Angela (Figure 5) selected the CPP and PCP conditions equally (three times each). Mary-Angela selected the PPC and no feedback conditions once each. During the choice phase, her performance in the CPP condition was above the observed mean in the feedback manipulation phase ($M = 30.23$). Except for the last session, performance during the PCP condition remained near the mean baseline rate, consistent with performance in the feedback manipulation phase ($M = 4.83$). Performance in the PPC condition was slightly above the mean in the feedback manipulation phase (20.90). In the no feedback condition, performance did not differ from the feedback manipulation phase (-8.80).

Gina. Gina (Figure 6) selected the CPP and PPC conditions three times each. She selected the no feedback condition twice during the choice phase, but did not select the PCP condition at any time during this phase. During the CPP condition, Gina no longer alphabetized

the files during sessions (an error she made during feedback manipulation), which is supported by the positive percent change ($M = 23.19$). Her performance in the PPC condition slightly increased from the feedback manipulation phase, but remained at the mean baseline rate ($M = 0.07$). Consistent with the feedback manipulation phase, performance in the no feedback condition was low and stable ($M = -41.66$).

Dina. Dina (Figure 7) demonstrated a slight preference for the no feedback (four selections) and the PPC (three selections) conditions. The CPP condition was selected once. Dina did not select the PCP condition at any time during the choice phase. Performance in the choice phase was generally consistent with performance during the feedback manipulation phase for the PPC ($M = -24.56$) and CPP (-39.13) conditions. Performance in the no feedback condition was stable and slightly above the mean observed in the feedback manipulation phase ($M = -5.96$).

Veronica. Veronica (Figure 8) did not demonstrate preference for any of the tasks. During this phase, she selected each of the tasks two times. Her performance in the PPC and no feedback conditions was consistent with performance during the feedback manipulation phase (PPC: $M = -35.16$; no feedback: $M = -4.47$). Veronica's performance in the CPP and PCP conditions was lower than during the previous phase (CPP: $M = -15.75$; PCP: $M = -4.15$).

Summary of pre- and post-session feedback preference data. In sum, participants receiving pre-session feedback (Table 6) selected the no feedback condition ($n = 12$) with the highest frequency and the CPP sequence with the lowest frequency ($n = 4$). With respect to the task, participants receiving pre-session feedback selected the collating packets task with the highest frequency ($n = 11$) and the filing time sheets task with the lowest frequency ($n = 2$). Participants receiving post-session feedback (Table 7) selected the PPC, CPP and no feedback

conditions an equal number of times ($n = 9$). The PCP condition was selected with the lowest frequency ($n = 5$). With respect to the task, the folding brochures task was selected with the highest frequency ($n = 10$) and the filing time sheets task was selected with the lowest frequency ($n = 6$) for participants receiving post-session feedback. When selections are aggregated across both feedback timings (Table 8) the no feedback condition was selected with the highest frequency ($n = 21$) and the PCP condition was selected with the lowest frequency ($n = 12$). With respect to the task, the collating packets task was selected with the highest frequency ($n = 20$) and the filing time sheets was selected with the lowest frequency ($n = 8$). Because participants selected a variety of tasks to avoid boredom (discussed below), the first selection response may be more indicative of participant preference. Table 9 includes the first selection responses of all the participants for both feedback timings during the choice phase. The no feedback condition was selected with the highest frequency ($n = 3$) and the PPC condition was selected with the lowest frequency ($n = 1$). With respect to the task, stuffing envelopes was selected with the highest frequency ($n = 5$) and filing time sheets was never selected ($n = 0$).

Nonparametric Statistics

A nonparametric ANOVA (Kruskal-Wallis) was used to determine whether the differences in percent change between conditions could be obtained by chance. The results of the Kruskal-Wallis showed that the differences in percent change between conditions were statistically significant for all participants (Joey: $H(3) = 15.84, p < .01$; Cookie: $H(3) = 17.03, p < .001$; Tina: $H(3) = 17.23, p < .001$; Mary-Therese: $H(3) = 20.57, p < .001$; Mary-Angela: $H(3) = 12.46, p < .001$; Gina: $H(3) = 10.49, p < .05$; Dina: $H(3) = 11.79, p < .01$; Veronica: $H(3) = 23.23, p < .0001$). Subsequently, a Dunn's (Bonferroni) Multiple Comparison Test was conducted to determine which conditions differed significantly. Table 10 contains the results for

each participant. There were no significant differences between performance in the CPP and PCP conditions for any of the participants. Significant differences were found between the PCP and PPC conditions for Joey, Tina, Mary-Angela, Dina, and Veronica. Significant differences were also found between the PCP and no feedback conditions for Mary-Angela and Veronica. The statistical analyses also revealed significant differences between the CPP and PPC conditions for Joey and Veronica as well as between the CPP and no feedback conditions for Cookie, Mary-Therese, and Gina. Finally, significant differences were found between the PPC and no feedback conditions for Joey, Cookie, and Tina.

Brief Oral Interview

At the conclusion of the study, the experimenter conducted a brief oral interview with each participant. Participants were asked open-ended questions about their observed selections during the choice phase. When the experimenter asked participants about their preference for the task, four participants reported a preference for collating packets (Cookie, Tina, Mary-Angela, and Dina), three for folding brochures (Joey, Cookie, and Dina), two for filing time sheets (Gina and Veronica), and two indicated preference for the stuffing envelopes task (Tina and Mary-Therese). Five of these selections were associated with the no feedback condition, four with the CPP sequence, two with the PPC sequence, and none were associated with the PCP sequence. Note that several of the participants (Cookie, Tina, and Dina) indicated preference for two of the tasks. Interestingly, the first selection in the choice phase matched the verbal report of task preference for five participants. Joey, Dina, and Mary-Therese verbally indicated preference for the task associated with the no feedback condition. Mary-Angela and Tina verbally indicated preference for the task associated with the CPP condition. Verbal reports of preference for these five participants were consistent with their first selections during the choice phase.

Next, the experimenter asked participants if they noticed that the order of feedback differed depending on the task. Two participants (Joey and Dina) reported that they did not notice anything about the feedback. Five participants (Cookie, Tina, Mary-Therese, Mary-Angela, and Gina) reported that they noticed that in one condition the experimenter did not deliver feedback (no feedback condition), but they did not notice anything about the sequence of feedback statements in the other conditions. The remaining participant, Veronica, reported that in one condition the experimenter did not deliver feedback, and that when feedback was delivered it always contained one positive statement, one corrective statement, and one praise statement, but did not notice the varying order of the statements.

After the experimenter informed the participant of the different sequences, participants were asked about their preferences for feedback sequence. Four participants reported not having a preference (Joey, Mary-Therese, Gina, and Dina), two of the participants reported preference for the CPP sequence (Mary-Angela, and Veronica), and Cookie reported preference for the PCP sequence. It is important to note that Tina initially indicated that she preferred the no feedback condition; however, she stated that while she preferred not to receive any feedback she believed she was more successful at performing the task for the condition in which she received the CPP sequence, which is consistent with her first selection response. Participant verbal reports for preference were consistent with the most efficacious sequence for three of 8 participants (Tina, Mary-Angela, and Dina).

Discussion

The purpose of the present study was to evaluate the efficacy of and preference for feedback sequence, particularly the feedback sandwich method. This study also evaluated the influence of the timing of feedback delivery to participants. Overall, the present findings suggest

that the sequence of feedback statements differentially influences performance. For participants who experienced feedback before performing the simulated work tasks (i.e., pre-session feedback), the no feedback condition was the most efficacious and the PPC sequence was the least efficacious. For participants who received feedback immediately following performance of the simulated work tasks (i.e., post-session feedback), the CPP sequence was the most efficacious and the no feedback condition was the least efficacious. Interestingly, the no feedback condition (which served as a control condition) produced better performance during pre-session feedback, but worse performance during post-session feedback for two of four participants. Excluding the no feedback condition from analysis yields very different findings. When comparing *only* the conditions during which the experimenter actually provided feedback, the CPP and PPC sequences were the most and least efficacious, respectively, for both the pre- and post-session feedback groups. Thus, the timing of feedback does not appear to influence performance unless incorporating a no feedback condition.

The data also indicate that participants may have differential preferences for particular feedback conditions or sequences. Participants who received pre-session feedback demonstrated a stronger preference for the no feedback condition, selecting it for 12 out of 30 opportunities. Participants who received post-session feedback showed equal preference for all conditions except the feedback sandwich (PCP) which was selected 5 times.

Contributions to the Literature

The present study contributes to the literature on performance feedback in several ways. Most importantly, the present study measured the effects of feedback sequence on observable and measureable work performance. Previous research on the sequence of feedback measured hypothetical constructs such as “emotional reaction” or “desirability” on likert-type scales (e.g.,

Davies & Jacobs, 1985). Without an evaluation of how the various sequences of feedback affects work performance the efficacy of such sequences is unknown, a gap addressed by the current study.

These results fail to support claims of efficacy and preference for the feedback sandwich, which has important implications for practice. As discussed previously, the feedback sandwich has gained popularity in many areas. It has been recommended for use with employees, athletes, individuals in the health care profession, and likely many more vocations (Dohrenwend, 2002; Glover, 2000; Hanson, n.d.; Shread, 2012). These results demonstrate that the feedback sandwich method may not be the most efficacious method for delivering feedback, and in some cases may negatively influence the performance of individuals who receive feedback in this format. It is important to note that the feedback sandwich is not the only sequence that has been recommended in practice. In his new book on academic mentoring, Zachary (2012) recommends that mentors provide feedback in the form of positive-positive-positive-corrective. The findings of the present study also do not support this claim. Although the sequence proposed by Zachary contains four feedback statements (whereas this study evaluated three statements), the present results suggest that ending feedback with a corrective statement may produce decreases in performance.

Given that reviews of the literature on performance feedback have demonstrated that characteristics of feedback are differentially effective (e.g., Alvero et al., 2001), the present results suggest that the sequence and timing of feedback may be important characteristics that warrant inclusion in a classification system. Researchers do not consistently describe the timing or the sequence of feedback in their published works. For example, Nigro-Bruzzi and Sturmey (2010) reported that the experimenter delivered both positive and corrective statements regarding

performance during role-plays, but never specified when or in what sequence these were delivered. Lebbon, Austin, Rost, and Stanley (2011) provided positive and corrective verbal feedback, but do not describe the sequence or the timing (other than feedback was provided after performance). Since the feedback sequence produced differential outcomes for participants in this study, the order of positive and corrective statements may be an important factor that authors should specify when reporting their research. The present findings indicate that feedback timing only influences performance during conditions in which the experimenter did not deliver feedback, which may better represent real-world work conditions. That is, supervisors are unlikely to provide feedback as frequently as it was provided in the present study. It is also possible that some employee responsibilities or tasks will not receive regular feedback. In these instances, then, the timing of feedback may be an important variable influencing employee performance. Thus, researchers are encouraged to better describe both the timing and the sequence of feedback in the published literature.

Another contribution worth mentioning is the use of a reverse translation model. That is, the present study took an issue experienced in real-world settings and brought it into the laboratory to investigate under highly controlled conditions. This follows recent calls for developing experimental preparations in this way (e.g., Mace & Critchfield, 2010). Translational research, including the present study, is important because it extends basic behavioral methodology to questions of social importance by examining everyday behavioral phenomenon in a controlled setting. Such research generates new questions and advances both discovery and application.

Conceptual Analysis of Behavioral Mechanisms

Function of feedback. Although this study did not explicitly evaluate the function of feedback, an interpretation of its potential function may inform the present findings and suggest future areas of research. Researchers have proposed a number of behavioral mechanisms that may serve as the function of feedback. First, feedback may serve an antecedent function such as that of a discriminative stimulus (Duncan & Bruwelheide, 1986). For feedback to function as a discriminative stimulus, it would need to evoke behavior immediately and be differentially correlated with a consequence. The most obvious condition where this function may apply is during pre-session feedback since participants received feedback *before* the opportunity to emit behavior. It is unlikely that pre-session feedback functioned as a discriminative stimulus because there were no programmed consequences in the present study and any non-programmed consequences not controlled by the experimenter were delayed. Moreover, when there is a delay between feedback and the response (regardless of which comes first), feedback does not meet the definition of a discriminative stimulus (Agnew & Redmon, 1993).

Since feedback does not fit the strict definition of a discriminative stimulus, many have argued that feedback functions primarily through rule control (e.g., Peterson, 1982). Rules are verbal stimuli that describe behavioral contingencies expressed in “*if...then...*” statements (Agnew & Redmon, 1993). That is, *if* you perform X behavior, *then* Y consequence will follow. The feedback delivered to participants in the present study did not include both components of an “if... then” statement. For example, a sample statement participants received is “I really like how you kept the pile of brochures organized. Next time make sure you crease the line all the way. But I appreciate your hard work.” Without programmed consequences, the feedback only describes the “if” portion of a rule. Agnew and Redmon (1993) argue that if a statement does not describe a complete contingency it does not fit the classification of a CSS and should not be

called a rule. However, they also indicate that humans may develop rules about contingencies and perform according to their self-stated rules, regardless of their accuracy or the planned contingencies. Thus, participants may create their own *then* statement thereby completing the description of a full contingency and allowing the feedback to be considered a CSS. These self-stated rules may be accurate or inaccurate and describe contingencies that may result in performance improvements or decrements. For example, if participants create the rule, “If I crease the line of the brochure all the way, then the experimenter will let me leave the session early.” This rule would be inaccurate, but would likely result in an improvement in performance. Unfortunately, because the feedback contained information about quality, participants may have spent more time attending to these details, potentially resulting in a decrease in rate. The participant may also create the rule “If I crease the line of the brochure all the way, then nothing different will happen.” Because there were no programmed consequences, this rule is accurate and would likely result in a lower rate of performance (i.e., extinction is operating). The covert creation of various rules by participants may account for some of the idiosyncratic differences in the present data. Future research might ask participants about the types of rules they created, or program reinforcement into the experimental preparation to decrease the likelihood that participants will create inaccurate rules or rules that will negatively influence performance.

Schlinger and Blakely (1987) point out that rules do not fit the definition of a discriminative stimulus because rules do not immediately evoke behavior. Often, the rule affects the probability that the behavior will occur at the appropriate time. Thus, they argue that rules should be classified as function-altering stimuli wherein rules alter the function of other stimuli, such as discriminative stimuli or reinforcing stimuli, which directly control the behavior. The most obvious condition where this explanation may apply is during post-session feedback since

there is a delay lasting 5 minutes to several days between the delivery of feedback and the next opportunity to perform the task. That is, the delivery of feedback does not immediately evoke the behavior described by the feedback; instead, the feedback may alter the evocative function of the task materials (discriminative stimuli) and result in a change in performance the next time the task is presented (i.e., the appropriate time). Given the pseudo-random order of the conditions in the present study, participants who received post-session feedback would be asked to complete different tasks unrelated to the feedback they just received (e.g., a participant who was instructed to crease the line of the brochures across the entire page might be presented with the filing task next, not the folding brochures task). Thus, the feedback could not immediately evoke behavior. However, the next time the participant has an opportunity to complete the task related to that feedback, the task materials themselves (e.g., unfolded brochures) could evoke behavior change (e.g., appropriate creasing) as a result of the feedback received (e.g., function-altering effects). If feedback were to serve as a function-altering CSS, it may change the evocative or discriminative function of the materials whereby the presence of the materials would evoke work behavior. Unfortunately, the current study did not seek to evaluate whether feedback functioned as a function-altering CSS; thus, based on the data it is difficult to determine whether feedback functioned as such.

Alternatively, feedback might serve a reinforcement function. For feedback to function as a reinforcer, the delivery of feedback would need to occur immediately following performance and increase the probability of the behavior in the future. The most obvious condition where this function may apply is during post-session feedback since participants received feedback *after* the opportunity to emit behavior. The praise statement included in the feedback sequence may serve as a reinforcer given participants' learning history. However, the delivery of praise is too

delayed, even in post-session feedback, for it to serve as a reinforcer. When the temporal delay is too great, rule control (a la function-altering CSS) may be the means by which feedback influences performance. If feedback is as a function-altering CSS, it may change the function of some aspect of the task that reinforces work behavior. For example, completed work tasks accumulating in the bin may signal the conclusion of the 5-min session, which could function as a negative reinforcer for task completion. As a CSS, feedback may influence performance by altering the reinforcing function of completed work tasks. Well-controlled research evaluating the precise function of feedback is generally lacking. Thus, the function is presently unknown.

Compound stimuli. An interesting finding was obtained that warrants further discussion. When comparing *only* the conditions during which the experimenter actually provided feedback, the CPP condition produced the highest aggregated mean followed by the PCP condition and, finally, the PPC condition (CPP > PCP > PPC). Thus, it appears as though the more information that is presented before the corrective statement, the less efficacious the feedback. An interpretation of the order of the efficacy of the feedback sequences might be informed by the attention literature. Organisms differentially attend to stimuli present in the environment. Research has shown that when stimuli are presented as a compound stimulus the control of responding by each stimulus is influenced by several factors (e.g., Reynolds, 1961). These factors include the salience and history of reinforcement of that stimulus as well as the salience and history of reinforcement of the other stimuli presented in the compound (Fantino & Logan, 1979).

For example, Reynolds (1961) evaluated pecking responses of pigeons when two compound stimuli alternated on a multiple VI 3 min EXT schedule. Each compound stimulus consisted of a color and a shape. The key for the VI 3 min component was illuminated red with

a white triangle. The key for the EXT component was illuminated green with a white circle. Reynolds showed that responding eventually came under control of the red-triangle compound, not the green-circle compound (i.e., the pigeons learned to discriminate). Reynolds then presented each of the stimuli comprising the compound (triangle, circle, red light, green light) separately in a random order, during which responses were not reinforced. He found that the pigeons did not respond to either stimulus previously associated with EXT (i.e., circle, green light). The findings were mixed with respect to responding to either stimulus previously associated with reinforcement (i.e., triangle, red light). One pigeon responded in the presence of the triangle and the other pigeon responded in the presence of the red light. These findings demonstrate that organisms may attend to one component of a compound stimulus. With respect to the present study, perhaps participants attended differentially to the *first* component of the feedback sequence compound. If the corrective statement is the most efficacious component, participants who actually attended to this particular component—that, participants who received the corrective statement first as in CPP—would show the most gains in performance.

Blocking may also explain these findings. In blocking, the prior correlation of a stimulus with reinforcement prevents the development of effective stimulus control by a second stimulus when the two are presented together as a compound stimulus (Fantino & Logan, 1979). Potentially then, an individual's prior history with positive and corrective feedback may have changed the saliency of each of the individual feedback statements. The sequence of these statements could have interacted with their salience and, in turn, influence performance. Either of these explanations appear plausible; however, the experimental preparation was not designed to assess either of these experimentally.

Limitations and Future Directions

Despite the strengths and contributions of this study, several limitations exist that are worth noting. There is limited research on how the sequence and timing of feedback may affect employee performance in real-world settings. Without research to guide the experimental methodology, there is a risk that the present experimental question would produce employee performance decreases if conducted in an actual employment setting. To avoid this risk, the experimenter conducted the present study in a simulated work environment in a laboratory; thus, the generality of these findings to the organizational setting may be limited. As the body of literature on the sequence and timing of feedback grows, future research might focus on analogue research that more closely resembles a true organizational setting. Moreover, the analogue-nature of the present study made it impossible to tie performance to real-world differential outcomes, such as raises and promotions. Future research could address this limitation.

The feedback statements that the experimenter provided to participants included information regarding the quality of performance rather than information about the rate of performance. As a result, the feedback could have produced a *lower* rate of performance if participants slowed their rate to produce a higher quality product. Although participants demonstrated rate decreases during the feedback manipulation, performance also increased above the mean baseline rate. In these instances (e.g., CPP sequence for Mary-Angela), both the rate and quality of performance improved providing a stronger argument for the efficacy of the feedback sequences in which this was found. Unfortunately, it is unclear whether the experiment would yield the same results if the feedback included information regarding quantity or rate of performance. Future research may wish to provide feedback that includes information about the

rate of performance in order to determine what effects this information has on performance when included in the sequence of feedback.

Third, based on the results of the participant selection responses, it seems likely that the task with which the sequence was associated at least partially influenced preference. It appears that the filing task was the least preferred and selected only eight times out of 62 possible selections. The verbal reports of participants support this finding. Additionally, the monotony of the tasks influenced participant selections. That is, participants often selected a variety of the tasks during the choice phase; in fact, only one participant (Tina) ever selected the same task twice in a row. Participants reported that they varied selections in order to avoid boredom.

Another limitation is that when participants were asked about the various sequences during the brief oral interview, they reported noticing the difference between conditions in which they received feedback versus no feedback, but could not describe the differences between the sequences. Nevertheless, the sequences differentially influenced performance. Future research may wish to identify a method of making the individual statements within the sequence more salient in order to increase the likelihood that the participants will be able to discriminate between the various sequences.

Finally, the experimenter did not have a history of a supervisor-supervisee relationship with the participants. It seems likely that instances where a supervisee respects his or her supervisor and/or seeks supervisor praise, the positive statement could function as a powerful reinforcer. This arrangement was not possible given the experimental preparation. However, the experimenter served as the graduate teaching assistant for a course in which six of the eight participants were enrolled, which may have influenced the efficacy of the positive statement in a similar way.

Conclusion

The present study evaluated the efficacy of and preference for feedback sequence and timing. The results indicate that the sequence of feedback may be an important characteristic of feedback that influences performance. The timing of feedback may also influence performance, particularly when a no feedback condition is included. There is limited literature on the sequence and timing of feedback against which to compare these results. The results of future research on the sequence of feedback may inform optimal sequences and help to inform practice. Importantly, additional research is needed to determine the function of performance feedback.

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Table 1

List of Instructions Delivered for Each Task

Task	Instruction
Folding Brochures	In this task, you will be folding brochures. Each brochure should be folded in half with this side (<i>point to image</i>) serving as the front. You may place the completed brochures in this bin (<i>point to bin</i>). After five minutes, you will hear a knock on the window to let you know that you can stop, and I will return to collect the materials. Do you have any questions?
Filing Time Sheets	In this task, you will be filing time sheets. Each time sheet has a name at the top (<i>point to name</i>) that corresponds with one of the folders, in which you should place the time sheet. After five minutes, you will hear a knock on the window to let you know that you can stop, and I will return to collect the materials. Do you have any questions?
Stuffing Envelopes	In this task, you will be stuffing envelopes. Each envelope needs one pink and one purple flyer (<i>point to flyers</i>). You do not need to seal the envelopes. You may place the completed envelopes in this bin (<i>point to bin</i>). After five minutes, you will hear a knock on the window to let you know that you can stop, and I will return to collect the materials. Do you have any questions?
Collating Packets	In this task, you will be collating packets. There are seven double sided pages and each page is numbered at the top right of the page (<i>point to number on page</i>). Each packet needs one of each page and to be stapled in the corner. You may place the completed packets in this bin (<i>point to bin</i>). After five minutes, you will hear a knock on the window to let you know that you can stop, and I will return to collect the materials. Do you have any questions?

Table 2

Interobserver Agreement by Participant and Condition

Participant	Condition			Mean
	Baseline	Feedback	Choice	
Joey	100	100	100	100
Cookie	100	99	100	99
Tina	100	100	100	100
Mary-Therese	99	99	100	99
Mary-Angela	100	100	100	100
Gina	100	100	100	100
Dina	100	100	100	100
Veronica	100	99	100	99

Table 3

Procedural Fidelity by Participant and Condition

Participant	Condition			Mean
	Baseline	Feedback	Choice	
Joey	100	100	94	98
Cookie	100	99	100	99
Tina	100	100	100	100
Mary-Therese	100	100	91	97
Mary-Angela	100	100	100	100
Gina	100	100	94	98
Dina	100	99	100	99
Veronica	100	100	100	100

Table 4

Mean Percent Change in Rate by Feedback Sequence Condition for Participants Receiving Pre-Session Feedback

Participant	Condition							
	PCP		CPP		PPC		No FB	
	ALL	SS	ALL	SS	ALL	SS	ALL	SS
Joey	13.26	12.70	<i>18.49</i>	<i>29.59</i>	<i>-4.65</i>	<i>-3.71</i>	15.40	18.37
Cookie	-11.40	-5.27	<i>-21.63</i>	-23.16	-20.97	<i>-31.18</i>	<i>8.58</i>	<i>1.49</i>
Tina	-3.27	-9.77	-10.40	-1.02	<i>-37.04</i>	<i>-51.85</i>	<i>-2.51</i>	<i>3.54</i>
Mary- Therese	<i>-31.42</i>	<i>-35.14</i>	-4.28	-12.88	<i>13.44</i>	<i>7.50</i>	10.27	3.67
Mean	-8.21	-9.37	-4.46	-1.87	<i>-12.31</i>	<i>-19.81</i>	<i>7.94</i>	<i>6.77</i>

Note. ALL = mean of all data points in feedback manipulation phase; SS = mean of the last three data points in the feedback manipulation phase (i.e., steady state data). The green italicized font denotes performance with the highest percent change. The red italicized font denotes performance with the lowest percent change.

Table 5

Mean Percent Change in Rate by Feedback Sequence Condition for Participants Receiving Post-Session Feedback

Participant	Condition							
	PCP		CPP		PPC		No FB	
	ALL	SS	ALL	SS	ALL	SS	ALL	SS
Mary-Angela	-.28	-2.97	<i>27.33</i>	<i>27.90</i>	15.3	14.17	<i>-13.25</i>	<i>-13.73</i>
Gina	-15.39	-17.02	<i>17.39</i>	<i>17.39</i>	-17.11	-11.63	<i>-26.28</i>	<i>-42.48</i>
Dina	<i>-9.2</i>	<i>-6.23</i>	-24.46	<i>-31.88</i>	<i>-30.71</i>	-27.64	-16.29	-14.38
Veronica	<i>31.45</i>	<i>21.67</i>	1.52	0.15	<i>-23.94</i>	<i>-31.74</i>	-2.16	-0.74
Mean	1.65	-1.14	<i>5.45</i>	<i>3.39</i>	-14.12	-14.21	<i>-14.50</i>	<i>-17.83</i>

Note. ALL = mean of all data points in feedback manipulation phase; SS = mean of the last three data points in the feedback manipulation phase (i.e. steady state data). The green italicized font denotes performance with the highest percent change. The red italicized font denotes performance with the lowest percent change.

Table 6

Participant Selection Responses during Choice Phase for Participants Receiving Pre-Session Feedback

Sequence	Task				Total
	Filing	Folding	Stuffing	Packets	
PCP	0	2	3	2	7
PPC	1	1	2	3	7
CPP	0	1	1	2	4
No FB	1	4	3	4	12
Total	2	8	9	11	

Table 7

Participant Selection Responses during Choice Phase for Participants Receiving Post-Session Feedback

Sequence	Task				Total
	Filing	Folding	Stuffing	Packets	
PCP	0	3	2	0	5
PPC	1	3	3	2	9
CPP	3	2	1	3	9
No FB	2	2	1	4	9
Total	6	10	7	9	

Table 8

Participant Selection Responses during Choice Phase for All Participants

Sequence	Task				Total
	Filing	Folding	Stuffing	Packets	
PCP	0	5	5	2	12
PPC	2	4	5	5	16
CPP	3	3	2	5	13
No FB	3	6	4	8	21
Total	8	18	16	20	

Table 9

First selection responses for all participants in the choice phase.

Sequence	Task				Total
	Filing	Folding	Stuffing	Packets	
PCP			2		2
PPC			1		1
CPP			1	1	2
No FB		1	1	1	3
Total	0	1	5	2	

Table 10

Significance levels of Dunn's (Bonferroni) Multiple Comparison Test

Comparison	Participant							
	Joey	Cookie	Tina	Mary-Angela	Mary-Therese	Gina	Dina	Veronica
PCP vs. CPP								
PCP vs. PPC	.05		.01	.001			.01	.0001
PCP vs. No FB				.01				.05
CPP vs. PPC	.01							.05
CPP vs. No FB		.01			.05	.05		
PPC vs. No FB	.01	.01	.05					

Note. Values represent levels of significance.

Figure Captions

- Figure 1.* Data for Joey. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of pre-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.
- Figure 2.* Data for Cookie. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of pre-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.
- Figure 3.* Data for Tina. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of pre-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.
- Figure 4.* Data for Mary-Therese. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of pre-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.

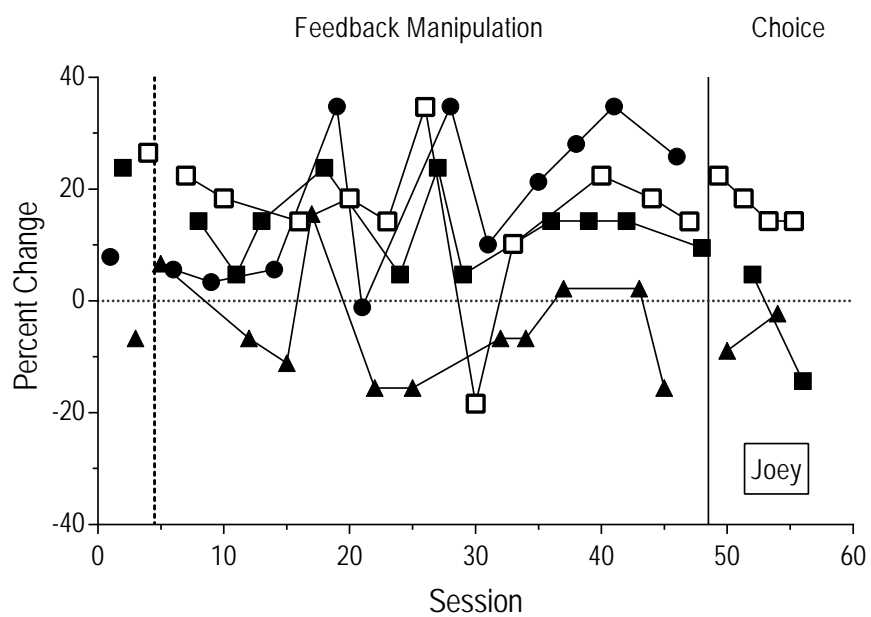
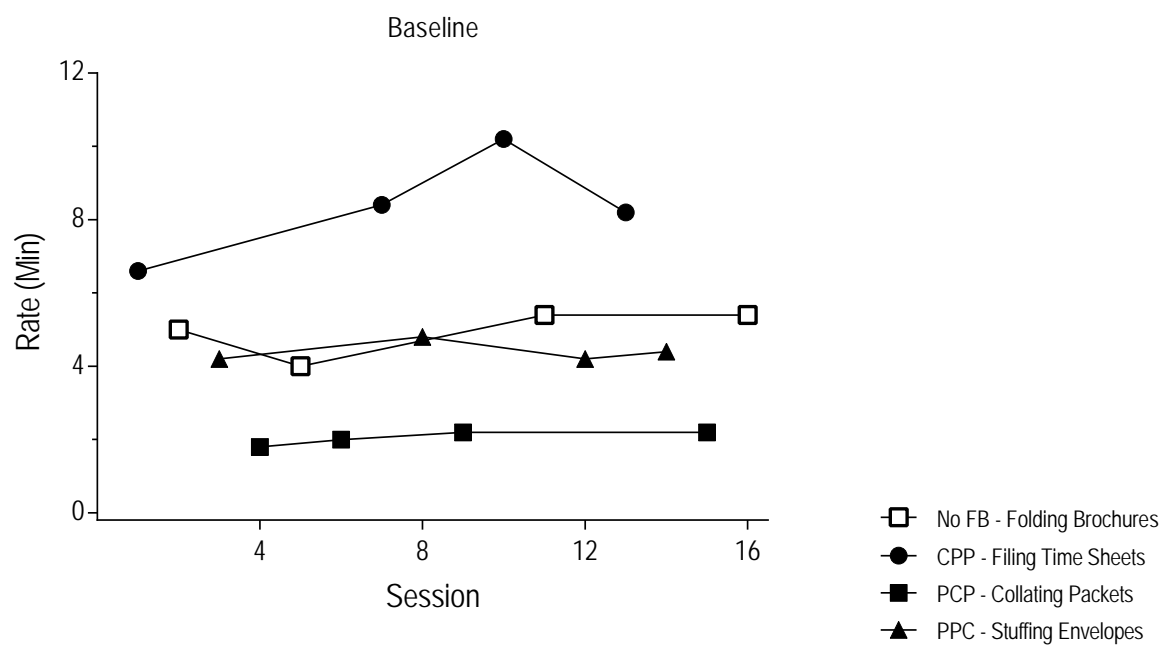
Figure 5. Data for Mary-Angela. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of post-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.

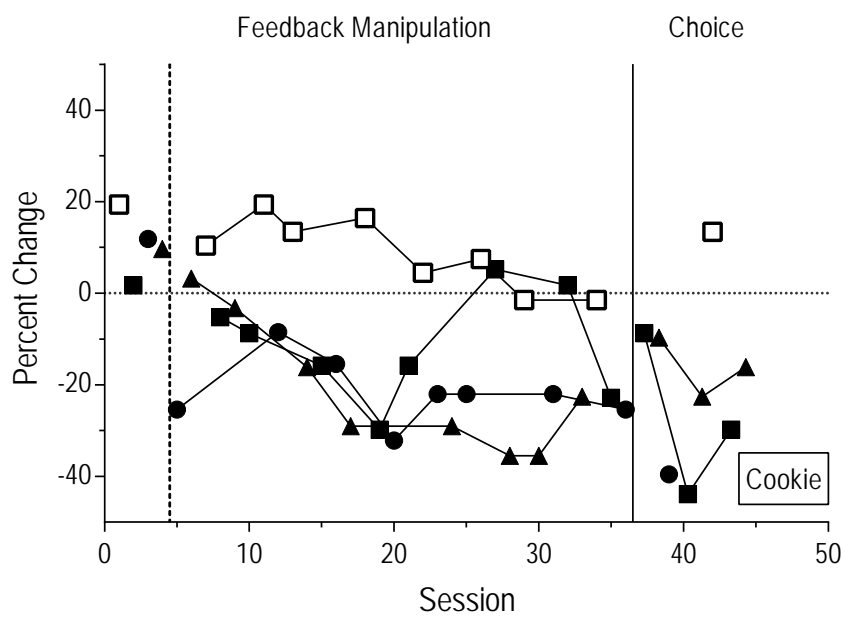
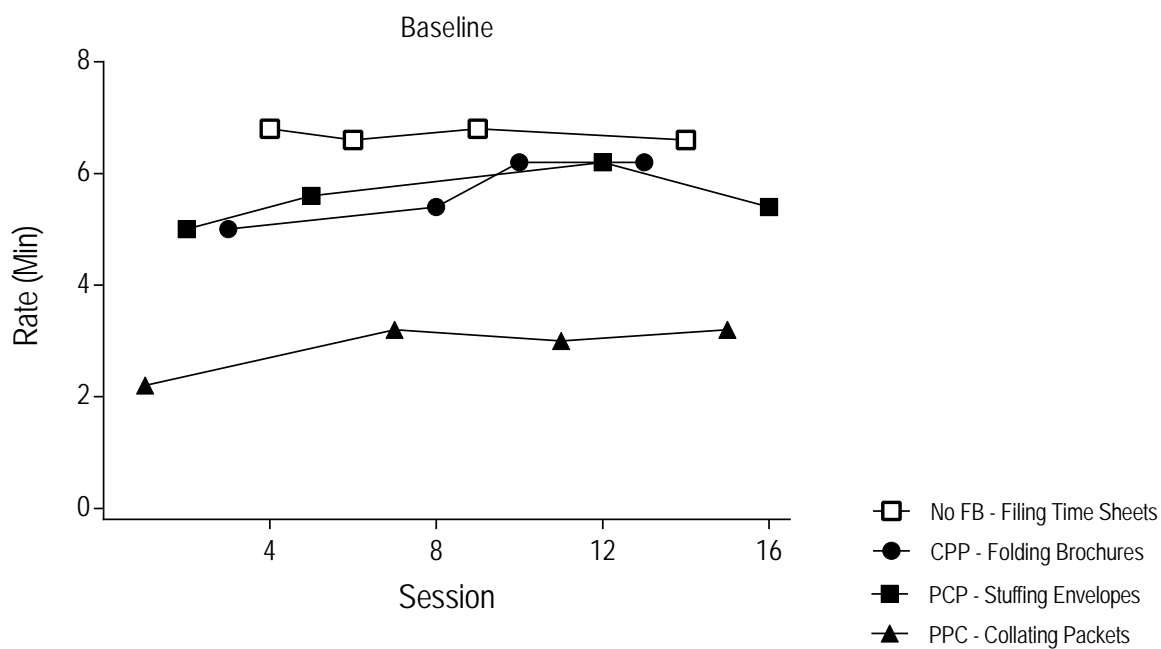
Figure 6. Data for Gina. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of post-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.

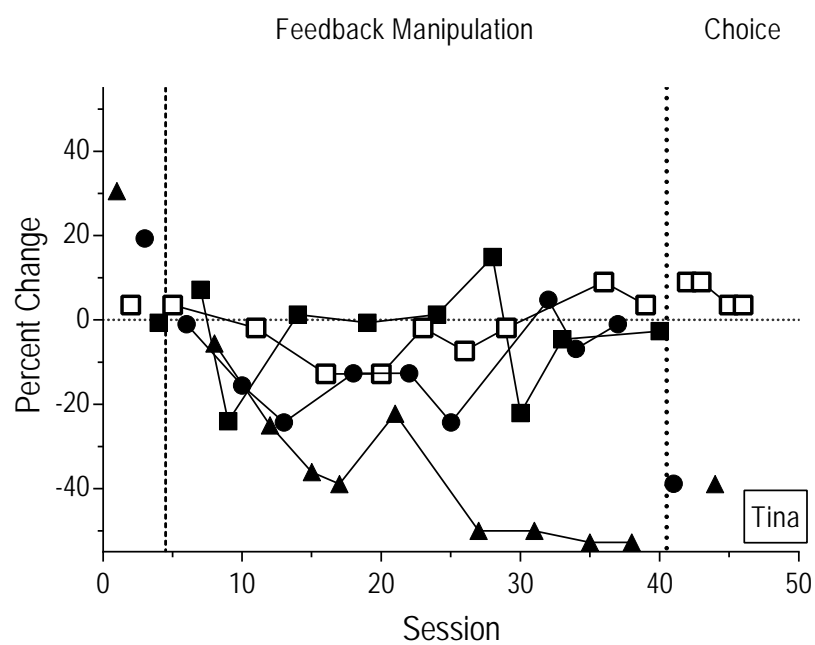
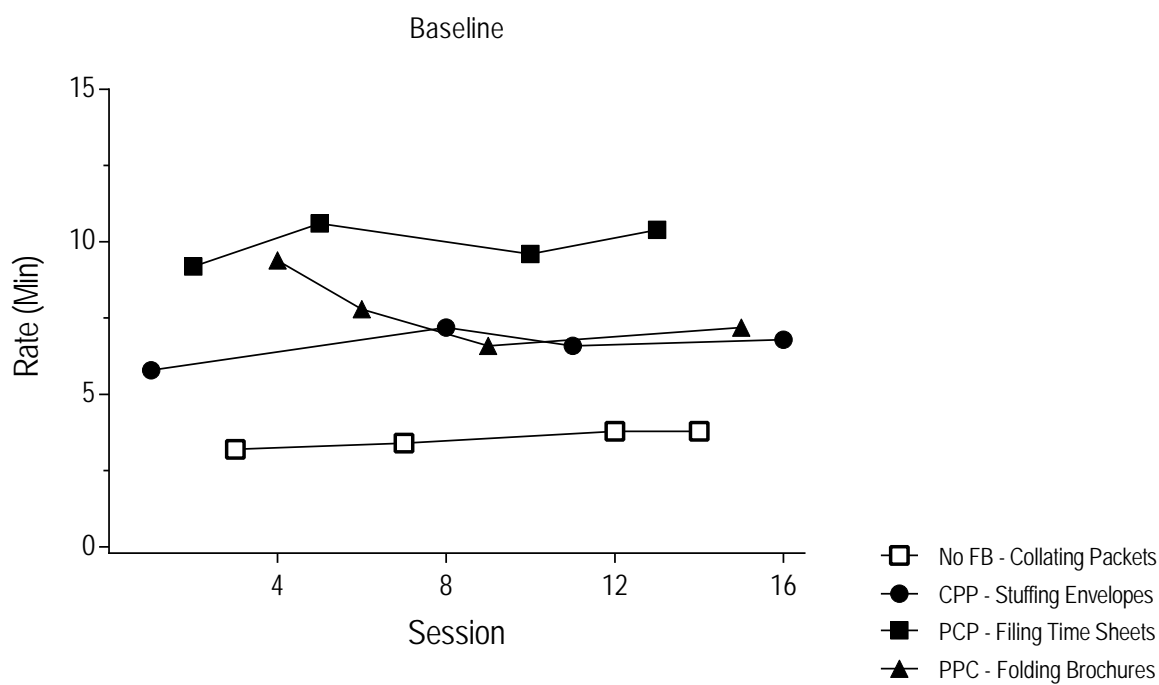
Figure 7. Data for Dina. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of post-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.

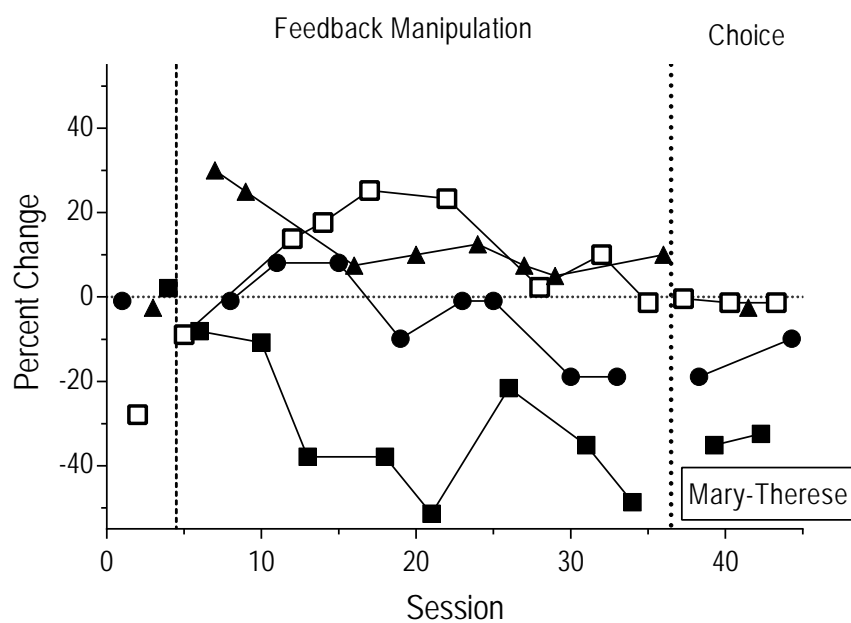
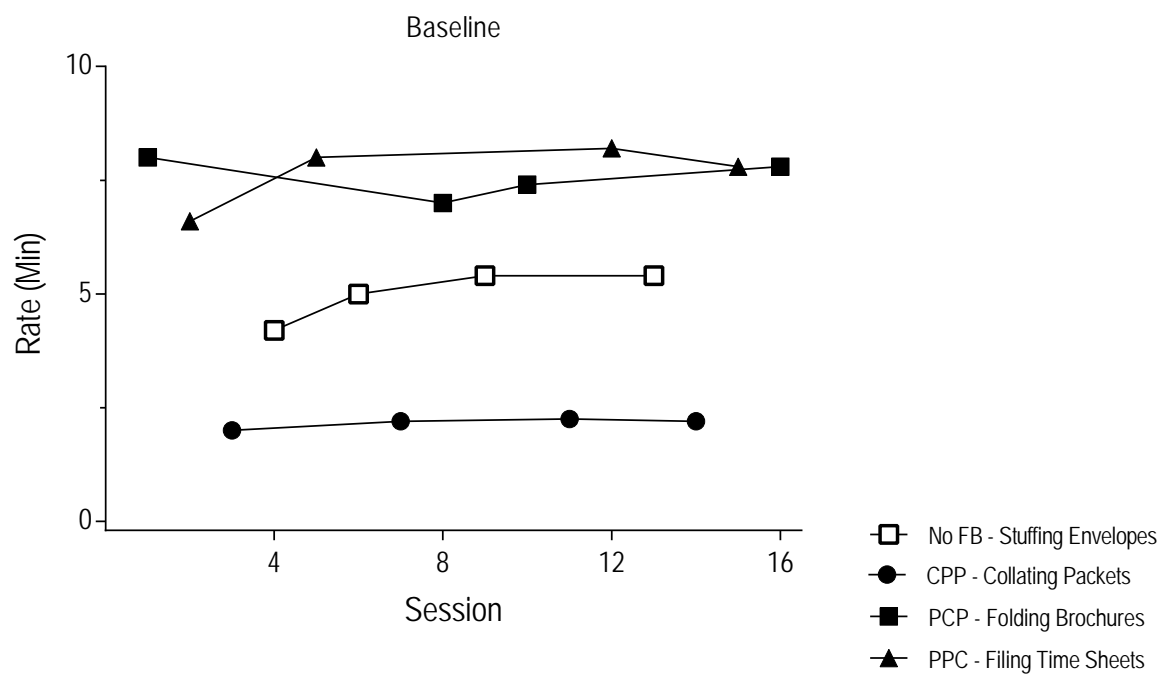
Figure 8. Data for Veronica. The top panel depicts rate of performance for each task during the baseline phase. The bottom panel depicts the effects of post-session feedback on percent change from the mean baseline rate during the feedback manipulation and choice phases. The dotted horizontal line located at zero denotes the mean baseline rate. Participant task selections are also displayed during the choice phase.

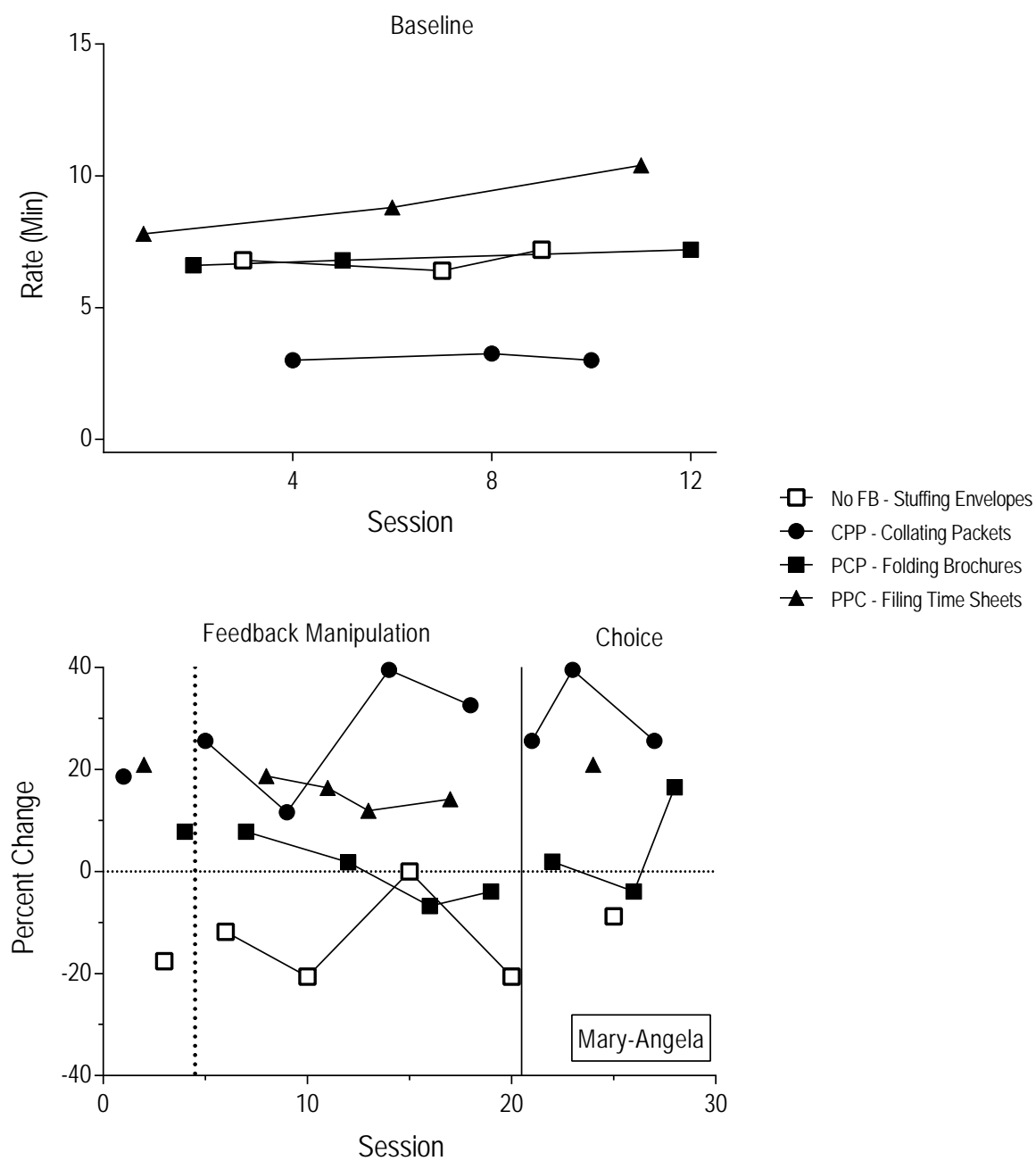
Figure 9. Mean of the last three data points for all participants organized by feedback sequence and timing.

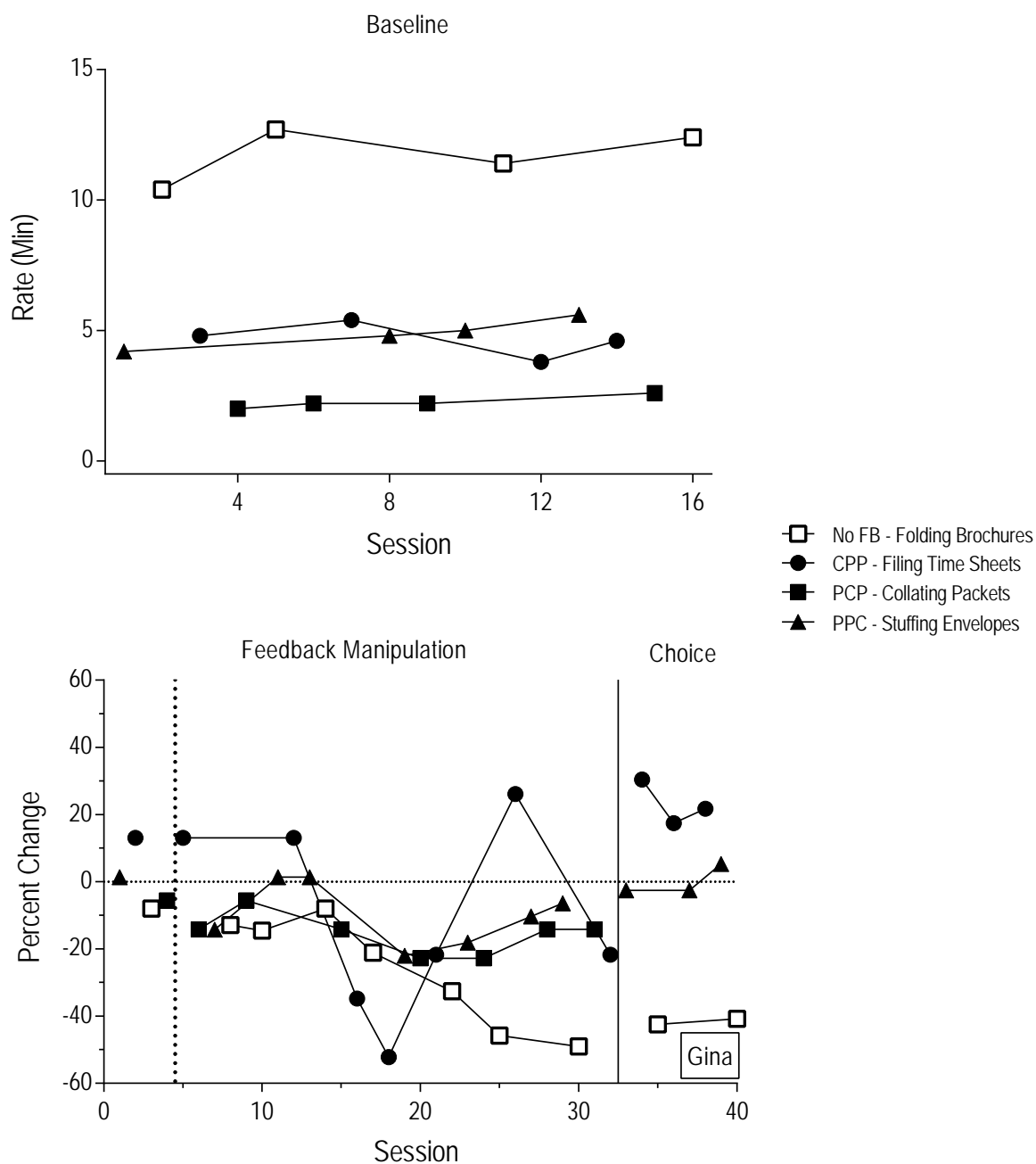


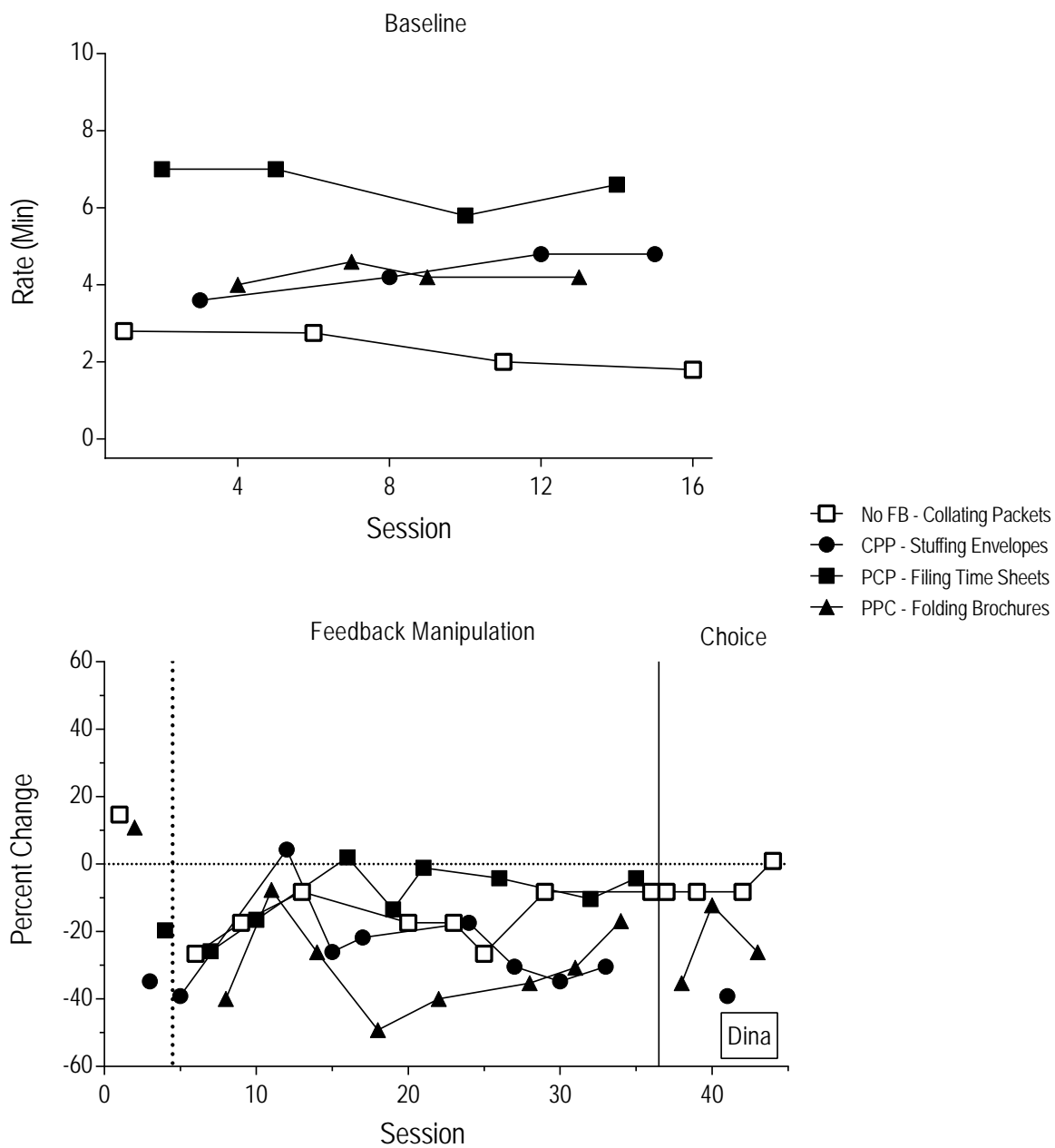


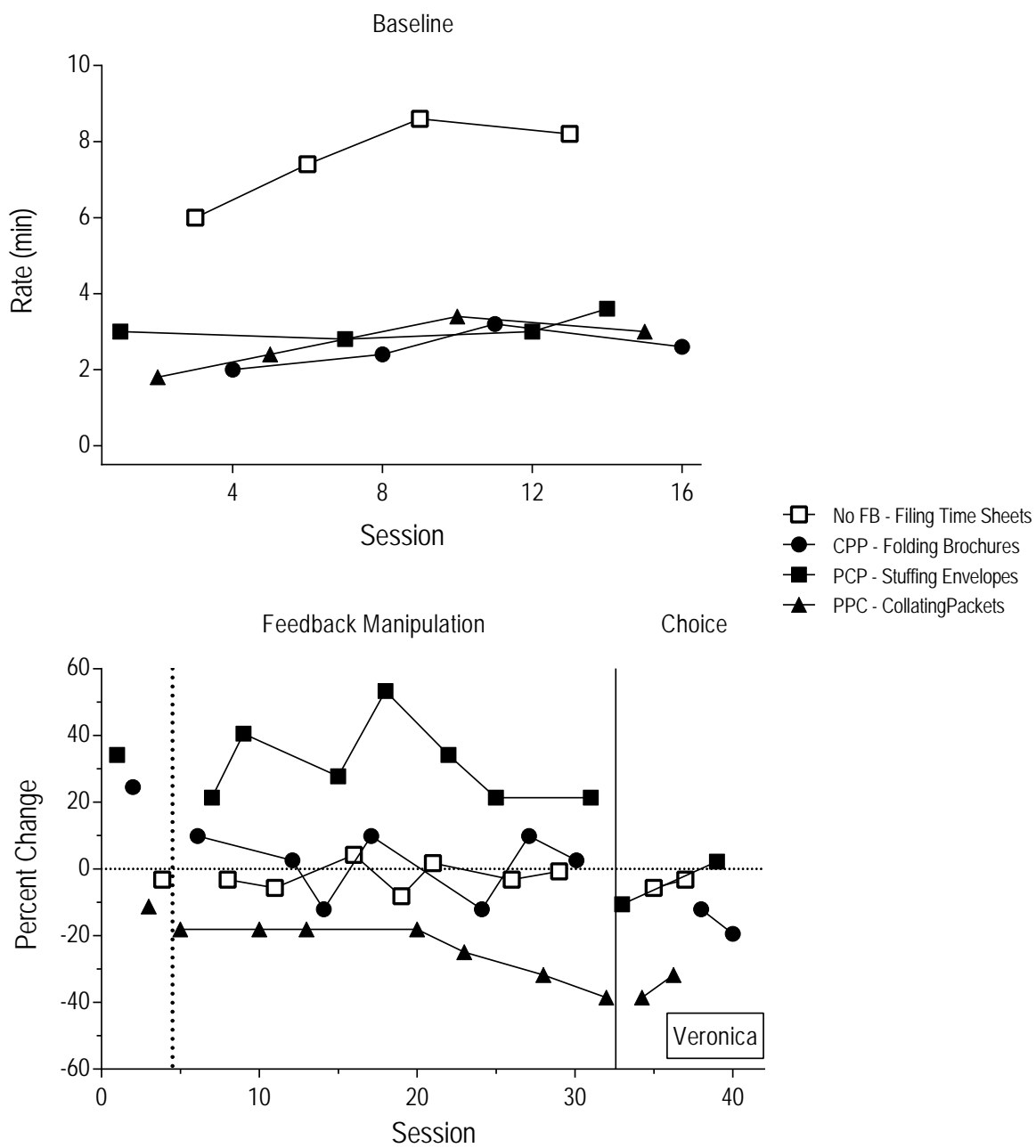


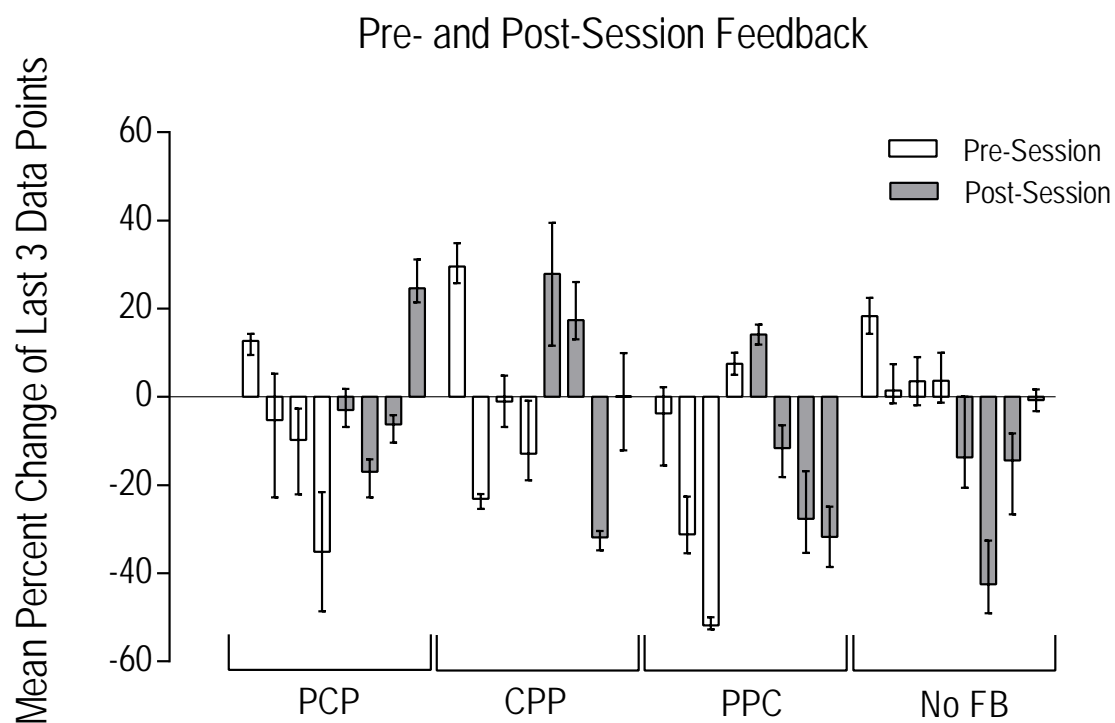












Appendix A

Participant recruitment script

“We would like to announce the opportunity to earn extra credit towards your final grade in this course by participating in a research project. The purpose of the project is to examine the effects of feedback on performance of simple office tasks. You will be asked to carry out four simulated routine office tasks lasting 5 minutes, presented in a random order. The four simulated tasks include folding brochures, stuffing envelopes, sorting packets, and filing. Following each task, you will receive accurate verbal feedback about your performance.

Sessions for the study will be 60 minutes in duration, but you will be asked to return for a total of 3-5 sessions held on different days. Your approximate total time commitment for the study will be between 3-5 hours. In exchange for your participation, you will be given extra credit points equal to 0.5% of your final course grade for each hour of participation.”

Appendix B

Materials for folding brochures


Outside of brochure

CLO's Mission: Make a Meaningful Difference for People with Developmental Disabilities

Community Living Opportunities (CLO), a not-for-profit organization, was formed in 1977 in Johnson County, Kansas by a group of parents who wanted their children and other people with developmental disabilities, no matter how severe, to have fulfilling lives in the community. CLO was among the pioneers of community-based developmental disability services for people with many challenging needs and has long been a leader in developing and implementing unique and effective service models. From the start, CLO's advisors and consultants included key faculty and graduate students from the Department of Applied Behavioral Science at the University of Kansas. They have been instrumental in creating CLO's Quality of Life planning process, Family Teaching Model, Extended Family Teaching Model, Children's Autism Network (C-CAN), and more.

CLO's services have always been based on dignity and respect, emphasizing a family-style atmosphere in the home setting, opportunities for choice, teaching, positive reinforcement, and as much independence as possible. CLO also believes in active family involvement, which is why family members or guardians of the people we serve make up the majority of our board of directors.

CLO provides an array of lifespan services for more than 400 children and adults with special needs, primarily in eastern Kansas. Services include community living, day services, behavioral consultation, targeted case management, children's services, and health-care support. CLO also embraces the values of best practices and sharing ideas. Nonprofit organizations partnered after CLO provide services in south-central Kansas, Tennessee, and California.

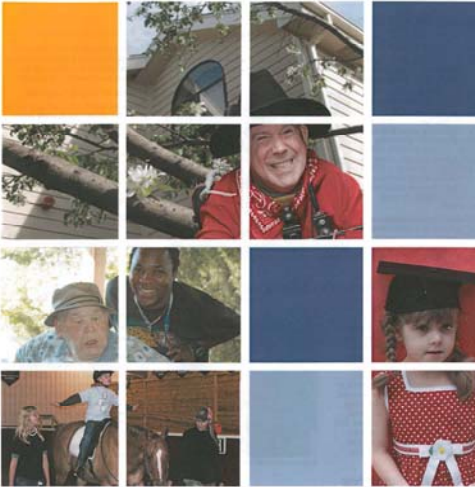


The title of this original advertisement, *Life is a Very Deep Blue*, exemplifies the life of its subject, my son, Jon Duncan. Jon was born in 1985, when services for Kansans with mental retardation and other developmental disabilities were still in the dark ages. CLO was one of the very earliest community residential care providers to emphasize quality of life for its clients. At CLO, Jon lived a good life through an eight-person group home, in a three-person apartment, in a family teaching home, in an Extended Family Teaching Model arrangement where, finally, he was living in his own apartment. Every step up the very steep hill of life advanced him on the road to a good life.

(John Duncan, son)

Visit us on the Web:
www.clokan.org

Douglas County 2113 Delaware Street Lawrence, Kansas 66044-3149 Phone: 785-865-5520 Fax: 785-865-5695	Johnson County 11627 W. 7th Street P.O. Box 4536 Lenexa, Kansas 66225-4395 Phone: 913-341-9216 Fax: 913-341-1077	Sedgewick County P.O. Box 962 Andover, Kansas 67002-0962 Phone: 316-567-7528 Fax: 785-865-5695	Southwest Kansas 11627 W. Madison Street P.O. Box 748 Iola, Kansas 66449-0748 Phone: 800-236-9119 Fax: 800-232-7051
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CLO

Services for Adults and Children with Special Needs

Making a Meaningful Difference

Inside of brochure

Community Living Services

CLO's Family Teaching Model

CLO designed the Family Teaching Model to produce 11 key, positive outcomes for each individual who receives services. CLO has long considered these outcomes to be the foundation of all of its programs and services we provide.

In family teaching homes, four or fewer people with developmental disabilities live on one side of a duplex or attached home with their own living space includes various accessibility and safety features. A married couple, called a family-teaching couple, occupies the adjoining living space with their own immediate family members. The living spaces are connected via a door or hallway for easy, quick access.

The family teachers provide most of the care and arrange for other support services for the people they serve, ensuring that each person's needs are met.



The four bodies of Susan, Karen, and Robert are shown in Family Teaching Model.

Family teachers are also trained and encouraged to build positive and lasting relationships with the individuals they serve and their families or guardians.

Extended Family Teaching

The Extended Family Teaching Model is like adult foster care in some respects, only better. A specially-trained person or couple opens their own home and extends their family life to someone in need – in this case, one or two individuals with developmental disabilities. CLO's extended family-teaching arrangements are intended to be long-term and sometimes evolve from pre-existing positive relationships.

An individualized service contract is developed between the extended family teachers and the individuals they serve (and their families/guardians) that address needs and lifestyle preferences and specify desired outcomes.

Day Services, Wellness Services

Day Services

CLO's Day Services program focuses on teaching adults with disabilities ways to live, work and participate more fully in their communities. Recreational activities provide opportunities for individuals to express themselves through hobbies, sports and other interests. Excursions in the community help them develop pride and self-worth. These activities help to set the occasions for teaching appropriate socialization skills and other life skills.



On-site therapy and other health care services are provided.

Wellness Services

CLO meets the often significant health-care needs of the individuals we serve through on-site wellness clinics in our Douglas and Johnson County locations. Our nursing staff, along with visiting nurse practitioners and physicians, conduct wellness assessments and provide services with a focus on catching health concerns early and close monitoring. The on-site clinics provide a familiar, comfortable setting for exams and certain health-care procedures.

CLO also provides on-site occupational and physical therapy.

Children's Services

Children's Autism Network

The specialists in CLO's Children's Autism Network (C-CAN) assess needs, develop teaching and provider support programs, and provide other services covered by the Kansas Autism Waiver.

Early intensive behavioral intervention offers one-on-one support to help children reach developmental milestones. Services are provided in the child's home or at CLO's Mission House.

Positive behavior support, a set of research-based strategies, helps manage challenging behaviors. C-CAN's certified behavior analysts develop positive interventions to reduce problem behavior and teach new skills that improve success at school, at home, and in social situations.

Private behavioral consulting services are available to help children who are ineligible for Autism Waiver services or waiting for services, those who have completed an early intensive behavioral intervention program, or to supplement public school special education services.

Inclusionary preschool services are available at Johnson County Montessori.

Preschool, established in 1965 and owned by CLO since 2000. Children with special needs can interact, establish relationships, and otherwise become part of a classroom family along with normally-developing peers (ages 2½ to 5).

Child Placement

CLO is licensed as a Child Placement Agency to help children with disabilities (infants to age 18) who need more care than some families can provide. CLO's clinical staff and array of Respite services are available any time to meet the child's needs.

Behavioral Analysis & Support, Targeted Case Management

Behavioral Analysis & Support

CLO's approach to providing services has featured applied behavioral analysis from the start, thanks to a longstanding partnership with the Department of Applied Behavioral Science at the University of Kansas. Many of the people we serve have a certified behavior analyst as a member of their core support team.

The behavior analyst works closely with team members to observe and evaluate problem behaviors, develop formal plans containing positive behavior supports and interventions, and help the direct-support staffs implement the plans properly and effectively.

Targeted Case Management

CLO's targeted case managers are the facilitators of support teams for children and adults with disabilities, ensuring that each individual obtains and benefits from the variety of services and supports available from CLO, other providers of community-based services, and resources available from the government and others.

CLO's case managers are committed to achieving high-quality outcomes for individuals and their families by:

- Assessing needs and lifestyle preferences.
- Providing transition planning to promote success in new environments.
- Facilitating the person-centered support planning process.
- Pursuing the resources, funding, services and supports to meet the needs, interests, goals and preferences of the individual.
- Evaluating the quality of services provided and acting to achieve desired outcomes.
- Serving as a liaison with families and guardians, ensuring effective communication.

Midnight Farm



Midnight Farm, located seven miles south of Eudora, Kansas on a scenic 40-acre tract, offers opportunities for people with special needs to live, work, relax, and pursue recreational activities in the natural beauty of the Douglas County countryside.

Midnight Farm's centerpiece is a fully accessible, 22,000-square-foot multi-purpose facility with a rustic meeting lodge and fully equipped kitchens, an indoor equestrian arena (home of a PATH-certified therapeutic horseback riding program), and a general purpose barn. Adjacent to the facility are petting areas and paddocks for farm animals, gardens, a greenhouse, walking and riding trails, picnic spots, a fire pit, a pottery and craft barn, and a country store. There are now three homes on the farmstead for people with disabilities.

Midnight Farm offers a variety of day services, camps and field trips for people with special needs. Community groups and the public at large are welcome to enjoy the farm's amenities, buy farm-produced products, volunteer, and more.



Midnight Farm is a CLO's Community Living Services facility.

HomeLink

CLO's HomeLink employs the latest in technology to bring "on-demand" support directly into the homes of people with disabilities. An integrated system of video cameras and other monitoring devices gives specially-trained personnel remote access to the home, be it on the other side of town, in another state, or even across the country. HomeLink makes it possible to:

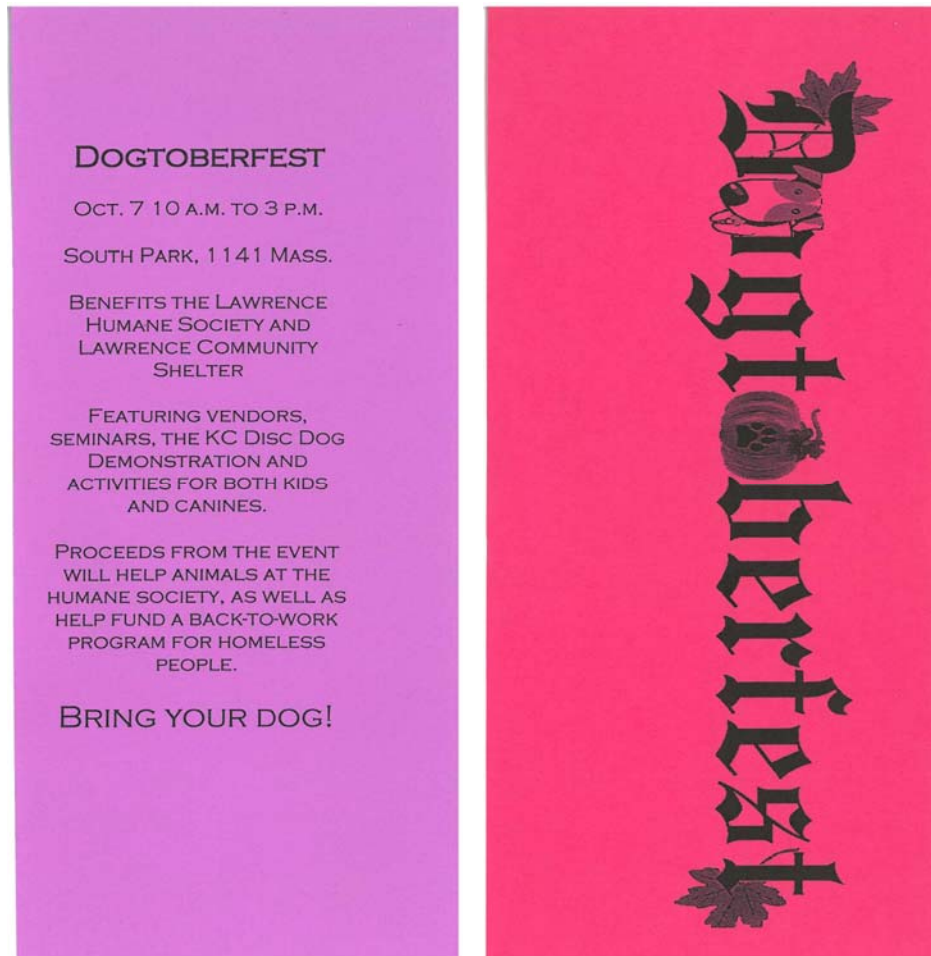
- Determine when an individual in a home setting needs help and dispatch support staff or emergency responders.
- Remotely supervise awake-at-night staff to make sure they're on task.

and that the individuals they serve are safe and getting proper care.

- Let a health-care provider make as-needed "house calls" to check on a patient, remotely collect data or vital signs like temperature, weight, blood pressure, oxygen levels, etc., and consult with home-based staff.
- Monitor individuals with seizure disorders and respond at the first observable signs of a seizure.
- Allow a certified behavior analyst to observe and evaluate behaviors in their natural settings.

Appendix C

Materials for stuffing envelopes



Appendix D

Materials for collating packets



Volunteer Manual



Information current as of August 2012. Information is subject to change in the future.

The Lawrence Humane Society provides shelter, care, and advocacy to stray, homeless, and abused animals and nurtures the human animal bond.

Dear Volunteer,

Welcome to the Lawrence Humane Society team! We are thrilled to have you and your passion for animals here at our facility. Every year, we work to care for thousands of homeless animals. As a nonprofit organization, we depend on the generosity of our volunteers donating their time and skills to care for the animals.

Our volunteer program is designed to utilize your skills to the maximum capacity and provide you with a safe and positive working environment. We will provide you with consistent, professional training and support you in your volunteer duties.

Thank you for your commitment to the Lawrence Humane Society and to the animals we care for. It is my honest desire for you to find your experience here enjoyable. You are guaranteed to find that your hard work is appreciated, and you will receive many sloppy kisses and purrs in return!

Sincerely,

Maggie Cargill
Volunteer Coordinator

A brief history of the Lawrence Humane Society

The first humane group in Lawrence started in the 1890s. Affiliated with the ASPCA, this group's main concern was with the welfare of pets and of working farm animals such as horses. The charter lapsed after some years.

The Humane Society as we know it today was chartered on March 26, 1951. Several years later, four acres were purchased on east 19th Street for the future site of the animal shelter. In 1958 a \$35,000 grant from charter members Dr. and Mrs. John Ise, in memory of their son Charles permitted construction of the original shelter building to begin.

During the 21st century, the Lawrence Humane Society continues to develop and implement many new programs to enhance animal welfare in Lawrence and in Douglas County. The number of major fund-raising projects and events increases each year to help support the shelter's ongoing commitment to do its job more efficiently and effectively.

(www.lawrencehumane.org)

Information current as of August 2012. Information is subject to change in the future.

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Information current as of August 2012. Information is subject to change in the future.

Volunteer Requirements

Qualifications: Adult Volunteers

- Volunteers must be at least 16 years of age.
- Volunteers must make a minimum time commitment of one shift a week for 3 months.
- Volunteers must pay a one-time fee of \$15. This must be paid before beginning volunteer duties.
- Volunteers must complete the volunteer profile.
- Volunteers MUST sign a release of liability. Volunteers will not be permitted to begin their duties until this release is signed.
- Volunteers will attend the volunteer orientation, and subsequent training pertinent to their duties.
- Volunteers should be able to safely and independently perform all role requirements outlined in the training.
- All volunteers must have an active email address.

Qualifications: Junior Volunteers

Junior Volunteer Teams must meet the above mentioned requirements as well as the following:

- Junior Volunteer Teams are comprised of 1-2 Junior Volunteers per Adult Volunteer.
- Junior Volunteers must be between the ages of 11 and 15.
- Junior Volunteers are required to be supervised at all times by their Adult Volunteer Team Member.
- Junior and Adult Teams are prearranged by the volunteers. The Lawrence Humane Society cannot match Junior Volunteers with existing Adult Volunteers.
- The Adult Team Member must attend all orientations and training sessions, and complete all required paperwork.
- The Adult Team Member must be able to safely and independently perform all role requirements outlined in the training.



Why Is There A Fee To Volunteer?

We've implemented a fee to help offset the cost of operating our Volunteer Program. The fee is put toward the cost of your Lawrence Humane Society name tag, the printing of this manual, and other operational expenses. We truly thank you for supporting our organization.

Information current as of August 2012. Information is subject to change in the future.

Volunteer Policies

Dress Code

All volunteers and staff members will abide by the following dress code:

- Long pants, preferably jeans
- Close-toed shoes and socks
- No profanity or inappropriate wording is allowed on any shirts.
- A name-tag
- A neat, professional personal appearance

The dress code enforced by the Lawrence Humane Society is designed to keep its volunteers and staff safe and clean. Please remember that while you are volunteering here you are representing the Lawrence Humane Society as a professional establishment, and we request the same professionalism from all volunteers and staff. Please note that you may come into contact with cleaning chemicals that may be damaging to clothing (such as bleach), and you may get dirty so please wear appropriate clothing that is ok to be damaged.

Professionalism

Remember that as a volunteer you are representing the Lawrence Humane Society as a professional establishment. Chances are high customers will ask you about the animals you are handling. Volunteers should conduct themselves in a professional manner. We ask that you:

- Use appropriate language. No loud or profane language is allowed while on duty.
- Appropriately use equipment and materials. Misuse, negligence and wastefulness of equipment and materials will not be tolerated.
- Conduct oneself with a friendly, positive attitude.
- Work with the public and answer questions about individual animals.
- Be aware of and abide by Lawrence Humane Society policies and procedures.
- Be prompt and reliable and follow through with commitments.
- Notify the Volunteer Coordinator as soon as possible if you are not able to report for a scheduled shift.
- Notify the Volunteer Coordinator of a change in personal schedule or holiday plans that might interfere with any scheduled shift.
- Abide by the outlined dress code.
- Communicate with the Volunteer Coordinator in regards to any concerns.
- Notify the Volunteer Coordinator at least two weeks prior to ending volunteer service.
- Handle the animals in a safe, humane manner as outlined by the training.

Information current as of August 2012. Information is subject to change in the future.

Sanitation

It is extremely important that we do everything we can to prevent the spread of disease. Animals come to the shelter every day from all parts of Douglas County with varying degrees of health. It is our job to keep the animals housed here as healthy and adoptable as possible. Illness can spread very quickly from one animal to another and possibly to humans, so following safety and cleaning protocols as outlined in your individual training is essential to controlling diseases and keeping everyone happy and healthy.

- Sanitize or wash your hands after handling individual animals.
- Items such as food and water bowls, toys, blankets, etc cannot be shared between kennels.
- Animals from separate kennels may not interact with one another unless otherwise noted by a staff member (this includes walking dogs together outside).
- If you suspect an animal is ill, please inform a staff member immediately. Signs to watch for include:
 - o Lethargy
 - o Coughing/sneezing
 - o Vomiting
 - o Diarrhea

Training

All volunteer positions require a little bit of training beyond the orientation. Each volunteer will start out with Dog Walking or Cat Companion training, or both! We want to make sure everyone has the skills to handle our animals. We hold regular training sessions every week.

- Tuesday and Saturday at 1:30pm-Cat Companion Training
- Tuesday and Saturday at 2pm – Dog Walking Training

Training for other volunteer positions will be held periodically and volunteers will be notified via email.

If you are unable to make it to the scheduled training times, please contact the Volunteer Coordinator to set up separate training.

If you do not sign up for training at the initial orientation, please contact the Volunteer Coordinator at least 24 hours prior to attending training.

Scheduling

At the Lawrence Humane Society, we are committed to the quality of our volunteers. We want to make sure your time and skills are utilized efficiently. To that end, we request that our volunteers provide us with a general schedule. We want to know when you will be here so we can evaluate training methods, follow up with you, and make sure our animals are getting adequate care every day.

- Schedules are requested for specific volunteer positions.
- Beyond your scheduled shift, you may volunteer at any time within regular volunteering hours without confirming with the Volunteer Coordinator.
- Schedules are flexible, but please stay in communication with the Volunteer Coordinator.

Information current as of August 2012. Information is subject to change in the future.

Basic Volunteer Jobs

The following jobs are available to anyone who is interested in participating. Volunteers may work multiple jobs.

Essential Shelter Help

There is more to running a shelter than playing with puppies! Our animal care associates need help cleaning kennels and keeping up with dishes and laundry in the workroom. These jobs are the foundation of running the shelter smoothly and keeping everyone happy, healthy, and safe.

Satellite Adoption Help

The Lawrence Humane Society often takes their animals out into the community to facilitate adoptions. For these events to be successful, we need a dedicated group of volunteers. Most of these events take place on weekends. Volunteers who wish to participate in this position will help gather necessary materials at the shelter, bathe the dogs who are attending the event, help transport supplies and animals, help set up materials at the event and watch over the animals at the event. This position is very important because the more volunteers we have, the more animals we can take into the community, and the more we can get adopted!

Puppy Pampering

Every dog that comes through the shelter has the right to be clean and smelling fresh! Because of all the hard work our animal care associates are putting in to making sure the dogs' kennels are clean, our dogs don't get regular baths. As a Puppy Pampering Specialist, it is your job to make our dogs smell like roses! Every dog will get a bath and a nail trim, and you will get plenty of soapy kisses!

Dog Walker

Our dogs need exercise and socialization, and we need you to provide it for them! Dog Walkers will take our adoptable dogs outside and play with them in the provided dog yards. Providing our dogs with daily exercise reduces their stress and makes the more adoptable! Volunteers in this position are required to attend volunteer orientation and a separately scheduled training session as well as commit one shift a week for at least 3 months. Nothing is better than sloppy wet kisses from happy, exercised dogs!

*Schedule requested

Cat Companion

Our cats need some special attention in order to keep them happy and stress-free! Cat Companions will interact with our cats to teach them good manners and play skills. Volunteers experienced in this position will also groom the cats, including any necessary brushing and nail clipping. Headbutts and purrs are guaranteed in this position!

Information current as of August 2012. Information is subject to change in the future.

Basic Volunteer Jobs, Continued

PetCo Kitty Care

We have some cats living off-site at PetCo on 31st and Iowa, and they need care, too! Volunteers helping with these kitties will clean their cages, feed the kitties and give them plenty of attention while they wait to be adopted at PetCo! Volunteers must have reliable transportation. *Schedule required

HandHeld Helper

Beyond dogs and cats, we take care of homeless handheld pets, too! We have lots of rabbits, rats, ferrets, guinea pigs and every other small and furry creature you can imagine in our shelter that need love, care and socialization! Just because these guys are small doesn't mean they need less care! These volunteers will socialize the handheld pets, provide general grooming care and love.

Off-Site Dog Walking

Our dogs would love to get away from the shelter for a while! As a volunteer, you can take our shelter dogs out into the community to give them some exposure and help them get adopted. You can take them to the Farmer's Market, downtown, to the dog park or anywhere else around town you'd like to take them. Show Lawrence how awesome our dogs are!

Fostering

Fostering is a vital part of shelter life. For many reasons, animals may need to spend time in a home for a while where they can receive special, individual attention to reduce their stress, learn good manners and recover from any potential health issues. If you are interested in fostering, please contact the Volunteer Coordinator.

*Must be at least 18 years old to apply for a foster license

Advanced Volunteer Jobs

The following positions are available to volunteers who have demonstrated exemplary service during their initial 3-month service period.

Behavior Assessment Assistant

Our Animal Assessment Specialist always needs an extra pair of hands to help her with temperament assessments. This volunteer position will focus on dog behavior. We need help performing the initial SAFER assessment and extra personality assessments. SAFER tests will be performed with a certified staff member. Personality assessments may be performed by a solo volunteer. Basic knowledge of dog behavior and body language is preferred but not required.

*Prerequisite: Dog Walking training

*Schedule required

Information current as of August 2012. Information is subject to change in the future.

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Bully Breed Home Visit Assistant

We have many "bully breed" dogs here at the Lawrence Humane Society: pit bulls, American Bulldogs, and any mix containing a bully breed. These dogs often have a bad reputation and we want to make sure that every animal we adopt out goes to a home where it will be safe, happy and loved. Sometimes this is a particular concern for our bully breeds. Our adoption counselors will arrange home visits for our bully breed dogs if they find it necessary, just to make sure our bully breeds go to the best homes possible. Home Visit Assistants will travel with a staff member to the adopter's home and make sure the home and lifestyle are appropriate for the adopter's new bully breed buddy.

Dog Play Group Monitor

Our dogs want to get outside and act like dogs! We need volunteers to supervise and play with dogs out in the yards while they socialize in small groups. Dog walker training and a two-hour commitment per shift are required. The dedication is worth it for the joy of playing with a pack of happy dogs!

**Prerequisite: Dog Walking training*

**Must be at least 18 years old*

Humane Investigations Assistant

It is an unfortunate reality that animals do get mistreated. The Lawrence Humane Society responds to calls of possible animal cruelty or neglect. Our staff members need support and assistance while investigating possible cruelty cases. This position will require extra training and reliability on the part of the volunteer.

TLC Companion

The Lawrence Humane Society houses more animals than what you see on the adoption floor. We have an entire building, separate from our main adoption building, just for our animals that are feeling under the weather and are not healthy enough to spend time in the adoption kennels. These animals need just as much socialization and attention as our healthy pets. In fact, the more interaction they have with people, the happier they will be and they will recover quickly. This position requires advanced training in sanitation procedures and strict adherence to those procedures.

**Prerequisite: Dog Walking or Cat Socialization training*

**Schedule required*

Transport Driver

Sometimes the best option for our animals is to transport them to another shelter. We need volunteer assistance to take these animals to their new shelter. Animals may need to go as close as Kansas City, or as far as Tulsa or Denver.

**A valid driver's license is required for this position.*

Information current as of August 2012. Information is subject to change in the future.

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Emergency Procedures**Fire:**

- Upon hearing a fire alarm, seeing a fire and/or seeing or smelling smoke, employees, volunteers, customers, and other members of the public should calmly exit the building and meet by the red aluminum can recycling bin near the parking lot exit
- Management should be alerted immediately
- Call 911
- Fire exits are labeled throughout the building
- Animals should **not** be removed from the building by employees, volunteers, customers or other members of the public.

Tornado:

- Upon hearing a tornado siren and/or seeing a tornado, employees, volunteers, customers, and other members of the public should calmly take shelter in the hallway between the TLC and Adopt buildings
- Animals should **not** leave the safety of their kennels

Volunteering Hours

Monday
11:30am – 4pm

Tuesday – Friday
9:30 am – 6pm (7pm on Thursdays)

Saturday – Sunday
9:30 am – 4pm

**Contact Information**

Volunteer Coordinator: Maggie Cargill
Email address: volunteer@lawrencehumane.org
Lawrence Humane Society phone number: 785-843-6835
VC Office Hours: Tuesday-Saturday, 9 am to closing

Thank you for choosing to be a part of our organization!

Information current as of August 2012. Information is subject to change in the future.

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Additional Information**Can I bring friends with me?**

No. Anyone who has not been officially trained in proper safety and sanitation procedures by a Lawrence Humane Society staff member cannot handle animals in a volunteer capacity. This includes children under the age of 11, regardless of parental supervision. This is for the safety of all people and animals involved. We cannot make exceptions to this rule.

Record Keeping

All volunteers are responsible for keeping track of their hours. There is a logbook at the front desk where you will record the time you started and the time you finished your volunteer shift. At the end of the month, the Volunteer Coordinator will tally hours. It is extremely important to record your hours accurately so we can keep track of how much time it takes and how many people is required to do certain tasks. We also like to know how much interaction the Society has with the public.

The Volunteer Coordinator can provide you with a record of your hours at any time.

Please make sure we have all your current contact information (including EMAIL). If you change your phone number or email address, please let us know!

Leaving Your Belongings

Because we do not have a safe, secure place for you to keep your belongings we ask you do not bring anything extra with you when you volunteer. Keep purses, backpacks, duffel bags, etc in your car if possible. We can provide a discrete location to keep your car keys and other small belongings. If you **MUST** bring larger belongings with you, please be informed that the Lawrence Humane Society, Inc is not responsible for any lost or stolen items.

Accident Reporting

Accidents do happen, and here at the Lawrence Humane Society we try our best through training and safety protocols to keep our volunteers out of harm's way. If an accident does happen, especially if it involves an animal, please notify staff immediately. We will fill out an incident report. Your safety is our first priority.

Parking

To leave room for customers and adopters, volunteers should park across the street at the fairgrounds with the LHS staff. If you think your vehicle won't handle the dirt road, or if you think it will get stuck in the mud on rainy days, then you may park toward the back of our parking lot. Again, we want to make room for customers who want to take home our wonderful furry friends!

Information current as of August 2012. Information is subject to change in the future.

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Funding

The Lawrence Humane Society receives funding in a variety of ways. The city of Lawrence and Douglas County contract with the Society for services it provides to the community. Grants, memorials, private and corporate donations and fund raising projects help to fund the Society as well. Everything that is in the facility—every bowl, every litter box and every paycheck—is made possible by the gifts of caring people. We ask that all volunteers and staff members be cognizant of not wasting supplies. The budget is always tight and wastefulness will not be tolerated.

How Can You Help?

Volunteering is a terrific way to help the animals and we truly appreciate the gift of your efforts and time. Here are some other ways you can help the homeless animals:

- As a LHS volunteer, we hope you share our commitment to reducing pet overpopulation and have had your own pets spayed or neutered.
- Does your workplace have a donation matching program or workplace giving program? If so, please consider designating Lawrence Humane Society.
- We offer a monthly donation option for our supporters. For as little as \$10.00 per month, you can fund a dog's heartworm test or purchase milk replacement formula for a litter of kittens. Please ask our Client Service Staff for a Direct Payment Authorization.
- Have a special occasion coming up? Instead of gifts this year, ask your friends and family to make a donation to Lawrence Humane Society in your honor. If you would like to honor someone with a donation to the shelter, we will be happy to send them a special letter acknowledging your thoughtful gesture.
- Create a legacy by remembering the animals in your estate planning by designating Lawrence Humane Society as a beneficiary. Simply include this language:

To Designate A Life Insurance Policy, Retirement Plan, or Financial

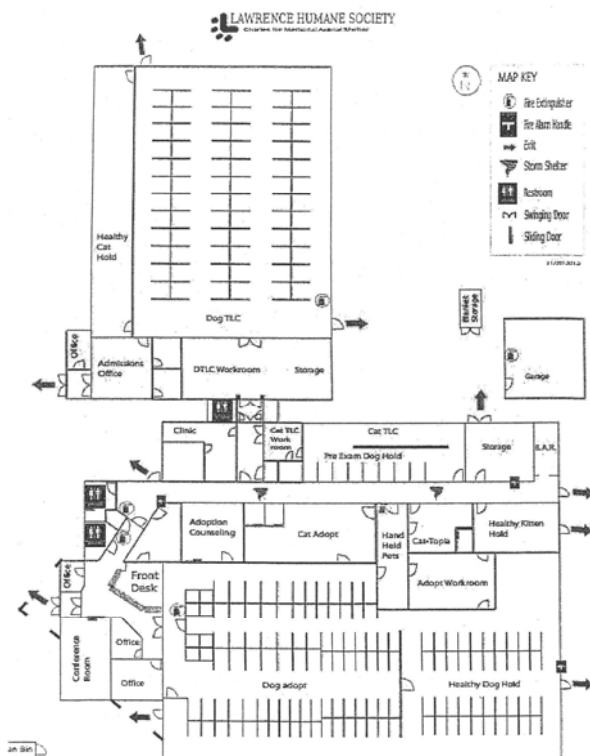
Account:

"I hereby designate Lawrence Humane Society, INC., Lawrence, Kansas, a not-for-profit corporation, (Federal Tax ID #48-0641821) irrevocable beneficiary of Policy No. _____, Plan No. _____ or Account No. _____.

To Designate a Percentage of Your Estate for Unrestricted Purposes

I give, devise, and bequeath to Lawrence Humane Society, INC., a not-for-profit organization (Federal Tax ID #48-0641821) located in Lawrence, Kansas, _____ percent (%) of the rest, residue, and remainder of my estate as an unrestricted gift to be used at the discretion of the Board of Directors of Lawrence Humane Society, INC. for its general purposes.

Information current as of August 2012. Information is subject to change in the future.



Information current as of August 2012. Information is subject to change in the future.

Appendix E

Materials for filing time sheets

University of Kansas

Applied Behavioral Science

100 Sunnyside Ave.
Lawrence, Kansas 66045

TIME SHEET

Employee Name: Cynthia Masaki

Title: Undergraduate Researcher

Employee Number: 093652

Status:

Department: Applied Behavioral Science

Supervisor:

Date	Start Time	End Time	Regular Hrs.	Overtime Hrs.	Total Hrs.
9/10	8:00	10:00			
9/11	3:00	5:00			
9/12	5:00	7:00			
9/13	9:00	10:00			
9/14	9:00	11:00			
WEEKLY TOTALS:					9 Hrs.

Employee Signature: _____

Date: _____

Supervisor Signature: _____

Date: _____

Appendix F

Informed consent

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, or the University of Kansas.

PURPOSE OF THE STUDY

The purpose of the proposed investigation is to examine the effects of feedback on performance of simple office tasks.

PROCEDURES

By participating in this study, you will be asked to complete a demographic survey. Following completion of this survey, you will be asked to carry out four simulated routine office tasks lasting 5 minutes, presented in a random order. The four simulated tasks include folding brochures, stuffing envelopes, sorting packets, and filing. Following each task, you will receive accurate verbal feedback about your performance. Feedback will consist of positive statements and neutral corrective feedback. Your time commitment for each session will be 60 minutes. However, you will need to return to the testing room approximately 3 to 5 times (total time of study 3-5 hours). All sessions will be video-recorded. *Your demographic survey will be kept in the faculty researcher's locked cabinet in a locked office, with your data and video file stored on a password protected computer saved to a secure server in a locked office.* You may ask to have the taping stopped at any time and choose not to participate in the study. Trained graduate and undergraduate research assistants will score the video tapes. 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 receiving feedback or become fatigued by the various office tasks.

BENEFITS

Your participation in this study will benefit society by determining ways to impact performance of simple office tasks.

PAYMENT TO PARTICIPANTS

Participants will be compensated by receiving 0.5% points of extra credit for every hour of participation, which will be applied to their undergraduate ABSC course from which they were recruited.

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 rather than your name. 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 D. DiGennaro Reed, Ph.D., BCBA-D, 1000 Sunnyside Avenue Room 4056 DHDC, 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:

Florence D. DiGennaro Reed, Ph.D., BCBA-D
Faculty Supervisor & Principal Investigator
Department of Applied Behavioral Science
4056 Dole Human Development Center
University of Kansas
Lawrence, KS 66045
785 864 0521

If you have any questions about your rights as a research participant you may contact the Human Subjects Committee Lawrence Campus (HSCL) office at (785) 864-7429 or (785) 864-7385, write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email stephaniede@ku.edu.

KEEP THIS SECTION FOR YOUR RECORDS. IF YOU WISH TO PARTICIPATE TEAR OFF THE FOLLOWING SECTION AND RETURN IT TO THE RESEARCHER (S).

HSCL # 19938

PARTICIPANT CERTIFICATION:

If you agree to participate in this study please sign where indicated, then tear off this section and return it to the investigator(s). Keep the consent information 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.

Type/Print Participant's Name

Date

Participant's Signature

Appendix G

Demographic questionnaire

ID # (given to you by researcher):

Do NOT enter your student ID number!

Age:

Gender:

- ☐ Male
- ☐ Female

Race/ethnic background:

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

Do you have a DOCUMENTED disability?

- ☐ Yes
- ☐ No

If yes, please specify:

- ☐ learning disability
- ☐ attention deficit/hyperactivity disorder
- ☐ physical disability
- ☐ other

Appendix H

Feedback statements

Positive:

Specific:

- I like you kept the _____ in a neat pile.
- I like how you kept the papers organized
- I'm pleased with your commitment to quality
- I appreciate your attention to detail
- I like how you lined up the edges before folding the brochure
- I like how you creased the line all the way
- I like how you made sure the papers were aligned before stapling
- I like how you made sure the packet had all the pages
- I like how you fold the flap down on the envelope before stacking them
- I like how you replaced the crinkled flyer
- I like how you left out the flyer that was too big
- I like how you pushed the flyer all the way down in the envelope

General:

- Thank you for putting in a lot of effort
- Good job, you've been a huge help
- We appreciate your hard work
- Thank you for maintaining a positive attitude
- Good job following the instructions
- You're doing a great job
- Really great job today
- These _____ look wonderful

Corrective:

- Next time, it would be great if you could keep the papers more organized
- Just a reminder, make sure you are paying attention to the task
- Next time, you might try a new method for organizing
- Next time, you might try a new method for completing the task
- Make sure you put the ____ in the box once complete
- Next time you might try taking out a bigger pile of _____ before beginning
- Next time, be consistent with the way you organize the task

Folding:

- Make sure you crease the line all the way
- Try not to bend the corners
- Make sure the line isn't crooked when folding

Filing:

- Try not to bend the corners

- Next time try handling the papers more gently
- Make sure the time sheet is facing left
- Make sure the time sheet is pushed all the way down in the file

Stuffing:

- Make sure the flyer is facing to the left
- Try not to bend the corners
- Make sure you push the flyers all the way down in the envelope
- Next time, fold the flap down before stacking the envelope
- Make sure the pink flyer is on top
- Make sure you leave out the bent flyers
- Make sure you leave out any flyers that do not fit

Packets:

- Make sure all of the corners are lined up before stapling
- Next time you might consider stapling at an angle
- Try not to bend the corners
- Make sure the staple isn't too far down the page
- Next time try handling the papers more gently
- Be sure that there is only one staple
- Be careful that you are only grabbing one page at a time

Appendix I

Task analysis of procedure

Baseline

Participant Number: _____

Date: _____

- ☐ Unlock both doors by pushing button on inside of door.
- ☐ Make sure that you have the following materials in the observation room:
 - ☐ Brochures
 - ☐ Envelopes with stuffing materials
 - ☐ Papers to create packets
 - ☐ Portable file with hanging files, materials to file
 - ☐ A bin for completed products
 - ☐ Participant research files
- ☐ Make sure that the testing room is clear of all experimental materials
- ☐ Greet participant.

Good morning/afternoon! How are you today? Let's get started. Please join me in this room (move to testing room). Please place your bag over here (point to corner of the room away from the table) and be sure to refrain from using your phone during the session.

- ☐ Obtain written consent and demographic data (first session only).

Before we begin the study, I need to obtain consent from you for participation. Please take a couple of minutes to read this consent form (hand consent form and pen to individual) and sign it if you're willing to provide consent. If you do, please also complete this short demographic information form (hand demographic form to individual). I'll be in the room on the other side of this mirror. When you're finished simply say "I'm done" and I will return.

Here is a copy of the consent form for your records (hand second consent form).

- ☐ Check to make sure consent form and demographic data are fully completed. If not, ask participant to complete the missing item.
- ☐ Begin instructions.

You will be performing a series of several office tasks: folding brochures, stuffing envelopes, creating packets, and filing. Each task will last 5 minutes. When the 5 minutes are up I will knock on the glass in order to let you know that you are done with that task. Do you have any questions before we begin?

☐ **Begin 1st task:**

- Bring the materials for the corresponding task marked above
- Explain the task to the participant
 - ***In this task you will _____. Do you have any questions?***
- Leave the room, and start timer for 5 minutes as soon as the door shuts.

☐ During the session, please do not engage in other activities. Instead, please observe the participant and record “interesting” activities/observations in the space below.

☐ After five minutes knock on the window and then enter the testing room and collect the materials (No Feedback is Provided).

☐ Record the amount completed by the participant _____

Feedback manipulation

Participant Number: _____

Date: _____

☐ Make sure that you have the following materials in the observation room:

- Brochures
- Envelopes with stuffing materials
- Papers to create packets
- Portable file with hanging files, materials to file
- A bin for completed products
- 4 colored clipboards (green, blue, yellow, pink) each marked for their separate tasks
- Participant research files

☐ Make sure that the testing room is clear of all experimental materials

☐ Greet participant.

Good morning/afternoon! How are you today? Let's get started. Please join me in this room (move to testing room). Please place your bag over here (point to corner of the room away from the table) and be sure to refrain from using your phone during the session.

☐ Begin instructions.

Like last time, you will be performing a series of office tasks: folding brochures, stuffing envelopes, creating packets, and filing. Each task will last 5 minutes, when the 5 minutes are up, I will knock on the window to let you know that you may stop. Do you have any questions before we begin?

☐ **Begin 1st task:** Collating Packets

- ☐ Bring the materials and colored clipboard for the corresponding task marked above
- ☐ Start timer for 5 minutes as soon as the door shuts
- ☐ During the session, please do not engage in other activities. Instead, please observe the participant and record “interesting” activities/observations in the space below.
- ☐ After five minutes knock on the window and then enter the testing room (make sure you are holding the corresponding clipboard), collect the materials, and give the participant feedback on his or her performance.
- ☐ Feedback order: **CPP**
- ☐ Feedback statements provided:
- 1.
 - 2.
 - 3.
- Record the amount completed by the participant _____
- ☐ **Begin 2nd task: Stuffing Envelopes**
- ☐ Bring the materials and colored clipboard for the corresponding task marked above
- ☐ Start timer for 5 minutes as soon as the door shuts
- ☐ During the session, please do not engage in other activities. Instead, please observe the participant and record “interesting” activities/observations in the space below.
- ☐ After five minutes knock on the window and then enter the testing room (make sure you are holding the corresponding clipboard), collect the materials, and give the participant feedback on his or her performance.
- ☐ Feedback order: **CONTROL**
- Record the amount completed by the participant _____

Choice phase**Choice 1**

☐ Options are presented in the correct order

Packets (CPP)	Stuffing Envelopes (---)	Filing (PPC)	Folding Brochures (PCP)
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☐ Feedback statements given:

1.

2.

3.

Record the amount completed by the participant _____

Appendix J

Brief oral interview

At the conclusion of the choice phase, ask the following open-ended questions:

1. Ask either one of the following, depending on the data patterns in the choice phase:
 - a. When you were allowed to choose the activity you could complete, we noticed you preferred **filing/stuffing envelopes/folding brochures/stapling packets**. Why did you prefer that activity?
 - b. When you were allowed to choose the activity you could complete, we noticed you selected all of the activities and did not pick just one. Which activity did you prefer? Why did you prefer that activity?
2. Did you notice that the order of the feedback we gave you was different depending on the activity?
 - a. If yes, what did you notice about it?
 - b. For yes or no, describe the feedback for each activity.
3. Which feedback order do you most prefer?
4. Why do you prefer that order?

Vita

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