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Effects of Positive and Negative Feedback Sequence on Work Performance and Emotional Responses

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ABSTRACT

Performance feedback has been broadly used within Organizational Behavior Management. However, the specifics regarding the most effective type of feedback still merits careful investigation, including the use of positive and negative sequences of feedback. The current study randomly assigned participants to receive one of the following sequences: (a) positive-positive feedback, (b) positive-negative feedback, (c) negative-positive feedback, and (d) negative-negative feedback. Uniform feedback delivery resulted in higher performance, although inconsistent feedback resulted in lessened negative emotional responses. Recommendations on whether to deliver positive or negative feedback in isolation or combination may depend upon the outcomes currently being prioritized by the organization.

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positive feedback; negative feedback; feedback sequence; emotional responses

Performance feedback may be defined as performance information that enables individuals to change their behaviors (Daniels, 2016). Performance feedback has been one of the most frequently used interventions, either in isolation or in combination with other variables, in the field of Organizational Behavior Management (OBM; Weatherly & Malott, 2008). The reliance of OBM on feedback for performance improvement has held across research studies and review articles over several decades (Alvero, Bucklin, & Austin, 2001; Balcazar, Hopkins, & Suarez, 1985–1986; Nolan, Jarema, & Austin, 1999; VanStelle et al., 2012).

Many of these studies have implemented feedback as a consequence for performance and certain forms of these consequences are likely to have reinforcing or punishing properties. The function of feedback as a consequence depends on how the elements of feedback were experienced by recipients during their learning histories. As such, the predictability of feedback may depend on how uniform the learning histories are for members of the culture and therefore some idiosyncratic effects are to be expected (e.g., workers who are avoidant of praise because attention has often been an antecedent for humiliation). For example, a

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litany of words and phrases such as “great job,” “excellent,” “appreciate,” “impressive,” “best,” “improvement,” and “well done,” have frequently been paired with verbal and social reinforcers, monetary rewards, break times, the reduction of threats, and other stimuli with reinforcing properties for most members of the culture. Alternatively, words and phrases such as “deficient,” “poor job,” “so bad,” “worsening,” and “not your best,” have frequently been paired with verbal and social punishers, reduced compensation, and an increase in threats. Such common pairing histories can lead certain words or phrases to elicit positive and negative emotional states, a phenomenon well documented by the literature (Kuykendall & Keating, 1990; Staats & Staats, 1958). When such positive and negative words are incorporated as elements of feedback for performance, the feedback may elicit emotional reactions as a respondent process and evoke verbal reports of such emotions as an operant process (Moon, Lee, Lee, & Oah, 2017). Beyond the immediate emotional effects upon the recipient, feedback may also influence the probability of future work-related behaviors as another operant process.

As past research has made clear, feedback is not limited to the role of a conditioned stimulus or behavioral consequence, but can take on various antecedent operant relations for work performance as well (Johnson, 2013; Johnson, Rocheleau, & Tilka, 2015; Peterson, 1982). Furthermore, feedback can serve multiple functions at once, yet it is beyond the scope of any particular study to investigate all the possible functions of feedback (Aljadeff-Abergel et al., 2017). The remainder of this paper will largely limit itself to potential functions as a consequence for operant task performance and as a respondent for emotional reactions (along with the associated discriminative properties for verbal self-reports of emotional reactions). For the sake of simplicity, this study will utilize the terms “positive feedback” and “negative feedback” in regard to these potential functions. In practice, positive feedback is delivered with the intent of increasing observed behavior and when done correctly, this stimulus should have reinforcing properties. Conversely, negative feedback is delivered with the intent of decreasing observed behavior and when done correctly, this stimulus should have punishing properties.

The field of OBM has generally eschewed the use of negative feedback whenever possible (Daniels, 2016). Much of the literature emphasizes reinforcement procedures and downplays, discourages, and dissuades the reader from punishment procedures in general (Abernathy, 2014; Daniels & Bailey, 2014; Geller, 2001). This emphasis fits with the values of behavior analysis in general, which have promoted a minimization of aversive control long before the development of OBM (Skinner, 1948). Beyond general philosophical sentiments, there may be important practical reasons to avoid relying extensively on negative feedback. Negative feedback can elicit negative emotional responses and contribute to a general worsening of environmental conditions. Such stimulation can serve as an emotional motivating operation—

either unconditioned or conditioned—and evoke undesirable behaviors such as aggressiveness, resistance, and withdrawal (Michael, 2004; Sidman, 1989). Even in situations in which negative feedback may be the most appropriate intervention, the emphasis in OBM literature tends to be on eliminating undesirable behavior in order to create a foundation for subsequently reinforcing desirable behavior, rather than simply providing punishment alone.

As such, it is hardly surprising that most feedback research has focused on consequences that could be categorized as positive feedback (Crowell, Anderson, Abel, & Sergio, 1988; Hawkins, Burgio, Langford, & Engel, 1992; Henry & Redmon, 1991). Examples of research on negative feedback do exist (Larson et al., 1980), but they tend to be the exception rather than the rule. As suggested above, although it is important to not rely extensively or exclusively on negative feedback, this should not mean that negative feedback should be completely abandoned. Despite the potential adverse effects, it is often necessary in certain circumstances to employ punishing stimuli, such as when a dangerous situation necessitates immediate intervention (e.g., a situation in which industrial accidents can occur) or in a situation that could incur substantial damage to the organization's finances, reputation, or legal obligations. Less dramatic but just as important is the consideration that no worker will always exhibit perfect work performance and corrective actions are sometimes warranted. Supervisors who deliver positive feedback exclusively may not be maximally effective at interacting with their subordinates when it comes to reducing undesirable behavior. It is possible that some workers may even prefer the limited use of punishment, especially if the expedient reduction of undesired performance can hasten the attainment of desired performance, thus increasing opportunities for contact with the rewards that are associated with superior performance.

When supervisors face a situation requiring the delivery of negative feedback to their subordinates, one common strategy is to deliver negative feedback at the same time as positive feedback in order to minimize deleterious effects upon the existing social relations while still delivering the necessary corrections (Larson, 1986). A frequent advisement for achieving this outcome is to utilize the “feedback sandwich,” in which negative feedback is immediately preceded and followed by instances of positive feedback (Dohrenwend, 2002; Shute, 2008). Some authors have disputed such advice and have argued that positive and negative feedback should be delivered with sufficient temporal separation so that these variables do not impact one another (Daniels & Bailey, 2014). The basic concern is that if positive feedback is consistently followed by negative feedback, the reinforcing properties of positive feedback are undermined by the impending punishing properties of negative feedback. Such a correlation may even eliminate all reinforcing properties of positive feedback despite the intent of the delivery agent. Instead, positive feedback may come to function as an aversive warning stimulus that establishes its own removal as reinforcing (i.e., a reflexive conditioned motivating operation; McGee & Johnson, 2015).

There are other important sequences of positive and negative feedback besides that of the feedback sandwich that are worthy of investigation (Henley & DiGennaro Reed, 2015). The basic issue is whether certain sequences and temporal proximities of these feedback types will augment, diminish, or have a neutral effect on each other. The existing research is not clear on the outcomes of these potential interactions. For example, Schaible and Jacobs (1975) found that pairing negative feedback with positive feedback enhanced the acceptance of criticism and the effectiveness of feedback. Ilgen, Fisher, and Taylor (1979) and Stone, Gueutal, and McIntosh (1984) found that recipients favorably accepted feedback when positive feedback was followed by negative feedback. However, the researchers in the previous three studies did not investigate the effects of feedback sequences upon actual work performance.

Parkes, Abercrombie, and McCarty (2013) compared the effects of feedback sandwiches (positive comments before and after feedback), open sandwiches (positive comment either before or after feedback), and feedback unaccompanied by positive comments upon clinical note writing skills of third-year medical students. Feedback utilized in all conditions appeared to be largely neutral in its evaluation. According to collected subjective reports, it was believed by the participants that their performance improved the most after receiving feedback sandwiches. However, this perception of the participants was contradicted by the objective performance measures, which showed no differences in improvements among the three feedback formats. Henley and DiGennaro Reed (2015) investigated performance with simulated office tasks and used one of three sequences of feedback delivery within a counterbalanced design: (a) positive, corrective, positive (PCP), (b) corrective, positive, positive (CPP), and (c) positive, positive, corrective (PPC). They found that corrective feedback followed by positive feedback was more effective than other alternatives. Slowiak and Lakowske (2017) used a medical transcription task in order to also examine PCP, CPP, and PPC sequences of feedback delivery. Participants would receive one of the three feedback sequences during 5-minute breaks occurring after every 12 minutes of a work trial as part of hour-long research sessions. The researchers found no differences between the sequences of positive and negative feedback. None of the previous three studies that examined performance included feedback sequences that were undiluted (i.e., positive only or negative only) in comparison to mixtures of positive and negative feedback sequences. In sum, there is no consensus on whether particular sequences of positive and negative feedback—either mixed or undiluted—are advantageous or detrimental to the performance or emotional reactions of employees. As such, the current research investigates these issues in hopes of contributing to a resolution of these ongoing debates.

Method

Participants and setting

Participants consisted of 120 undergraduate and graduate students of a large Korean university. They were recruited through online, part-time job bulletin boards operated by the university. The experiment was conducted in a computer lab of the university, with 50 computers, an electronic lecture desk, and a projector. The projector was used to give a brief explanation of the purpose of the research and to demonstrate the functioning of the experimental task. The 50 computers had the same specifications and sufficient space between them so as not to disturb others.

Experimental task

A computer program displayed components of mobile phones in a virtual assembly task. There were three basic models of phones (realistically modeled after popular cell phone brands), each with six main components (rear of LCD, body unit, battery, main board, mounting bracket, and front side of LCD). [Figure 1](#) displays examples of both the initial and mid-assembly screens that participants would typically encounter. Participants would assemble the phone by using a computer mouse to drag the parts from the top of the screen to the bottom of the screen in the correct sequence. During the general assembly, participants could initiate a visual inspection task by clicking the “Quality Control” on-screen button after the second (body unit) and fourth components (main board) were moved in the correct sequence at the bottom of the screen. After clicking this button, either the “body unit” component or the “main board” component would appear (e.g., see [Figures 2](#) and [3](#)). These components would randomly appear as either correct or faulty (errors included elements missing or in non-standard configuration). Participants could click the on-screen “Model Stimulus” button to display a model component once for 1.25 seconds, thus allowing participants to compare the current component with a correct model. If the participant decided that a part of the component was faulty, they could click on that area of the screen, which would then display a red circle over the erroneous part (see [Figure 3](#)). If the participant decided that a part of the component was not faulty, they simply would not click on that area of the screen. The body unit and main board both had four parts that required inspection for potential errors. Clicking the on-screen “Finish” button would return the participant to the general assembly screen to allow for further assembly and completion of the current phone model. Clicking the on-screen “Next” button would complete the current phone and display the next phone to be completed. Participants could complete as many assemblies as time and their rate permitted. [Figures 4–6](#) display all three phone models, along with the two components used for quality inspections.

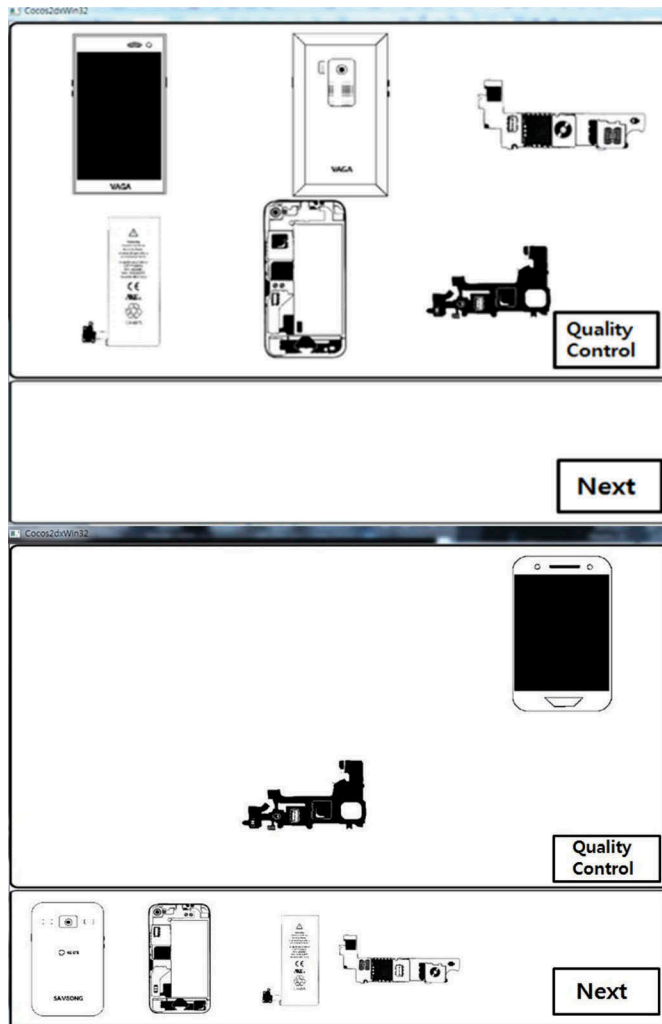


Figure 1. Example of virtual mobile phone production program execution—initial and mid-assembly.

Dependent variables

Number of correctly completed tasks

One of the dependent variables was defined as the mean number of correct decisions regarding quality control. Each of the quality check components (body unit and main board) required the participant to inspect four distinct areas on the components to decide if that component was faulty or correct. Each of the four areas was used for calculating the number of correct decisions. The results of quality control could be classified as true positives (deciding there is a flaw when a flaw is present), true negatives (deciding there is no flaw when no flaw is present), false positive/Type I error (deciding

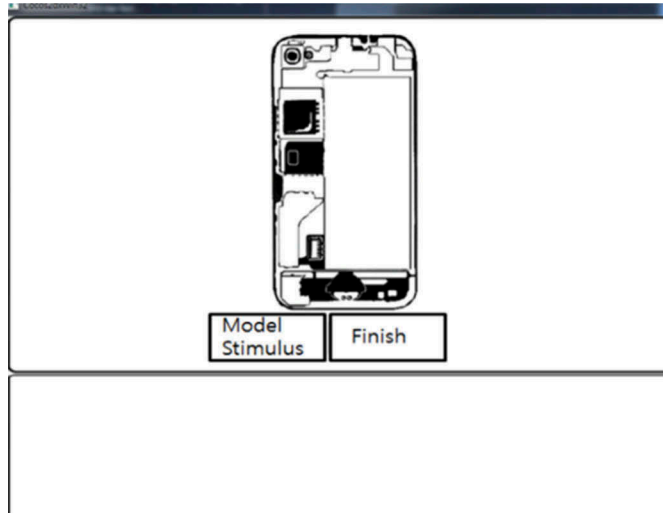


Figure 2. A screen of quality control executed for the second component.

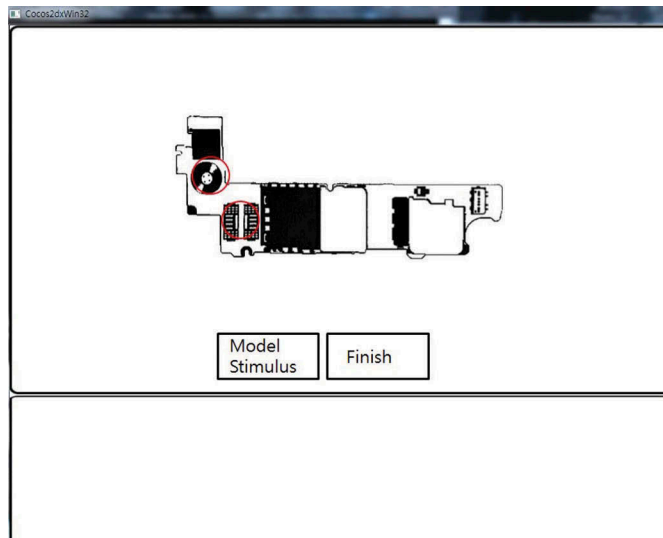


Figure 3. A screen of quality control executed for the fourth component (two errors circled by user).

there is a flaw when no flaw is present), and false negative/Type II error (deciding there is no flaw when a flaw is present). True positives and true negatives were the basis for calculating the average of correct responses.

Emotional responses

To identify the effect of feedback types on the emotional reactions of participants, the perceived emotional responses were measured by utilizing the questionnaire items of Warr's (2007) after the completion of baseline and

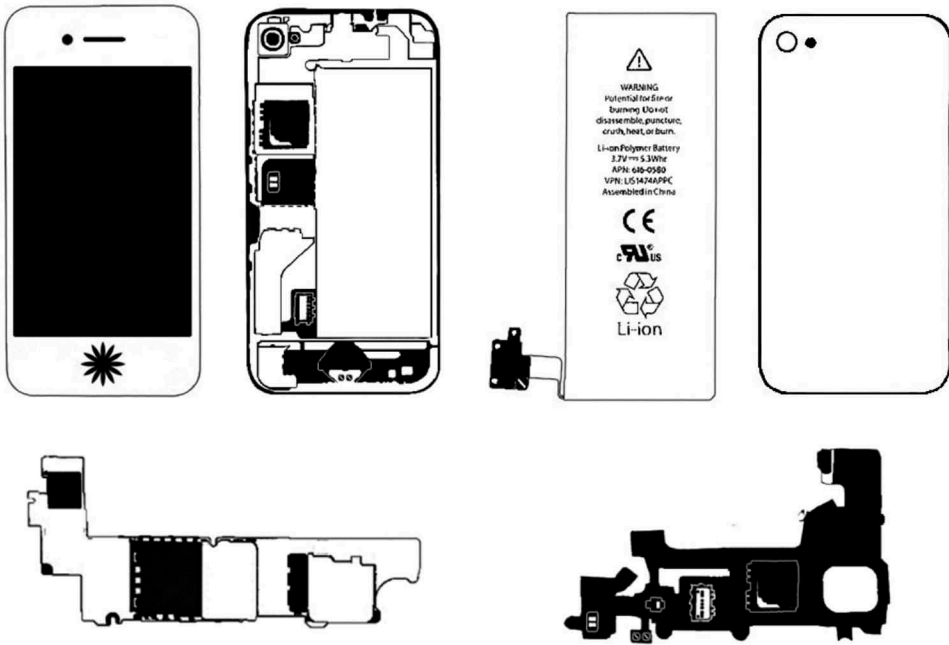


Figure 4. Components of first cell phone model.

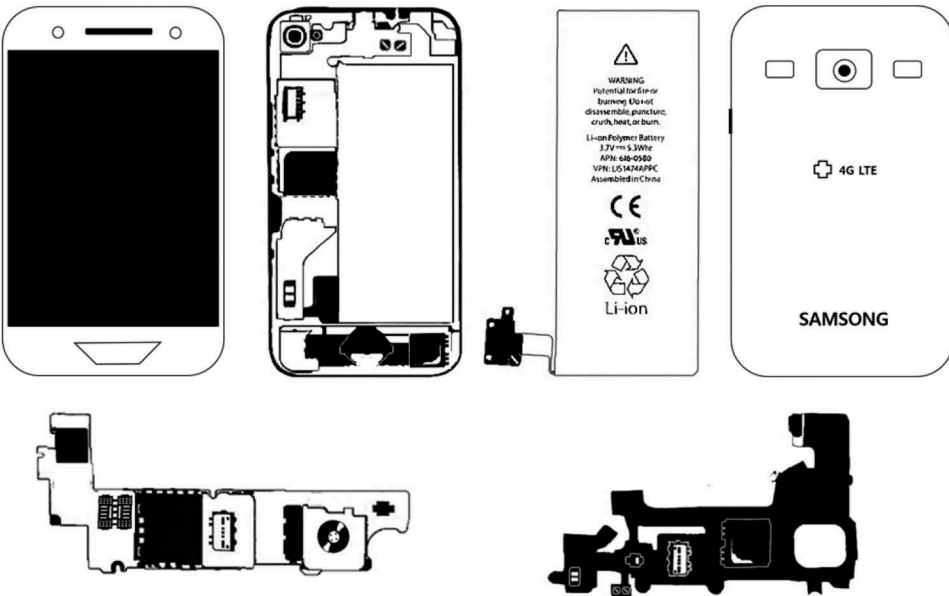


Figure 5. Components of second cell phone model.

intervention phases. A total of 12 types of self-report for emotions were measured on the 5-point Likert scale. This was done by having the participants assign a numerical value for six listed emotions from each of the

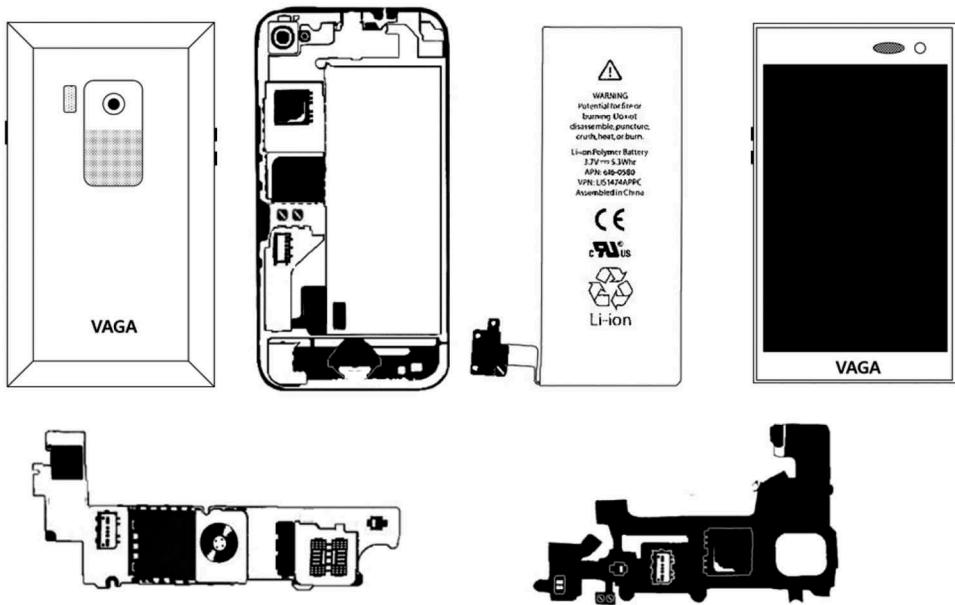


Figure 6. Components of third cell phone model.

classified groups—either positive (items such as surprised, happy, excited, satisfied, comfortable, and relaxed) or negative (items such as unsatisfied, anxious, nervous, sad, discouraged, and bored).

Independent variable

The independent variable consisted of one of four types of positive and negative feedback sequences: positive-positive (P-P) feedback, positive-negative (P-N), negative-positive (N-P) feedback, and negative-negative (N-N) feedback. Participants were randomly assigned to one of four groups based on these sequences.

Positive-positive (P-P) feedback group

The participants assigned to the P-P feedback group were offered positive verbal results after they were provided with information about the rate of correct quality control on the second component (body unit), and also offered positive verbal results after they were provided with information about the rate of correct quality control on the fourth component (main board). Participants would receive feedback such as “Your performance for quality control on the second component of 3 mobile phones is ____%. *Very well done.* Further, your performance for quality control on the fourth component is ____%. *Great job!*” The specific praise statement used for the

first and second instance of positive feedback would vary (e.g., very well done, you did your best, great, etc.) to avoid the appearance of rote delivery. It is important to note that the actual feedback statement is given in the participant's native language of Korean and the examples presented here are the English equivalent rather than the specific phrasing.

Positive-negative (P-N) feedback group

The participants were provided positive feedback on the component that was performed at the higher correct rate of the two components; subsequently they were given negative feedback on the lower correct rate of the two components. The participants who received P-N feedback heard statements such as “Your performance for quality control was ___% on the [second/fourth] component. *You did your best!*,” and “Your performance for perfect quality control on the [second/fourth] component is ___%. *It is almost as though you did not conduct quality control.*” Similar to the praise statements, the criticism used for the instance of negative feedback would vary (e.g., we did not realize you were this bad, poor job, is this the best that you can do?, etc.) to avoid the appearance of rote delivery. In case of the two components with the same rate of work performance, positive feedback was delivered on the component that increased in the higher rate; whereas negative feedback was delivered on the component that increased in the lower rate, as compared to the previous performance.

Negative-positive (N-P) feedback group

Participants in the N-P feedback group would receive both negative feedback and positive feedback on their performance related to each of the two components selected for quality control. The participants were delivered negative feedback on the component performed at the lower rate of the two components; meanwhile they were delivered positive feedback on the higher rate of the two components.

Negative-negative (N-N) feedback group

Participants provided with N-N feedback were offered negative verbal feedback after they were provided with information about the rate of correct quality control on the second component, and also offered negative verbal results after they were provided with information about the rate of correct quality control on the fourth component.

Experimental design

The 4×2 mixed design was used to assess differences in feedback sequences. The between factor was sequence of the feedback delivered (P-P feedback, P-N feedback, N-P feedback, and N-N feedback), and the within factor was the experimental phase (baseline and intervention).

Experimental procedure

Participants were required to attend two experimental sessions—baseline and intervention. The use of the Internet and personal electronics were permitted during the operation of the task to allow for the availability of realistic alternative activities. In addition, a 15-minute orientation was held for participants prior to baseline during which the researcher explained the operation of the experimental task. This explanation included details on the types of errors that may occur during quality control inspections. The baseline session began immediately after the orientation session and lasted for 30 minutes, with two brief breaks that were 3–5 minutes in duration every 10 minutes. During the baseline session, participants used the virtual assembly task as described in the *Experimental Task* section above and received no feedback regarding their performance. At the conclusion of the baseline session, participants were asked to complete the emotional responses questionnaire. Participant responding was automatically recorded by the computer.

Approximately one week following the conclusion of the baseline session, the intervention session was conducted for 30 minutes. Prior to initiating the task, the participants were provided with pictures about the correct rate of performance for quality control checks during the previous baseline session. After the participants checked the picture for about 30 seconds, the researcher provided them oral feedback according to their assigned experimental condition. Again, breaks that were 3–5 minutes in duration occurred every 10 minutes. These breaks were used by the researchers to collect and calculate performance data for the purposes of feedback delivery. At the conclusion of the break, feedback was provided in accordance with the assigned experimental condition. After completing the 30-minute intervention session, participants were asked to once again respond to the questionnaire on the perceived emotional responses. After completing the questionnaire, ₩10,000 (approximately \$9.00) was distributed as a participation fee.

Results

Work performance

Figure 7 shows the means for the number of correctly completed work tasks across conditions. To examine two main effects (feedback sequence and experimental phase) and an interaction effect, a mixed design ANOVA was conducted on the number of correctly completed tasks. The feedback sequence by the experimental phase interaction was statistically significant ($F(1, 116) = 7.19, p < .05$). Furthermore, there was a statistically significant main effect for the experimental phase ($F(1, 116) = 674.67, p < .05$). However, there was no statistical difference for the feedback sequence ($F(1, 116) = 2.66, p > .05$).

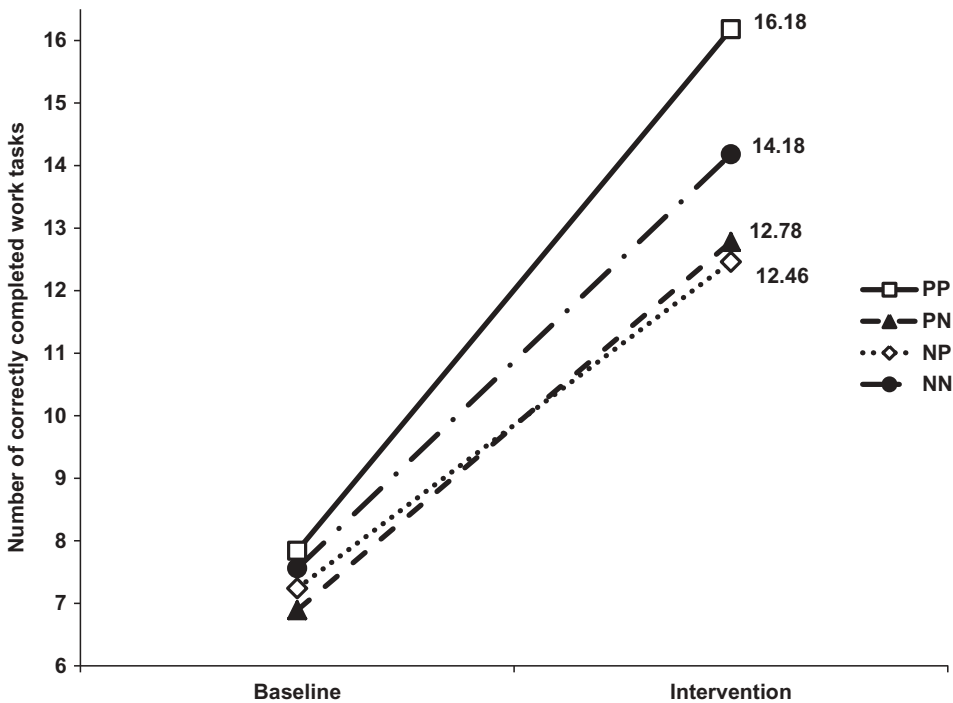


Figure 7. Means across experimental conditions and the result of simple main effect.

Tests of simple main effects across the experimental phase were also performed. The number of correctly completed tasks was significantly different between baseline and intervention under P-P feedback ($F(1, 116) = 276.30, p < .05$), under P-N feedback ($F(1, 116) = 137.80, p < .05$), under N-P feedback ($F(1, 116) = 107.90, p < .05$), and under N-N feedback ($F(1, 116) = 174.25, p < .05$). The result of the test of simple main effects across the feedback sequence indicated that the number of correctly completed tasks was significantly different between P-P feedback and P-N feedback under intervention and between P-P feedback and N-P feedback under intervention. The result of the pairwise comparison test for the simple main effects across the feedback sequence indicated that the number of correctly completed tasks was not significantly different among feedback groups. In the intervention, there were significant differences for the performance between P-P feedback and P-N feedback ($p < .001$) and between P-P feedback and N-P feedback ($p < .001$). However, there was no significant mean performance difference between P-P and N-N feedback under intervention ($p > .05$).

Emotional responses

Positive emotion

Figure 8 shows the mean score for positive emotional response across conditions. While the mean score of positive emotional response increased in

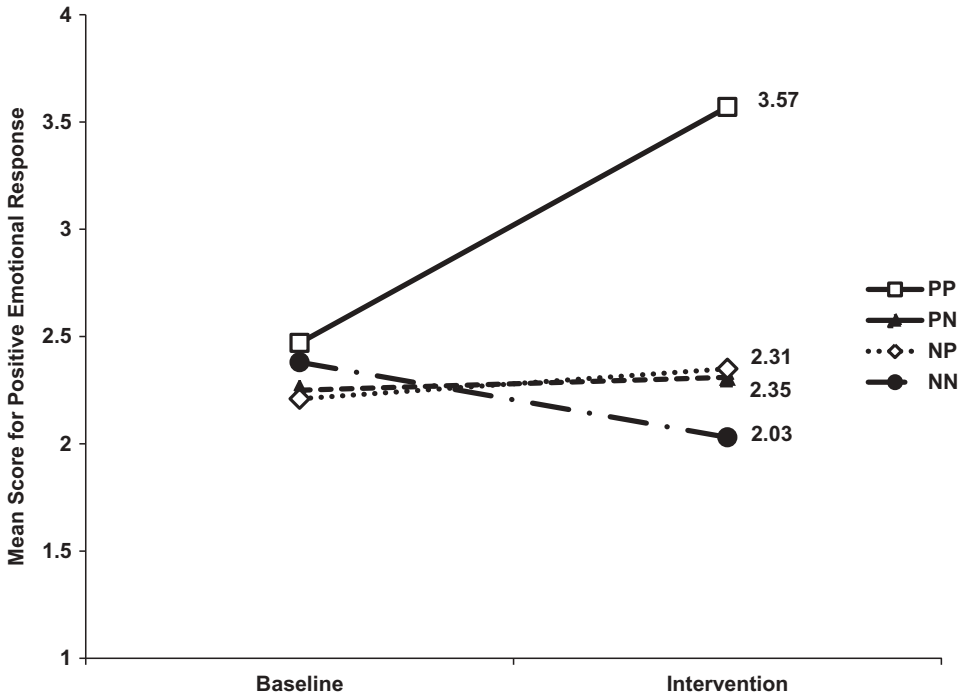


Figure 8. Mean of positive emotional responses across experimental conditions and the result of simple main effect.

positive-positive feedback, positive-negative feedback, and negative-positive feedback, mean score of positive emotional response decreased in negative-negative feedback. A mixed design ANOVA found a statistically significant main effect for the feedback sequence ($F(1, 116) = 26.795, p < .05$) and for the experimental phase ($F(1, 116) = 16.598, p < .05$). Also, the feedback sequence by the experimental phase interaction was statistically significant ($F(1, 116) = 28.04, p < .05$). Tests of simple main effects across the experimental phase on the mean score of positive emotional response found that the mean score of positive emotional response was significantly different between baseline and intervention under P-P feedback ($F(1, 116) = 89.889, p < .05$), and under N-N feedback ($F(1, 116) = 9.137, p < .05$). The pairwise comparison for the test of simple main effects across the types of feedback on the mean score of positive emotional responses was also performed. The mean score of positive emotional response was significantly different between P-P feedback and P-N feedback under intervention ($p < .001$), between P-P feedback and N-P feedback under intervention ($p < .001$) and between P-P feedback and N-N feedback under intervention ($p < .001$). In addition, the mean score of positive emotional response was significantly different between P-N feedback and N-N feedback under intervention ($p < .05$) and between N-N feedback and N-P feedback under intervention ($p < .01$).

Negative emotion

Figure 9 shows the mean score for negative emotional response across conditions. While the mean score of negative emotional response decreased in P-P feedback, P-N feedback, and N-P feedback, mean score of negative emotional response increased in N-N feedback. A mixed design ANOVA on the mean score of negative emotional responses found a statistically significant main effect for the feedback sequence ($F(1, 116) = 18.153, p < .05$) and for the experimental phase ($F(1, 116) = 8.488, p < .05$). Also, the feedback sequence by the experimental phase interaction was statistically significant ($F(1, 116) = 15.782, p < .05$). Tests of simple main effects across the experimental phase on the mean score of negative emotional response found a significant difference between baseline and intervention under P-P feedback ($F(1, 116) = 42.251, p < .05$), and under N-N feedback ($F(1, 116) = 9.942, p < .05$). The result of the pairwise comparison for the test of simple main effects across the feedback sequence indicated that the mean score of negative emotional response was significantly different between P-P feedback and P-N feedback under intervention ($p < .001$), between P-P feedback and N-P feedback under intervention ($p < .001$) and between P-P feedback and N-N feedback under intervention ($p < .001$). In addition, the mean score of negative emotional response was

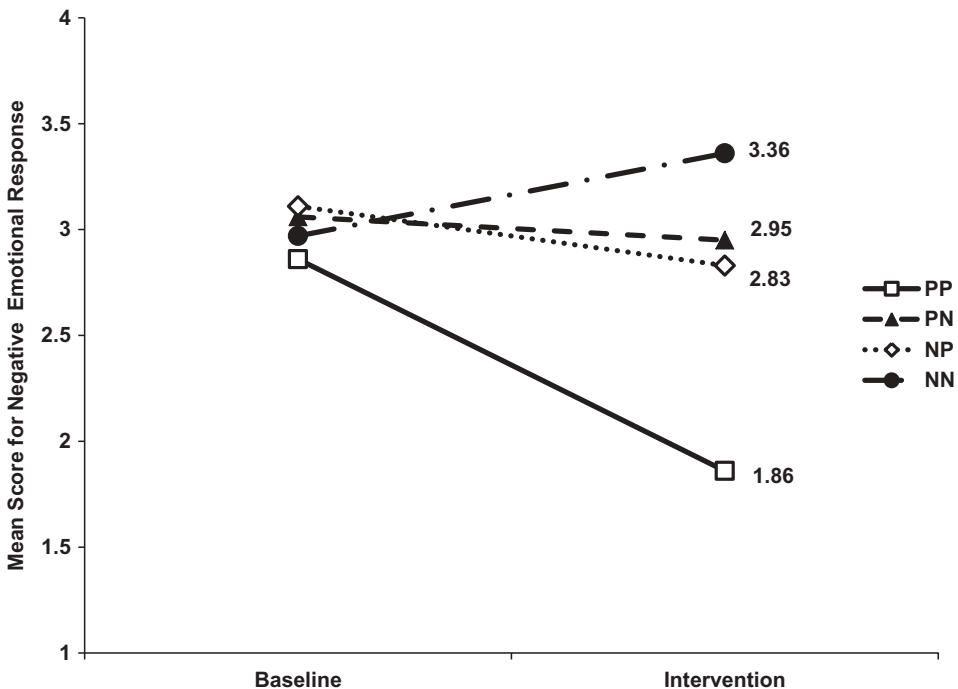


Figure 9. Mean of negative emotional responses across experimental conditions and the result of simple main effect.

significantly different between N-N feedback and P-N feedback under intervention ($p < .01$) and between N-N feedback and N-P feedback under intervention ($p < .001$).

Discussion

The purpose of this study was to examine the effects of positive and negative feedback sequences on work performance and emotional responses. Results demonstrated that work performance showed a significant increase in all feedback sequences (P-P, P-N, N-P, N-N) compared to the baseline. Therefore, these study results were consistent with those of previous studies on OBM in that feedback improved work performance (Balcazar, Shupert, Daniels, Mawhinney, & Hopkins, 1989; Bucklin, Alvero, Dickinson, Austin, & Jackson, 2000). Similar to Slowiak and Lakowske (2017), the current study found no differences between mixtures of positive and negative feedback. When comparing the effects of the sequential delivery of feedback types, the sequential delivery of the congruent feedback types (P-P, N-N) caused statistically significantly improved work performance as compared to the sequence of opposing feedback types (P-N, N-P). This result is consistent with arguments that blending feedback types with contradictory behavioral effects will undermine the effectiveness of the individual elements (Daniels & Bailey, 2014). Despite the frequent admonishments against negative feedback and other aversive stimuli, the N-N group's work performance also increased and there were no statistical mean differences between the P-P and N-N groups' performance.

With regard to emotional responses, the mean positive emotional response score of the P-P group increased in the intervention phase and was the highest overall. This is contrasted with the mean negative emotional score for the P-P group, which decreased in the intervention phase and was the lowest overall. Perhaps unsurprisingly, the positive and negative emotional responses of the N-N group demonstrated a pattern that was the inverse of the P-P group. These results suggest that P-P feedback is more effective and N-N feedback is less effective in regard to emotional responding. However, a mixed feedback sequences (P-N, N-P) appears to mitigate the adverse effects upon emotional responses that can be caused by negative feedback. In this manner the results obtained from current research are consistent with the findings of Dohrenwend (2002) and LeBaron and Jernick (2000), who maintained that when negative feedback was delivered with positive feedback, feedback recipients felt relaxed and negative emotional reactions were minimized. Taken together, these results suggest that if the objective is to alter work performance, then a uniform delivery of feedback types (positive only or negative only) is superior. However, if the objective is to minimize

negative emotional reactions in response to criticisms, then the delivery of diverse feedback types (both positive and negative) would be warranted.

Although the present results demonstrated the effectiveness of positive and negative feedback sequences on work performance and emotional responses, there were limitations associated with the implementation of this study. One limitation is that the current experiment gave feedback only three times, which may not have been sufficient to investigate the true impact of different feedback sequences. Especially in the case of N-N feedback, even though performance increased in the current research, some researchers have asserted that when feedback recipients experienced negative emotional responses, they may show various detrimental side effects (Brief, 1998; Daniels & Bailey, 2014; Judge, Thoresen, Bono, & Patton, 2001; Sidman, 1989; Spector, 1997). The failure to uncover any differences between P-P and N-N sequences on performance might be attributed to the short phases of this research. If the feedback had been repeated over a longer time period, it is possible that differential effects may have been observed between positive and negative feedback.

Another limitation relates to the fact that the work requirement was quality inspection task using two similar components. Some participants in the P-N and N-P groups expressed misgivings about receiving different evaluations on components despite fairly similar levels of work performance. This may have called into question the accuracy of feedback for some participants, a consideration that past research has suggested may be important for performance (Johnson et al., 2015; Palmer, Johnson, & Johnson, 2015) and could impact participant acceptance of feedback.

The fact that feedback was delivered by an experimenter with no previous history with the participants may also be a source of concern. Unlike the experimental situation, the relationship between supervisors and members in a real organization is not as limited in duration. Therefore, the feedback delivered by an experimenter may have been less effective than that delivered by supervisors in a real organization.

Despite these above limitations, this research is distinctive in that it empirically investigated the difference in work performance and emotional responses in response to differing positive and negative feedback sequences. Unlike previous studies, this study examined both undiluted and mixed sequences of positive and negative feedback upon objective performance. This study establishes a pragmatic guideline that when negative feedback is situated with positive feedback, undesirable emotional reactions may be reduced. Given the potential for emotional motivating operations to evoke counterproductive work behaviors and workplace withdrawal (e.g., turnover, absenteeism), strategies to reduce the probability of these outcomes may prove valuable. However, the present study results reveal that negative feedback delivered with positive feedback is not as effective as P-P feedback or

N-N feedback from the perspective of performance. If the emotional reactions are not a prevailing concern for the organization at the moment, the implication is that it is advantageous to not mix positive and negative forms of feedback. Rather than relying on blanket recommendations or condemnations for the sequencing of positive and negative feedback, the best practices may need to be customized for the outcomes currently being categorized as the top priorities.

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