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# The Impact of Authority Relations and Feedback Delivery Method on Performance

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**ABSTRACT**

The proliferation of technology has been changing feedback delivery methods in organizations. However, the effectiveness of feedback delivery methods can vary depending on social dynamics (e.g., authority relations) in the organization. The current study was designed to examine the impact of authority relations and feedback delivery methods on performance. A total of 120 participants were recruited to work on a simulated cell-phone assembly task and were exposed to one of the four feedback conditions: (a) authority figure with face-to-face feedback, (b) authority figure with e-mail feedback, (c) non-authority figure with face-to-face feedback, and (d) non-authority figure with e-mail feedback. Results showed that while both feedback delivery methods resulted in high performance with the presence of an authority figure, only face-to-face feedback resulted in high performance with a non-authority figure. Practical considerations for effective feedback delivery methods in relation to authority figures are also discussed.

The modern workplace often places a heavy combination of competing duties related to employee supervision and administration upon managers. One result of these multiple demands is that administrative workload can often interfere with opportunities to facilitate leadership practices (Wallo, Ellstrom, & Kock, 2013), especially considering the long hours required of the typical manager (U.S. Department of Labor, 2019). This could unintentionally contribute to a "neglectful" environment, one in which engaging in administrative work takes precedence over monitoring employee performance. It may be that the only time performance monitoring trumps administrative tasks is when performance drops below a certain standard, in which the manager may face repercussions from their own supervisor. When this happens, managers will likely use aversive control because it influences performance in the desired direction quickly so that they may return to their other responsibilities in a timely fashion. The manager may berate the

employee or impose threats through a series of progressively worsening discipline steps (Grote, 2006). Eventually, if the employee does not improve, they may be terminated. These interactions may lead to employee turnover, as captured by the coined phrase "You don't quit your job, you quit your boss," an adage that is supported by many research studies (Greenbaum, Mawritz, & Piccolo, 2012; Mardanov, Heischmidt, & Henson, 2008; Palanski, Avey, & Jiraporn, 2014). In cases where the employees do not exit the company, these contingencies motivate employees to perform just well enough to avoid these aversive consequences and no more (Daniels, 2016).

For companies that try to avoid the pitfalls of an overly punitive system, there is a need for an intervention that is not too time intensive or cost prohibitive. Fortunately, feedback represents a potential solution to fit these constraints. Feedback is a communicative variable that induces change by informing the employee on how they are currently performing (Daniels & Bailey, 2014). Feedback has been shown to be effective in enhancing employee performances such as productivity (Berger & Ludwig, 2007; Goomas, 2010), quality management (Tittelbach, Fields, & Alvero, 2008), customer-contact service (Brown, Malott, Dillon, & Keeps, 1980; So, Lee, & Oah, 2013; Wiesman, 2006), and safety behavior (Lee, Shon, & Oah, 2014; Moon & Oah, 2013) in various organizational settings. Feedback also provides the opportunity to embed social reinforcers into feedback sessions, such as congratulating or thanking an employee. This not only influences positive behaviors, but also attributes positive regard on behalf of the supervisor for recognizing the employee's individual efforts and accomplishments. Such conditions make it more probable the supervisor themselves will become a conditioned reinforcer, making their presence in the workplace more enjoyable for the employees. The positive exchange of communication is likely to improve morale and job satisfaction during these interactions (Anseel & Lievens, 2007; Sommer & Kulkarni, 2012). Finally, feedback can be delivered quickly and at low cost. Due to such benefits, feedback may represent a plausible solution for managers to use in order to optimize employee performance.

The most traditional method of feedback is face-to-face feedback, such as having a one-on-one meeting or review. One reason face-to-face feedback may be favored is that managers can add in impromptu evaluative statements regarding the employee's performance, which has been demonstrated as important in previous research (Johnson, 2013). Rule-governed behavior may play a role as well (Malott, 1992), especially if employees describe contingencies differently depending on the delivery method (e.g., "I better pay attention to what he's saying because it was important enough to tell me in person"). There is also a possibility that social reinforcement – through eye contact, care, conversation, and other similar interactions between a feedback provider and recipient – is better facilitated during a face-to-face interaction. However, feedback does not necessarily have to be face-to-face to be effective. As part of an effort to reduce errors in assembling orders in a warehouse,

a study by Berger and Ludwig (2007) used voice-assisted technology headsets connected to worker's waists to deliver feedback. This simple intervention produced a reduction of errors that resulted in a sizable financial impact for the company. The use of such voice-assisted headsets suggests that physical presence of the feedback giver may not be necessary to produce significant changes in performance.

Modern-day advances in technology may also aid in closing the temporal gap between performance and feedback. Many organizations presently use feedback consisting of weekly meetings, usually led by or in the presence of a supervisor. Given that managers are already struggling to make time for a myriad of assigned duties, technological advances present the possibility for improving performance without a significant investment of time. Moreover, the instantaneous properties of certain technology allow feedback to be delivered more immediately and thus allows for the potential to exert even greater control over the performance than the typical end-of-the-week meeting may. This raises the question about the degree to which the presence of the feedback provider will have a differential impact on performance, if at all.

Feedback is already being used in performance management interventions in many different forms of delivery, modality, and content in efforts to improve performance management. Feedback can vary widely in terms of the conditions under which it may be delivered, who is delivering it, how it is being delivered, and when it is delivered (Johnson, Rocheleau, & Tilka, 2015; Palmer, Johnson, & Johnson, 2015). As such, social dynamics may impact the effectiveness of feedback. Automation of feedback delivery may represent an improvement for the expenditure of time, but such impersonal and automatic feedback may not be as effective as feedback delivered directly by a manager. Social contingencies, especially the social relations between authority figures and subordinates, likely exert a powerful effect in most organizations. Even for a new employee, it is quite possible that compliance with a new authority figure will still be quite powerful. Much of this can be attributed to common learning histories in most cultures. Most members of the prevailing culture learn that compliance with the requests of parents or other caregivers will result in approval and other reinforcing outcomes, whereas noncompliance with the requests of parents or other caregivers will result in disapproval and other punishing outcomes. Similar learning outcomes likely occur with other powerful individuals in the child's life, such as teachers, doctors, and law enforcement officers, such that evocative effects extend to authority figures in general (Guerin, 1994). Authority figures become a powerful stimulus class and the relevant control continues to be maintained during adulthood thanks to managers, professors, and other figures with the necessary social status to readily confer powerful consequences. Regarding the degree to which the contingencies involving authority figures extends, it is unknown whether this generalizes

immediately to any new figure higher in organizational status or if some history of differential consequences with the authority figure is needed to exert control.

In summary, people quickly learn to emit behaviors that have been specified by verbal stimuli from an authority figure. The evocative power of such verbal stimuli may depend upon whether contextual variables establish the requestor as sufficiently similar to past authority figures and the physical proximity of such authority figures. The method of feedback delivery may have a modulating effect on the stimulus control exerted by authority. As such, the present study investigates the impact of different feedback delivery methods. Furthermore, the study also examines the impact of feedback from someone who was already established as an authority figure and someone without such a prior history.

## Method

### *Participants and setting*

Participants consisted of 120 undergraduate and graduate students from a university in South Korea. Participants were recruited through on- and offline bulletin boards of the university. The study was conducted inside a university computer lab with 50 workspaces.

### *Experimental task and procedure*

The experimental task involved a computer program designed to simulate a production task that had been used in previous research (Choi, Johnson, Moon, & Oah, 2018). Participants were required to assemble realistic components of virtual mobile phones. During assembly participants had two opportunities to visually inspect their work through a quality control check. Once the participant clicked the on-screen button labeled "Quality Control," the phone component would display as correct or faulty (if missing an element or in nonstandard configuration). Participants then had the option to compare their phone against a correct model for 1.25 seconds by clicking the "Model Stimulus" button on the screen. If the participant detected an error, they could click over the faulty element to create a red circle over it. The participant would then return to the assembly screen. Once completed, the participant would click the "Next" button to submit the assembled phone and begin the next. Examples of the task during assembly and quality control are represented in Figure 1.

The study consisted of four 30-minute sessions involving one baseline and three experimental sessions. Prior to the sessions, participants attended an orientation involving informed consent and a demonstration of the
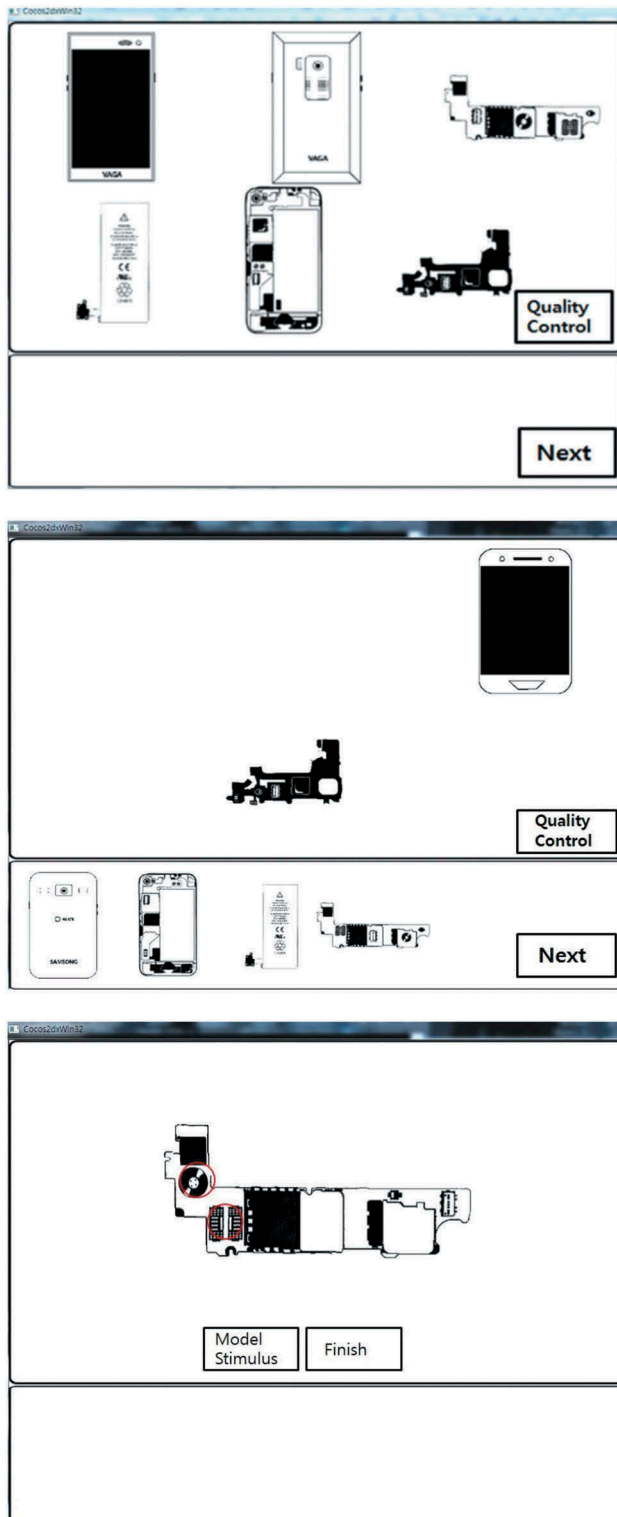
Figure 1. Example of virtual mobile phone assembly program.

experimental task. After the last session concluded, participants were compensated with ₩20,000 (~18 U.S. dollars at the time of rate conversion) and debriefed on the entire experiment.

### Independent and dependent variables

The independent variables in this study were 1) the nature of the relationship with the provider of feedback (established relationship with authority figure, no existing relationship with authority figure) and 2) the means through which performance feedback was delivered to the participant (e-mail, face-to-face). The participants were randomly assigned to one of the feedback conditions. Half of the participants had a preexisting relation with the authority figure and therefore random assignment could not be utilized with this variable. The dependent variables in this study were total number correct and percentage correct during the assembly task.

### Experience with the feedback provider as an authority figure

An established relationship with an authority figure was defined as prior or current enrollment in an undergraduate course (based on recruitment survey) in which the experimenter served as the professor. Although no particular interactions were scripted or preplanned to establish such a historical relationship, it was presumed that the professor belonged to the stimulus class of "authority figure" because of the power of the professor to assign content, set deadlines, and evaluate academic work as part of the coursework.

### Means of feedback delivery

Face-to-face and e-mail feedback were delivered by the individual who had been established as an authority figure for half of the participants. If assigned to the face-to-face condition, the participant was directly handed written feedback from the authority figure at the beginning of each experimental session based upon the participant's performance during the preceding session. The authority figure did not provide any other comments or non-verbal communication such as facial expressions. If assigned to the e-mail condition, participants were prompted to check their e-mail containing the feedback, which was sent about five minutes prior to their arrival. The name of the authority figure was clearly visible as the sender's e-mail address. The feedback consisted of the total number of phones assembled per model, the number of phones accurately assembled per model, and errors made. An example of such feedback would be as follows: "Out of 52, 40 were accurately assembled. In details, 11 out of 16 in Vega (accuracy 69%), 16 out of 18 in Galaxy (89%), 13 out of 18 in iPhone (72%) were accurately assembled. Particularly in Galaxy, 0 out of 18 had sequence error, and 2 out 18 had quality control error. Thank you for participating in the work."

## Results and discussion

Figures 2 and 3 show the number and percentage of correctly completed work tasks across experimental sessions. Results indicate that e-mail feedback from a non-authority figure resulted in consistently lower performance than other experimental conditions. There was consistent overlap in performance for the remaining three feedback conditions. These differences were also seen with the overall mean performances across sessions for authority/face-to-face (48.4; 59%), authority/e-mail (46.4; 60%), non-authority/face-to-face (45.3; 59%), and non-authority/e-mail conditions (37.8; 45%).

Participants who received e-mail feedback from a non-authority figure had lower levels of performance compared to other forms of feedback delivery. This suggests that an established relation with an authority figure can maximize performance regardless of the method of feedback delivery, but this may not hold true with non-authority figures trying to utilize feedback through other means. This also supports the notion that not all forms of communication will be equally effective for all types of feedback providers. This may be due to the possibility that historically, additional interactions are involved or at least perceived, within the context of face-to-face feedback. Although follow-up interactions are possible via e-mail, it is unlikely that they can compare to the immediate and dynamic nature of an in-person verbal exchange (this point may apply to both authority and non-authority
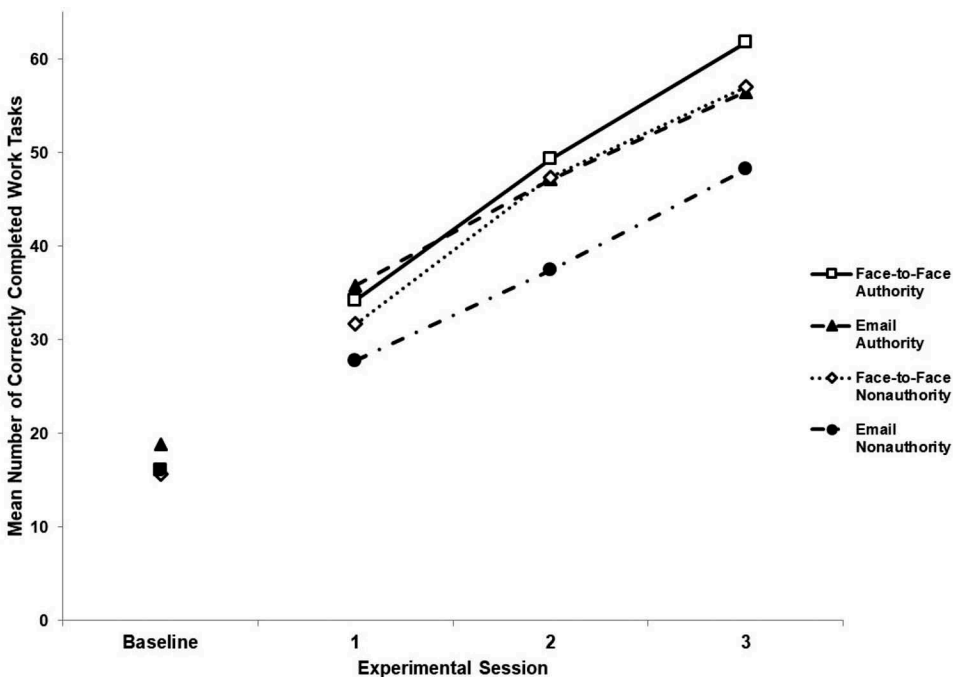


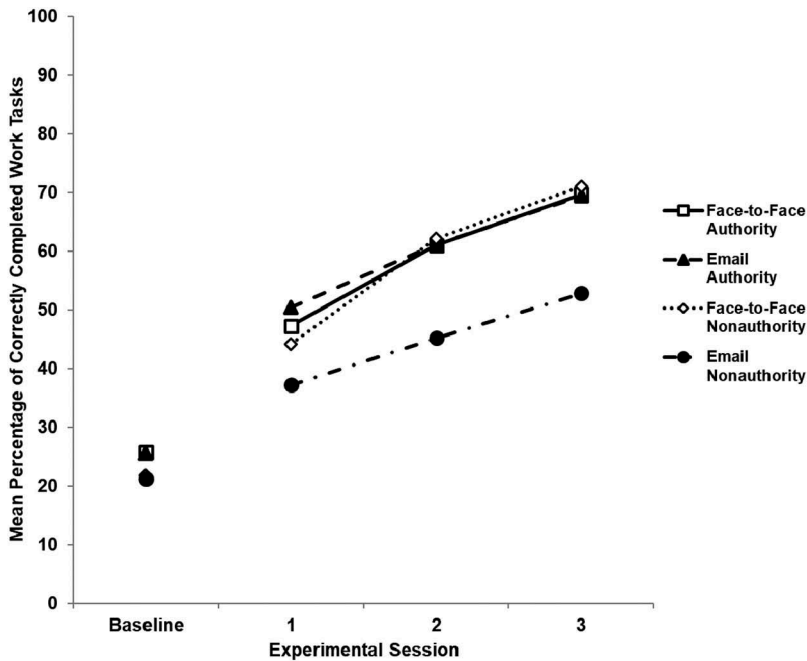**Figure 2.** Number of correctly completed work tasks across sessions.

**Figure 3.** Percentage of correctly completed work tasks across sessions.

figures in actual work settings). This implies that although face-to-face may be the more time-consuming method of feedback delivery, the changes observed in employee performance may be worth the supervisor's investment if they do not already have an established history with the recipient of feedback. This study also suggests that other modalities of delivering feedback can be safely utilized if the individual does have an established history with the supervisor, as suggested by the effectiveness of e-mail feedback from an authority figure. In short, it appears that either face-to-face feedback or an established authority relation in general are important, but a combination of both may be unnecessary.

Several limitations should also be addressed. For example, it was assumed that the professor would be seen as an authority figure by the participants, but data were not collected to verify this. Future research could address this via a simple Likert survey inquiring about the degree to which the participants perceived the professor as an authority figure. Furthermore, the nature of the authority relations may limit the generality of the findings in that a relation based on professor and student interactions may not perfectly simulate a relation based on supervisor and employee interactions. Also, there may be cross-cultural limitations if the typical evocative properties of authority figures within South Korean culture does not adequately capture the evocative properties of authority figures in the cultures of the United States and elsewhere. In addition, preemptive data regarding participants'

individual learning history with authority figures in general would have been beneficial. This information would have helped with the analysis of the differences in performance between the non-authority versus authority relations in the two face-to-face feedback conditions. Knowledge of the performer's past experiences with authority figures could have helped to predict differential outcomes of feedback delivery.

The current study did not utilize a control condition of no feedback. Although a rich literature exists demonstrating the effectiveness of feedback over no feedback, the literature is not uniformly consistent (Alvero, Bucklin, & Austin, 2001; Balcazar, Hopkins, & Suarez, 1985). The current study did find that face-to-face feedback and feedback from an authority figure (irrespective of modality) were effective, but this finding does not conclusively show that such conditions would be superior to no feedback. Even if it is assumed that they would be superior, it would still be valuable to assess the degree to which they are superior. As such, it is important that future studies utilize an appropriate control condition.

In addition to addressing issues related to experimental control, other factors could be studied as well in relation to authority figures, such as the inclusion of photos, simulated facial expressions, or video in communications. These additional stimuli that are present in face-to-face communication could potentially reduce the difference between face-to-face and less indirect communication means. This research suggests that although face-to-face communication may be replaced with technology, the effects it generates may not be replicated to the same degree. Therefore, supervisor-to-employee interactions may be the more pertinent of tasks the manager focuses on considering their current workload. If this implication is correct perhaps other aspects of supervisory workload, such as administrative duties, should be studied to see if substitution through technological means yields results of equal merit.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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