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COMMENTARY

Providing thoughtful performance feedback in the classroom

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Providing thoughtful performance feedback in the classroom

There is an abundance of research in the I-O psychology literature on providing performance feedback in the workplace that could be implemented in the classroom as well. In the focal article, Kath et al. (2021) address the importance of providing students with individualized feedback on their performance to reduce achievement gaps. They encourage the use of rubrics and providing clear reasons as to why the students received the grades they did. Although their suggestions regarding feedback are valuable, they leave room for elaboration on the specifics of how to provide students with feedback to enhance their motivation and learning. The purpose of this commentary is to provide additional guidance on effective ways to give students feedback, which should not be done without caution. This commentary covers the characteristics of feedback and methods of delivery to consider in providing student feedback.

Materializing the benefits of negative and positive feedback

The literature holds mixed conclusions regarding the outcomes of both negative and positive feedback. Kluger and DeNisi's (1996) meta-analysis revealed that in over 33% of studies, feedback harmed performance. Both positive and negative feedback messages were capable of decreasing performance levels. In other studies included in their meta-analysis, feedback had no effect on performance whatsoever. This research warranted further investigations into discovering when and why feedback can be detrimental. It is critical that as instructors, we are not providing feedback to our students that harms their motivation, confidence, self-efficacy, or performance. This section briefly describes scenarios when the benefits and detriments of both positive and negative feedback are revealed.

Negative feedback can help, whereas positive feedback can hurt

According to control theory (Carver & Scheier, 1981), reactions to feedback depend on the recipient's desire to reduce a goal-performance discrepancy. When negative feedback is given, a goal-performance discrepancy exists, and therefore the recipient should be motivated to perform at a higher level to reduce the discrepancy. When positive feedback is given, no goal-performance discrepancy exists; therefore, the recipient may be unmotivated to enhance their performance. In an experiment involving 90 college students, Podsakoff and Farh (1989) demonstrated that negative feedback resulted in significantly higher subsequent performance than positive feedback. According to these findings, negative feedback should be given to students to encourage them to work harder and achieve their goals, and positive feedback should be avoided as it may result in students slacking off.

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Positive feedback can help, whereas negative feedback can hurt

Before deciding to forego giving positive feedback according to the implications of control theory, consider social cognitive theory (Bandura, 1986), which suggests the opposite relationship between feedback valence and motivation. According to social cognitive theory, recipients of positive feedback upwardly revise their goals because the feedback enhances their self-efficacy or their belief that they have the necessary ability to perform a certain task at a certain level. Bouffard-Bouchard (1990) provided bogus positive or negative feedback to students regarding how they performed in relation to their peers. They then measured the students' self-efficacy levels and had them perform a subsequent task. Feedback valence did alter students' self-efficacy, which further influenced their performance, supporting social cognitive theory.

As instructors, how do we ensure that our positive feedback results in an increase of motivation rather than a motivational stall? One suggestion is to use tiered, stretch goals based on the students' ability level. Following this approach, instructors would provide positive feedback along with an ability-based stretch goal that would further advance the student's knowledge or skill. For instance, the feedback message might state "*Great work! You've mastered this task. To even further develop your skills in this area, you should work on.*" In a laboratory study involving 138 students, Jeffrey et al. (2012) found that ability-based goals result in higher performance than a single goal for the entire group. According to goal-setting theory, difficult, specific goals result in higher performance (Locke & Latham, 1990). Therefore, instructors should think through an appropriate though difficult goal for students who master an assignment. Because this practice implies that different students of varying abilities will receive goals of different difficulty levels, instructors should work to ensure that the rewards given for goal attainment match the goal-difficulty level and that reward opportunities are fair for all students.

Social cognitive theory (Bandura, 1986) also implies that recipients of negative feedback should downwardly revise their goals, because they feel that the goal is too difficult to attain. As previously mentioned, control theory (Carver & Scheier, 1981) suggests that in response to negative feedback, recipients may work harder to reduce the goal_performance discrepancy, which is in opposition to social cognitive theory. Control theory also explains an alternative possible response where the recipients simply lower their goals to reduce the discrepancy, which is typically not the instructor's desired response.

As instructors, it is often (if not always) necessary to provide negative feedback in order to allow the student to learn from their mistakes. Instructors should take caution when forming negative feedback messages because they may result in undesired consequences, such as decreased motivation or self-efficacy. As instructors, how can we provide negative feedback in a manner that prevents harming students' self-efficacy, effort level, and performance? In their study involving 76 students, Wang and Wu (2008) demonstrated that *elaborative* feedback, which includes details on the reasoning behind the incorrect answers increases students' levels of self-efficacy. Instructors should consider using elaborative, negative feedback as a means of improving the students' knowledge or skills. Rather than simply stating a message such as "*Your response on question 3 was a, and the correct answer is b*," the *because* or reason why should be included in the message with the appropriate level of detail for the student to learn from the feedback.

Another potential detriment of negative feedback is that it is much more likely to be perceived as inaccurate compared with positive feedback (Jacobs et al., 1973). For this reason, it is crucial for negative feedback messages to include evidence of its accuracy. Because positive feedback tends to be accepted regardless of its accuracy, it is less important to provide evidence of its accuracy. This is not meant to imply that instructors should never provide evidence supporting their positive feedback; however, from a time-management perceptive, instructors might consider devoting their efforts to providing evidence supporting negative feedback above positive feedback. As mentioned in the focal article, instructors can use rubrics to provide this evidence. Instructors may also consider sharing the correct answer with the students and the logic behind the correct answer.

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Although providing elaborative feedback to all students in large classes may be time consuming, learning management systems such as Blackboard, Moodle, and Canvas facilitate this work by offering features that instructors can use to build automated feedback into assessments.

The order of feedback messages

A possible solution to providing feedback that maximizes the motivational effects of both negative and positive feedback is to provide a mixed-valence feedback message that includes both positive and negative feedback. Should a feedback "sandwich" that contains one negative message in between two positive messages be served to students, or is there another order of valence messaging that is more effective at enhancing student motivation? The order of feedback valence in a mixed-valence message has been shown to have an influence on their reactions to feedback and subsequent performance (Henley & Reed, 2015; Stockton & Morran, 1981). Stockton and Morran (1981) found that negative feedback resulted in significantly higher acceptance when it was received following three to five sessions of positive feedback compared with following only one or two sessions of positive feedback. Acceptance of negative feedback was highest when it was immediately preceded by positive feedback. It may be the case that a certain amount of negative feedback can be motivating as long as it is given following positive feedback. Henley and Reed (2015) examined the order of feedback valence in a mixed-valence message and found the greatest positive effect on performance when negative feedback followed two positive feedback statements. These findings do not support the positive-negative-positive valence order of the feedback sandwich but rather a positive-positive-negative order.

The focal article's authors suggest giving easy assignments early in the semester such that positive feedback will likely be provided before any negative feedback; thus, students with high performance orientations will not be discouraged. This suggestion aligns well with the implications of Henley and Reed's (2015) research. If instructors design early assignments such that they mostly result in positive feedback, students may respond to later negative feedback on more challenging assignments more desirably. Instructors may also consider providing multiple positive statements before a negative statement in their feedback messages to students.

Feedback on performance relative to classmates

Instructors commonly give both relative and nominal types of feedback. Relative feedback contains information about recipients' performance compared with that of others, and nominal feedback contains information about recipients' performance compared with an expectation unrelated to others' performance (Ilies & Judge, 2005). For instance, when instructors show class averages or grade distributions, they are essentially providing students with relative feedback such that the students may compare how they performed with their peers' performance. However, when instructors provide students with feedback messages that contain only information about their specific work, the instructors are providing purely nominal feedback. Up to this point, this commentary has mostly focused on providing effective, nominal feedback, but should relative feedback be used in the classroom, or should it be avoided? Ilies and Judge (2005) conducted two experiments involving 745 and 162 management students, respectively. Their findings suggest that individuals may direct their attention elsewhere after receiving positive, relative feedback and thus lower their efforts. As previously mentioned, Bouffard-Bouchard (1990) demonstrated that students' self-efficacy and subsequent performance levels decrease in response to negative, relative feedback. Thus, relative feedback may do more harm than good.

Forced distribution rating systems (FDRS), which involve making pay or employment decisions based on how an employee performs relative to other employees, are a much studied though controversial topic in the industrial-organizational psychology literature (Moon et al., 2015). Although whether or not to assess students using FDRS is beyond the scope of this paper, there

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are some implications that can be taken from the FDRS research. Generally, research suggests that FDRS improve performance but can result in dysfunctional competition and perceptions of injustice (Moon et al., 2015). The same phenomenon may occur in the classroom, which may be problematic if students are expected to work together or in teams. These effects likely would not be as pronounced if students are simply informed of how they performed relative to peers but are not graded accordingly. In sum, instructors might avoid students' redirecting their efforts, dysfunctional competition, and perceived injustice by providing only nominal feedback; however, providing relative feedback may also have benefits worth considering (i.e., transparency for students; heightened individual performance).

Conclusion and self-assessment

In conclusion, I encourage instructors to consider the following questions, which reflect the recommendations made throughout this commentary:

- *When providing purely positive feedback, do you include a stretch goal that is difficult and specific to the student's ability level?*
- *When providing negative feedback, do you elaborate on the rationale for the correct answer such that the student can learn from his or her mistakes?*
- *In your feedback messages, do you provide multiple positive feedback statements before negative feedback statements?*
- *Do you only provide relative feedback when there are clear benefits to the students?*

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