Prompted Written Reflection as a Tool for Metacognition: Applying Theory in Feedback

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BACKGROUND AND MOTIVATION

Understanding how to seek feedback is a core topic in the curriculum in leadership courses. However, not all feedback-seeking activities are effective. The purpose of this activity is to help students to apply empirical research about feedback to their experiences in receiving and interpreting feedback. We hoped the activity would enable them to understand how to seek and interpret feedback but to also learn about how to apply it to their own learning, and thus, encourage metacognitive thinking.

METHOD

This activity took place approximately midway through the semester in a third-year mandatory course for students in the business administration program. There were approximately 40 students in each class. Students were introduced to the rationale for the activity by reading DeNisi and Kluger's (2000) review article about the relation between feedback and performance. Then they answered questions requiring them to explain the key concepts in the reading and apply the theory to a real-life example (see Appendix A). Then students listened to a short lecture that explained the theory behind the factors that increase and decrease the effectiveness of feedback. The lecture focused on the finding that the way people seek feedback can have an impact on their subsequent performance. If people seek task-based feedback by looking for the correct answer or, by asking for ways to improve their answer by focusing on how to learn the task, their subsequent performance on the task will improve. But if they seek self-based feedback by looking for information on how they did they did relative to others, by seeking information for the class average their subsequent performance on the task will not improve.

Then, students reflected on how they could apply this knowledge to their own lives. They wrote a response to the following question: "Consider a situation where you got feedback and that did not help you improve your subsequent performance. Explain why the feedback was ineffective in terms of task, task learning or self-focus. What could you have done to increase your focus on task, or task learning and decrease attention to self?" Then, we gave students examples of learning goals (see Appendix B) and asked them to write learning goals with reference to the example they just wrote about. Finally, students who volunteered, read their written reflections out loud to the rest of the class. Students were graded for participation for the homework activity as well as for

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their participation the in-class discussion. Finally, students were asked a similar question on the final exam about feedback they received in this course. Specifically, they had to reflect on the feedback they received from an assignment in the course where they were evaluated on argumentation, definitional, data analytical, and descriptive skills and to set a learning goal on how to improve themselves on these skills. We hoped that these multiple writing prompts would encourage students to apply research about feedback to their own experiences with receiving and seeking feedback. Such written reflections should encourage students to learn about how they may help or hurt themselves by the kind of information they focus on when asking for feedback from instructors (e.g., asking for the class average vs. asking for how to improve, or asking for the correct answer).

Our activity was guided by research which suggests that providing a written prompt that encourages students to critically think about their own experiences can encourage metacognition. For example, Ratto-Parks (2015) asked first-year college students to think about a rhetorical story assignment they had completed in a course and reflect on what they did well and where they could improve. She found that student reflections improved metacognition and strengthened writing quality. Just as Ratto-Parks' activity encouraged students to reflect on, and thus improve their writing skills, we hoped that our questions guided students on the kinds of information they should focus on while seeking feedback and also encouraged students to meta-cognize about their experiences with feedback, and to reflect on how to use feedback-seeking opportunities to improve themselves. Similarly, other studies have found that the content of written reflections that prompt critical reflection can elicit metacognitive processes (Erksine, 2009; Harten 2014; Lew & Schmidt 2010).

Further, feedback itself has also been shown to improve metacognition (Callender, 2016). In our activity, we evaluated students on multiple skills in their course-related writing assignment (e.g., argumentation, definitional skills etc.) and then asked students to reflect on what that feedback means. By asking students to relate information learned in the course to their past feedback-seeking experiences and by providing opportunities to apply that knowledge while they are getting feedback in the course, we think we are helping students to improve their metacognitive skills since they are using both written reflections and feedback as tools to develop such skills. Taken together, the in-class writing exercise, an explanation of the theory behind feedback, an opportunity to get feedback, and answering a question on the final exam about that feedback should all improve meta-cognitive skills. This is also predicted by past research cited above.

OUTCOMES

Preliminary analysis shows that highly engaged students (i.e., those that read the article, answered the homework questions, wrote a reflection and participated in class discussion) tended to achieve higher marks on the related final exam question. Overall, students showed an improved understanding of effective feedback following the in-class activity. We are motivated to continue to systematically analyze student responses to the initial in-class reflection questions and to the final exam questions. We hope to detect metacognitive thinking by using Ratto-Parks' Index of Metacognitive Knowledge in Critical Reflective Writing, which shows promise in translating metacognitive language into identifiable traits that can be used to assess students' reflections (2015). This analysis could be challenging because our activity consists of only one in-class

reflection question based on prior feedback-seeking experiences and one final exam question based on a feedback-seeking experience in the course itself. Most studies include multiple written reflections. To detect improvement in metacognition we may need to encourage students to repeatedly answer questions about what they are learning in multiple feedback contexts. This is similar to our prior research (Radhakrishnan, Arrow, & Sniezek, 1996), which shows that asking students to repeatedly evaluate their performance over multiple tests after receiving feedback on each test improves the accuracy of their evaluations. Improving students' understanding of what they are learning, that is, their meta-cognitive skills, may also follow a similar mechanism. Multiple written reflections about how to interpret feedback while getting feedback on multiple tasks can not only help students gain an improved understanding of the theory of feedback but also about themselves.

We expect that both the improved understanding of effective feedback processes as well as the opportunity to practice metacognition will help students to interpret and give feedback more effectively both within and outside of the course. Since our students are in the management discipline, seeking feedback effectively is a skill that is essential to their professional development as leaders. In addition, we predict that the improved experience with metacognitive processes will aid them in thinking critically and interpreting feedback in their other courses as well.

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APPENDIX A—HOMEWORK QUESTION

The way in which feedback is given can draw one's attention to oneself and this attention to self leads to negative effects on subsequent performance (after the feedback). However, it also discusses conditions where feedback focused on the self, may not necessarily lead to negative effects. Explain how this occurs. Use the concept of ought vs. ideal self, and promotion vs.

prevention focus. Illustrate how this theory occurs by applying it in a concrete real-life situation or example.

APPENDIX B—EXAMPLES OF LEARNING GOALS

The following is displayed on a slide in lecture to aid students in developing their own learning goals.

For a professor…
- Finding specific ways to explain complex material in memorable ways
- Explain concepts by giving examples & counter examples
- Explain theories by giving concrete examples of process of how it works
- Show the relevance of the subject matter to the students' lives outside the classroom

For a golfer…
- Mastering the proper grip of the club
- Master proper placement of the feet
- Learning when to use what club
- Understanding the distribution of weight from one foot to the other when swinging the club