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Mood, emotion, and affect in group performance: an experiential exercise

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Abstract

One path to the successful transference of knowledge is through linking concepts to students' experience. To provide this connection, we used an experiential methodology to design an exercise called mood, emotion, and affect in group performance. This exercise provides learners with an opportunity to experience, in addition to hearing and reading about, the effects of positive and negative dispositions on a group task. We describe the design and mechanics of the exercise with practical reflections from the use of the exercise in many different environments. The paper ends with end-of-the-semester student comments and instructor reflections.

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Introduction

Personality characteristics and traits such as positive and negative moods, emotions, and affects have generated much interest among scientists. Researchers have related these concepts to job commitment, job satisfaction, absenteeism, turnover, group affective tone, and job success within an organization, and to a “mood contagion” or “spillover effect” outside the workplace (see the Literature review section). More recently, scientists have tied these personality characteristics to leadership effectiveness through emotional intelligence (EI) by asserting that EI can help leaders solve complex problems, make better decisions, be more adaptable, and handle crisis in a more emotionally stable manner (Goleman, 1995; Mayer and Salovey, 1995; Goleman *et al.*, 2002). This level of attention indicates that positive and negative moods, emotions, and affects are important aspects of organizational life, and are therefore, worthy of special treatment in our teaching efforts.

Because one path to the successful transference of knowledge is through linking concepts to students' experience (Kolb, 1984), we set out to design a supplementary exercise that would provide students a means by which they could experience the impact of these concepts “in the moment” on a simulated work task. The resulting experiential exercise, “Mood, Emotion, and Affect in Group Performance (MEAP),” makes those lessons salient by illuminating emotive consequences on group members individually

and collectively as a direct process, on task effectiveness indirectly, and on self in a reciprocal process.

In the following sections, we begin with a literature review in which we explain the benefits of using an active learning approach and provide a summary of the research relating to positive affectivity (PA) and negative affectivity (NA), moods, and emotions. We then briefly review extant methods and exercises used to teach these subjects noting the contribution of our approach to existing methodologies and exercises. Following this, we describe the development of the new exercise and explain how it works. The paper ends with a Discussion and results section. In the appendices, we include role-play cards, detailed instructions, and timing schedules for running the exercise, as well as quantitative exercise results.

Literature review

Active learning

Teachers possess the power to create the conditions that can help students learn a great deal (Palmer, 1997)

We believe that instructors have a moral obligation to create classroom conditions that can help students learn as much as possible. One path to the successful transference of knowledge is through linking concepts to students' experience. Proponents of active learning paradigms share this belief (Bonwell and Sutherland, 1996; Anderson and Speck, 1998; Boggs, 2001; Chávez and Ge, 2007). They invite professors to take responsibility for providing students with the necessary activities that can enhance learning. This means that teachers must strive to move away from a teacher-centered classroom, where teachers do most of the work while students become passive recipients (Meyers and Jones, 1993), to a student active learning environment.

Hence, we chose to capitalize on an active learning methodology by connecting concepts with the student's own experience. Such an approach is the first step in the Experiential Learning Model developed by Kolb (1984). This step in the teaching process provides students with something practical that they can readily draw on while affording insights through learning-by-doing. It enhances learning by augmenting knowledge discovered through passive roles such as reading or listening to a lecture (O'Donnell and O'Kelly, 1994; McCarthy and Anderson, 2000) via

the creation and use of highly participatory activities that require students to participate in cycles of action and subsequent reflections on that action (Yorks *et al.*, 2003).

The learning occurs through the use of two important components of active learning: contextualization and intrinsic motivation. Contextualization is the process of placing learning topics in context. These contexts involve themes or characters of particular interest to students. The development of individualized meaning subsequently increases intrinsic motivation to learn, interest in the subject matter, and a deeper understanding of the material (Chabay and Sherwood, 1992; Dugdale, 1992; Lepper and Cordova, 1992; Parker and Lepper, 1992).

Additionally, the use of active learning may enhance students' retention of information better than conventional techniques (O'Donnell and O'Kelly, 1994; McCarthy and Anderson, 2000). Watson and Kessler (1996) purport that experiencing an event acts as a driving force that can even attract the attention of students who show a lower than average need for achievement in the classroom. This outcome is accomplished by engaging learners in a process of analyzing, applying, and synthesizing course content (Thomas *et al.*, 1998).

Specific mediating processes that help explain why enhanced learning occurs include the following. When students undergo the cycle of experiencing and subsequently reflecting on a topic, they are more likely to internalize the theoretical concepts. Similarly, because experiential exercises force students to be active, they are more likely to involve "the whole" of the student to include their values, attitudes, and emotions, which is necessary for the internalization process. Finally, the very act of "doing" requires all senses to be concentrated on the activity, to include the synchronization between movement and thought (Ball, 1999; Chávez and Poirier, 2007).

Based on the principles of experiential learning, this exercise has the potential to contribute to student learning in five different ways. First, active learning encourages maximum student involvement (Kolb, 1984). Hence, their potential for understanding and internalizing the material increases. Second, students learn the material in a context similar to what they will experience in their professional life, as they must interdependently complete a task that requires coordination and cooperation for an optimal solution. Third, they experience the emotive consequences of their own

affect, mood, or emotional behaviors on other group members directly and on task effectiveness indirectly. Fourth, students personally experience the effects of positive and negative affect, mood, and emotions on their own psychological responses. Finally, students learn self-assessment and self-leadership strategies that will serve them well throughout their lives (Cagne, 1965). Through increased awareness of one's own emotional responses, students learn to question their "*theories in action*" or unconscious, routine responses and begin to develop the capacity to manage their own emotions (Schön, 1987) and thought processes (Chávez and Ge, 2007).

The rest of the literature review is devoted to summarizations of PA and NA, moods, and emotions along with the contagion of all three traits and state. Before moving into a discussion of the import of these constructs, we provide a summary of the interconnectedness among these concepts.

Traits and states

Mitchell and Daniels (2002) subdivided approaches dealing with personality characteristics into "hot" and "cold" theories. The two categories focus on who people are: their traits, dispositions, what they feel and need. "Cold" theories include genetic traits and needs that have a relatively stable and indirect (distal) influence on performance. "Hot" theories include moods, emotions, and affects and focus more on short-lived mood states, personality traits, and emotions that have a more direct (proximal) impact on performance. While both groupings include important topics to our understanding of human behavior, this exercise focuses on the "hot" theories.

Affect refers to a personality trait or disposition that is a reasonably long-term and stable characteristic (George and Brief, 1996). Whereas some authors differentiate between the terms affectivity and affect, we use them interchangeably in this paper. These traits reflect one's tendency to have relatively stable emotional reactions to the environment across time and situations. Affective traits are not directed toward a target (Watson and Tellegen, 1985; Watson and Walker, 1996; Chen *et al.*, 1997). Mood and emotion are affective *states*.

The difference between mood and emotion *states* is that mood is not directed toward a target, while emotion is a specific feeling *state* directed toward a specific target. *States* are of shorter duration and are more sensitive to situational factors than are affective *traits*. We can think of affect/affectivity

as a generalized, non-targeted, feeling, or attitude that is unbounded by temporal and contextual differences. On the other hand, moods and emotions are feelings of comparatively shorter duration that are more sensitive to specific circumstances (George and Brief, 1996).

Positive and negative affectivity

Affectivity refers to a perceived positive or negative tendency to react to stimuli in a consistent manner over time and across situations (Judge and Hulin, 1993; Judge and Locke, 1993; Ilies and Judge, 2003). People with a disposition for PA consistently react to changes, events, or situations in a positive manner and generally appear to have an "upbeat" attitude. They tend to see the upside and possibilities in situations. People with a disposition for NA consistently react to changes, events, or situations in a negative manner and tend to focus on the downside or disadvantages of a situation.

Researchers have associated affectivity with various work outcomes and/or attitudes. One research stream focuses on relationships between job satisfaction and PA/NA (Judge and Hulen, 1993; Brief, 1998; Shaw *et al.*, 2000; Ilies and Judge, 2003). Study results indicate that PA is positively related to job satisfaction while NA is related to job dissatisfaction (Judge and Hulen, 1993; Judge *et al.*, 2000; Ilies and Judge, 2003). Staw *et al.* (1986) demonstrated the stability of these affects on job satisfaction. They first measured PA and NA in children followed by measuring job satisfaction more than 40 years later. They found that the primary measures significantly predicted later job satisfaction ratings of the same subjects.

Other work outcomes associated with affect include job satisfaction, job success, absenteeism, group affectivity, prosocial behaviors, and employee turnover. For example, individuals high in PA are perceived as possessing greater interpersonal skills, and were found to enjoy greater job success than do individuals high in NA (e.g., Staw *et al.*, 1994). Chiu and Francisco found positive dispositional traits to be inversely related to lower absenteeism and turnover via job satisfaction as a mediating variable. Similarly, a study by George (1990) showed that individual affect within groups influenced the emergence of a group level positive or negative affective tone. She then discovered that a negative collective affective tone decreased the extent of prosocial behaviors within the group, while a positive collective affective tone correlated with a decrease in absenteeism.



Decision-making quality is another work outcome associated with affect. Researchers found that affective states influence one's capability to organize their own cognitions in the decision-making process. For instance, research on cognitive organization showed that individuals with high PA tended to show better memory recall and creativity in the problem-solving process. Likewise, these individuals were better able to postulate simpler and more efficient decisions to complex problems (Isen, 1984). Isen also noted that participants high in PA tended to be more flexible, open, and innovative than those low in PA when making important decisions. Additionally, individuals experiencing PA tended to be more thorough and organized when completing complex tasks than those low in PA.

Finally, George *et al.* (1998) purport that dispositional affect influences an individual's experience of trust and their perception of others' trustworthiness, which may help explain how dispositional affect influenced the ability of negotiators to reach a synergistic resolution in cross-cultural negotiations.

Positive and negative moods

Affect is an enduring trait that can include a mood state. However, mood is a comparatively weaker and less stable state. Like affect traits, researchers classify mood states into positive and negative dimensions (Watson and Tellegen, 1985).

Several studies indicate that a leader's positive mood is associated with group performance and efficiency (George, 1995; Barsade, 2002; Sy *et al.*, 2005).

George (1995) found that leader PA is an antecedent for leader positive mood. Leaders who are high in PA are more likely to demonstrate positive moods in work settings. However, people can more easily "get over" effects of mood states once the mood has passed. The difference is that affective states do not pass, as they are traits that are likely to reappear across many situations and time. For example, if a group member (or superior) is in a negative mood during one meeting, we do not automatically assume the same person will be in the same mood the next day or when working on different projects. However, if that person consistently portrays a negative mood (negative affect) not only at meetings, but also during private conversations, in training classes, etc., we are more likely to expect the same behavior regardless of situation or time.

Positive and negative emotions

Because emotions are strong feelings that are likely to affect cognitive processes and leadership behavior, they demand attention (George, 1995; Yukl, 2006). Like moods and affects, we can categorize emotions as being either positive or negative (Fischer, 2000). Emotions are directed at someone or something and are transient in nature. Therefore, emotions are hard to measure unless we do so at the time the person is experiencing the emotion.

Hence, researchers developed a measurement process known as Experience Sampling Methodology (ESM) as a means of obtaining real time reports on emotions and moods (Wheeler and Reis, 1991; Alliger and Williams, 1993; Fischer, 2000). For instance, Fischer (2000) gathered respondent information on current emotions five times each working day for 2 weeks in her exploration of the relationship between emotions and job satisfaction. The findings indicate that both positive and negative emotions make unique contributions to predicting overall job satisfaction. Additionally, frequency of positive emotions was a stronger predictor of overall satisfaction than was intensity of positive emotion.

As stated earlier, many researchers use the terms affect, mood, and emotion interchangeably when studying effects in the workplace. While the MEAP exercise does not differentiate between these terms "in the moment" of the experience, it does provide an opportunity for instructors to introduce and clarify these terms.

The contagion of all three (mood, affect, and emotion) in group performance

We use the term "emotional contagion" broadly to include contagion of moods, and affects as well as emotions. Emotional contagion was defined by Schoenewolf (1990) as a process in which an individual or group directly influences the emotions of another person or group, and indirectly influences behaviors of another person or group, through either a conscious or unconscious induction of emotion states and/or behavioral attitudes.

Contagion is a social influence process. Several researchers have shown that individual attitudes, moods, and emotions do affect group members culminating in a construct called "group affective tone." Group affective tone represents a group's collective state or trait, which in turn, can influence work outcomes (George, 1989, 1990; George and Brief, 1996; Barsade *et al.*, 2000). Barsade (2002) described this contagion process as being a "ripple

effect.” In his experimental laboratory study, Barsade found a significant influence of emotional contagion on both individual-level attitudes and group processes. Not surprisingly, individuals in positive emotional contagion groups reported greater group cooperation and less conflict in their decision-making tasks than did group members in negative emotional contagion conditions.

Similarly, an earlier experimental field study by Williams and Alliger (1994) showed that moods (especially unpleasant moods) spilled over from work to family and vice versa. Thus, a reciprocal relationship exists between work and family experiences in that behavior in one role is affected by experiences in the other (Barling and MacEwen, 1992). The importance of these studies is the realization that “spillover” not only affects other work group members, but feelings caused by events in one arena affect behaviors in other arenas as well (e.g., home, school, work, and social arenas). Thus, the “contagion” of moods, emotions, and affectivity is not limited to work settings. Indeed, the affects permeate all aspects of our lives, and thus, deserve increased emphasis in classroom and training venues.

The need for a new exercise

Many readings exist that address these important subjects. Some come packaged with lecture plans and examples for use when teaching the concepts. Many books include case studies, while others provide self-assessment tools that students may use to measure their own personality characteristics and traits (e.g., PA and NA, tolerance for ambiguity, or EI). While each approach has strengths and weaknesses, it is our opinion that none instills the deeper sense of learning that comes from experience.

Because influence is a social process, we believe that learners must actually experience the influential consequences of mood, emotion, and affect in a social setting in order to internalize the lessons. Experiential methodologies provide the conditions in which students can move “in varying degrees from actor to observer and from specific involvement to analytic detachment” (Kolb, 1984: 31) and require that students incorporate knowledge obtained through traditional methods, with experience, reflection, and analysis. Doing so increases the probability of internalization and subsequent behavioral change. Therefore, we set out to find existing experiential exercises to use in teaching these important concepts.

We found only two published exercises that deal with emotions. One explores the need for organizations to generate “display rules” for emotional expressions within the workplace (Gibson, 2006). The other addresses the effects of positive and negative moods on creativity (Zimmerman and Gallagher, 2006). We have used both in our classrooms and training venues and have found both exercises to be valuable. Gibson’s exercise successfully introduces the existence and importance of emotion in organizations through reflection, but does not place students in a work task or measure any output criterion. Zimmerman and Gallagher have students *subjectively* measure creativity (group drawn pictures) of manipulated positive and negative group conditions. We found that students sometimes questioned the exercise outcomes. We designed the MEAP exercise to illustrate the differences between positive and negative affect, moods, and emotions on an *objective* measure of group performance that explores *productivity, quality, and emotive consequences*. Students seem to accept the objective outcomes even though we do alert them to problems in methodology (e.g., small and uneven sample sizes, role selection, etc.). By using both exercises, we stumbled upon the realization that students were less likely to question subjective results (e.g., creativity and problem-solving ability) after participating in the quantitatively measured exercise presented here.

We also included a neutral group as a comparison and a “free-riding” group so that students could use their own experiences as members of team projects to identify with outcomes. Additionally, we incorporated the concept of emotional contagion in the MEAP exercise, which we feel is central to the concept of group affective tone. While our “in-the-moment” exercise cannot capture affective traits, it does approximate mood and emotion states, illuminates the process by which mood contagion occurs, and provides opportunities for discussing the differences between states and traits. We see the three exercises as being complementary. One exercise introduces the importance of emotion in the work setting. The other illustrates a qualitative consequence of PA and NA. Our exercise introduces an objective measure of positive and negative moods, emotions, and affect and illuminates the “contagion” process.

In the next section, we state the new exercise objectives and provide exercise instructions, caveats, debriefing questions, and sample discussion topics for use in the debriefing. We recognize



that each class has a personality of its own. Consequently, discussion topics vary from class to class and may include additional topics to those presented here.

The MEAP exercise

Objectives

- (1) To introduce students to the effects of PA and NA, mood, and/or emotion on group performance through contagion.
- (2) To create a classroom atmosphere that encourages students to become active in the learning process through a learning-by-doing approach.

Overview

While working on an assigned group task, participants play roles that represent PA or NA, mood, and/or emotion, a free rider, or a neutral person completing a group task. We have run this exercise in undergraduate and masters level organization behavior and leadership courses and in executive training. The group task is represented by one crossword puzzle of medium difficulty that each group must solve together. Instructors provide each group with identical material consisting of one crossword puzzle, one clue sheet, and one pencil in order to ensure that students work on the task as an interdependent group. Additionally, each student is supplied a role card (color-coded to match the group condition) for enactment during the exercise. Color-coding enables the facilitator to keep track of which group is in which condition and to assess the success or failure of the role manipulation accordingly. Since students know ahead of time that they will be playing a role and that there are several different roles, this does not present a threat to the exercise. Instructors encourage students to have fun, “get into” their roles, and to act out roles as they imagine an employee might do on a group work task.

Role card assignments function as the manipulation instrument for group conditions. In the neutral group condition, each member receives the same neutral role-playing card. In the free-riding group condition, all but one member receives the same neutral role-playing card, and one member receives a free-riding role-playing card. Likewise, in the positive group condition, all members except one receive a neutral role-playing

card, and one member receives a positive role-playing card. Finally, in the negative group condition, all members except one receive a neutral role-playing card while one member receives a negative role-playing card (see Appendix A for roles).

This timed exercise begins and ends upon the instructor’s instructions. Upon task conclusion, the instructor provides puzzle answers and has students calculate their scores. The instructor publicly calculates and records group results followed by a class discussion about result patterns, surprises, student emotive roles, and emotional reactions within group conditions.

MEAP exercise preparation

- (1) The instructor selects a crossword puzzle. We recommend a puzzle of medium difficulty. Puzzles must be complex enough to prevent completion within the time allotted, yet uncomplicated enough to permit groups to experience collective efficacy (Whyte, 1998). We used a medium Dell crossword puzzle.
- (2) The instructor enlarges crossword puzzles and clue sheets so that four people can simultaneously see the format. These reproductions should be color-coded to represent four manipulated conditions and to accommodate the number of groups in each condition. Example: a class consisting of 32 students would have eight groups of four students – two in each condition. Thus, we would prepare eight sets of team roles consisting of four colors (two each yellow, blue, white, and lavender).
- (3) The instructor prepares role cards for each condition. Again, cards are color-coded to match each team condition (see Appendix A). Note that we have created an observer role-playing card for students who decline to playact or for extra students when uniform group size is important.
- (4) Finally, the instructor prepares an enlarged transparency or power point slide showing a completed crossword puzzle. Puzzle books often provide answer keys, which instructors can copy, enlarge, and/or scan into power point. Alternatively, instructors can prepare individual answer sheets for each group. See Appendix B for specific instructions and timing when running the MEAP exercise.

In the next section, we provide suggestions and caveats when running the exercise followed by a section on discussion questions for inclusion

in the debriefing. We conclude the paper by revisiting and discussing our objectives in using this methodology.

Suggestions and caveats

We base these recommendations on our experiences when running the exercise. Different instructors have different personalities and teaching methods and we are aware that there are many different approaches to running an exercise. Whether you choose to be more or less restrictive than we suggest here depends on individual preferences.

We suggest that instructors randomly select group members in order to avoid interference of preconceived notions that may subsist within existing groups. For example, close friends may have an easier time detecting the falsity of any role another may be playing during the exercise, thereby nullifying or regulating emotional reactions.

Once students identify themselves as avid puzzle solvers, instructors can assign those students to observer roles in order to control their expertise as an exercise confound. However, we find it easier and just as controlling to assign those students to free-riding roles, thereby eliminating their expert influence on group outcomes, while keeping them actively involved.

Although we randomly assign individual members to groups, we find it useful to purposefully assign individuals to manipulated roles. We suggest assigning free-rider roles to experienced puzzle solvers as discussed above. Beyond that assignment, we recommend that instructors capitalize on perceived natural personality traits for role assignment. Another avenue is to use results from personality tests of skills, traits, and/or needs to determine role assignment (e.g., Myers Briggs and McClelland's Needs theory). For example, assigning extroverts to positive and negative affect roles is likely to enhance the experience for all team members. Introverts may have a difficult time being vocal enough to convey their roles in an accurate manner. Similarly, extroverts may have a more difficult time playing free-riding roles than do introverts. People high in need for affiliation may find playing negative roles very difficult, while people high in need for power may find it relatively simpler to dominate group processes, regardless of whether they play a negative or positive role.

Because our focus is on creating an experiential exercise that illustrates scientific concepts rather than on proving these concepts, we are comfortable

assigning students to roles that may better fit their personalities. Our suggestion to assign roles in a pre-determined manner also stems from our experiences with failure (also known as learning moments). In one case, an assigned free rider became so distraught, when her group became angry at her reluctance to help, that she left the room and refused to return until after we explained to her group that she was only playing a role. Subsequently, we included the choice of leaving the room in free-rider roles. At other times, we assigned students to negative roles and then observed that they were actually playing a free-rider role. When questioned, they explained their reluctance to acting negative. They chose to do nothing, rather than complain about the task, class, or instructor, as the negative role encourages. We had relatively less problems with students assigned to positive roles. However, we observed that some students play this role better than do others. We allow students to decline a role if they feel uncomfortable with the role they receive. We then assign them observer roles.

The above observations come from a concerted effort to monitor group dynamics by walking around and watching member behaviors during the exercise. Some students may need nudging in the direction of their role. Other students simply appreciate the feedback that a smile or an affirmative head nod conveys when they are correctly enacting roles. By carefully watching group interactions, instructors are better able to identify interesting topics for class discussion even when roles fail to effect group outcomes in expected directions. For instance, the examples provided in the previous paragraph when students did not enact their roles, presented unexpected opportunities for the instructor to discuss problem-solving styles and need theories.

The number of groups per class and time allotted for the exercise is dependent on class parameters (e.g., size, class length, and exercise purpose). For example, an instructor who wishes to discuss group dynamics such as size and structure may want to assign groups of five to seven members (odd and of medium size). Instructors of 50-min class sessions may limit groups to two or three members in order to decrease exercise time. We choose to consistently run 15-min, four-member group exercises, with one member of each group playing the nonstandard role in order to develop cumulative outcome results. Though we strive to use four person groups, class size sometimes dictates that we include groups

of three or five. In such cases, we do not include results from three and five person groups in the cumulative outcome statistics. We do this so that we can present collective results of a large number of groups from different classes. For pedagogical purposes, we are not concerned with controlling group size other than assuring that groups are small enough to allow participation by all members.

Our experience is that in large classes (three-plus groups per condition) emerging patterns replicate the cumulative pattern. However, in small classes of two or fewer groups per condition, or in classes with different numbers of groups across conditions, or different sizes of groups, resulting patterns are inconsistent, which is a pivotal reason we choose to sometimes present collective results. When using cumulative outcomes, we explain the importance of sample size so that students understand the rationale for the presentation. We also explain that the collective results are being shown to stimulate discussion and are not scientific. Regardless of these issues, the contrast between group experiences in different conditions, even in small classes, is rich enough for very interesting discussions.

Suggested discussion questions for debriefing

(1) Do you see any patterns in numerical results? What might explain these outcomes?

The class calculations generally result in a pattern (relative to neutral groups) in which free-riding conditions minimally impact outcomes, while positive groups perform significantly better on the task, but only half as great as the decrease in outcomes of groups in negative conditions (see sample calculations in Appendices C and D). Research on positive and negative mood, emotion, and affect supports these results.

(2) For each group condition ask the following:

Those of you in the ____ group. How did you feel as you were doing the task? Was there any conflict? How did you feel about (fill in person's role)? Did their behaviors affect your performance? How so? Did you feel any different at the end of the task than you did at the beginning? Would you volunteer to work with this group on another task?

Common responses of students in positive group conditions include being more engaged in the task, having fun, being creative (sometimes even silly), making new friends, and feeling happy. Job satisfaction, relational needs, and creativity, immediately

come to mind as relevant topics depending on student disclosures.

Common responses of students in negative group conditions include being less engaged in the task with less concentration as their concern for avoiding conflict increased. These students also bring up their anger with the person playing the negative role and their desire to join groups they perceived to be enjoying the exercise (i.e., having fun). This revelation may instigate discussions concerning turnover, absenteeism, or transfers.

Common responses of students in free-riding group conditions include ignoring the free rider while vowing not to work with that person again, assuming the free rider did not contribute because they did not know anything, and expressing a hope that the free rider was not being paid as much. In addition to topics already mentioned, attribution theory (judging), projection, and perceived inequities come to mind as relevant topics for discussion.

Common responses of students in neutral groups range from "I just did the task," "it was O.K.," "no big deal," to "why are we doing this anyway?" Here, we often elucidate on motivational outcomes such as compliance vs commitment, intrinsic vs extrinsic motivation, and task importance in job design. Because students see and hear other student responses, they are able to compare and contrast the differences in motivational responses to the task across the different groups.

(3) What if any of these results surprise you? Why?

This important question brings out preconceived notions about relational influences on human behavior. For example, students are often amazed to see the strength of negativity on task outcomes. By inquiring about student reactions to emotive roles, instructors can make salient the consequences of one's own actions on others. Students do not realize that such seemingly casual remarks as "this task is stupid," or repeated negative comments about a task or management (here represented by the crossword puzzle and instructor) can have a detrimental effect on work outcomes through emotional contagion. Nor do students realize their own vulnerability to emotive behaviors. We generally include a discussion on the possibility of negative contagion beyond confines of the classroom – lest students in negative conditions become tempted to go home and kick their dog(s). However, we wholeheartedly



encourage spreading any contagion derived from the positive condition.

Depending on discussion direction, instructors can also introduce the importance of modeling, stress, and job satisfaction in organizations, not to mention such leadership topics as EI and cognitive resources theory.

(4) One example of a feedback and validity question the instructor can ask is: “Can you tell which role ____ was playing ... or what condition your group was in?” This is a particularly useful type of question when groups perform contrary to expectations. We have stumbled across a variety of answers such as, the person was disengaged, or not willing to play the part for personality reasons; the person was unbelievable based on familiarity, etc. Instructors can relate such responses to varying organizational behavioral concepts. For example, what happens when managers assign individuals to positions that require them to act in ways in which they are uncomfortable (person-job fit)?

(5) Imagine that you are the manager and you have one of these individuals in your work unit. How are you going to control the affective tone of your work unit in each condition?

This question forces students to think in terms of corrective actions and reinforcement theory. When is it proper to reward and/or punish? What are the risks of punishment? Who should be rewarded – groups or individuals – and under what circumstances? Are rewards contingent on desired performance or are rewards encouraging undesirable behaviors? What is the trade-off (e.g., short- vs long-term results, quality vs quantity, or structure vs creativity)?

(6) “What other elements of organizational behavior do you see in this exercise?” Alternatively, if using this exercise at the beginning of a course to introduce course topics, the instructor might ask, “What issues do you see as being important in a work situation?”

This question invites different interpretations and personal experiences. Topic suggestions presented thus far are representative but not inclusive. We feel it is imperative that we draw out students so that we can address their issues and concerns. Doing so, places learning in context so that students are better able to identify with and thereby internalize lessons.

Discussion and results: meeting the objectives

Our first objective was to introduce students to the effects of PA and NA, mood, and/or emotion on group performance. We believe that the MEAP exercise does accomplish this. At the very least, instructors can introduce each topic during debriefing by asking pertinent questions. However, we believe that exercise facilitators can achieve an even greater degree of success by recognizing, capturing, and expounding upon various concepts as students allude to them. Students are often unaware of the terminology needed to describe concepts they are trying to express when they describe a situation, feeling, or reaction. The skill of instructor(s) in clarifying those concepts is imperative if the class is to come together in a common understanding of behavioral dynamics.

This exercise provides instructors an opportunity to introduce requisite subjects. Additionally, operative results reach beyond those we initially designed into the exercise or those we expected. Because the exercise lent itself to many more topics than those originally intended, we found ourselves alluding to the activity throughout the semester. Hence, we have used MEAP as an end-of-course exercise to remind students of what they learned, and as a partial review for a final examination. Alternatively, we have also used this exercise as an introduction to various subjects we plan to cover during the semester. Additionally, one instructor has successfully used this exercise in executive training seminars.

Our second objective was to create a classroom atmosphere that encourages students to become active in the learning process through a learning-by-doing approach. We are satisfied that we incorporated the required elements of active learning dictated by research: student involvement and contextualization. We partially accomplish contextualization by placing learning material in a context similar to what students will experience in their professional life – a group problem-solving task. Additionally, we feel that the debriefing questions draw students out so that they can comment on issues important to them. This allows students to place learning in their own context, which is an essential part of the learning process.

At the end of each semester, we have students identify the activities, processes, concepts, etc., they perceive to have been the most influential in the learning process. We publicly record all suggestions and then have students vote for their favorites. Each student gets one vote for every 5–6

suggestions. We then eliminate the suggestions that receive the fewest votes and students again vote one time for each of the 5–6 remaining suggestions as instructed by the nominal group technique. We typically begin with 30–40 suggestions. In the classes that we have run the MEAP exercise (approximately 15–20 different classes), MEAP has always emerged as one of the top five activities. Using this process helps us determine which activities to eliminate and which to retain in subsequent courses. It also aids in teaching students to use a nominal group technique, and in demonstrating the variety of opinions among an assumed homogeneous group.

Students have written many positive comments about the exercise in their course evaluations. For example, “I never realized how such small comments (e.g., this is a stupid task) could have such big reactions,” “I thought they knew I was joking,” “Even though I knew she was acting, I was getting angry at ...,” or “I’m going to be more careful about being negative in the future.” We consider such comments indicative of the success of the exercise for three reasons. First, such comments are unsolicited, yet continually appear on student evaluations. Second, we have not yet received any negative comments about the MEAP exercise. Third, the structure of the exercise is theoretically strong. Classroom discussions during the debriefing further indicate internalization and understanding of the comments. Positive group members report

more enjoyment in the task, having more fun, and being more creative. Negative group members commonly report feeling angry, left out, and express desires to join groups they perceived to be enjoying the exercise. As expected, student members of the neutral group see the task as “just something to do.” Apparently the manipulations, through student role-playing, successfully impacted the affective tone of the groups directly and the group performance indirectly.

According to active learning theorists, involvement of the “whole” person to include values, attitudes, and emotions is likely to lead to deeper reflections and self-analysis, resulting in effective learning of longer duration. This exercise allows each student to personally experience his/her own psychological response within the contexts of the situation that learning occurs. The sheer number of emotional reactions reported by students is evidence of successful accomplishment of this feat. In fact, we advise those that implement this exercise to expect an outpouring of emotional reactions and to interpret them as indications of success.

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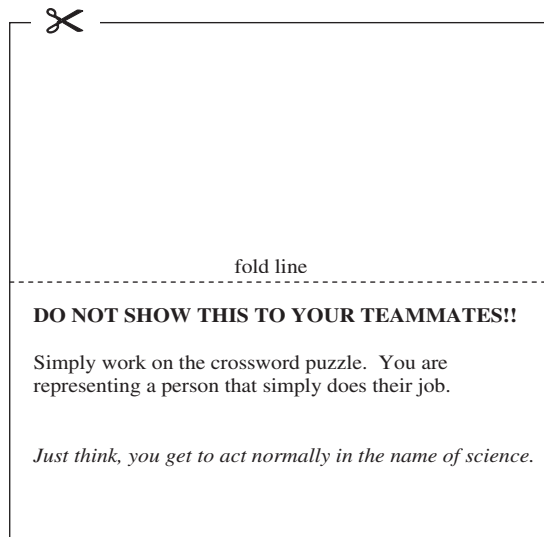
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Appendix A

Role cards may be printed and cut for use in the MEAP exercise

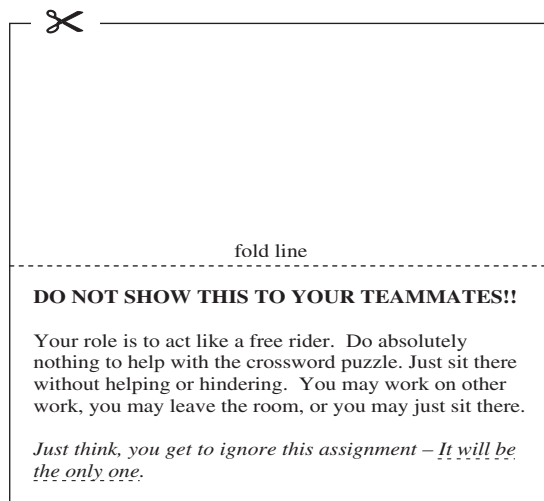
Neutral role-playing card

All members of neutral group teams receive this role card. All except one member of each team in free-rider, positive, and negative conditions also receive this card. We printed neutral condition role cards on yellow paper.



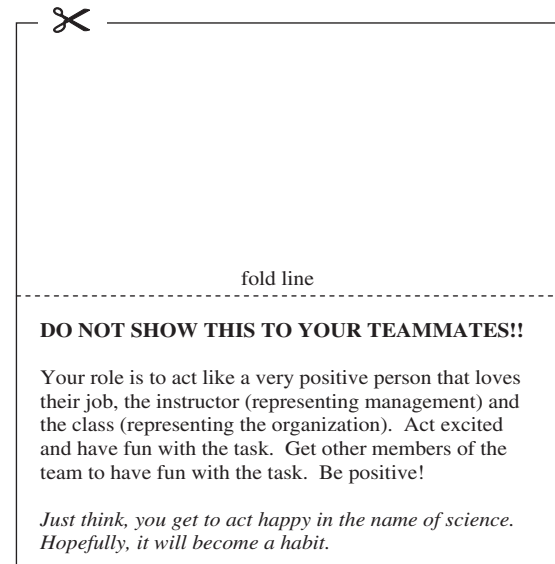
Free-rider playing card

One member of each team in the free-rider condition receives this role card. All other team members receive a neutral role card. We printed free-rider condition role cards on blue paper.



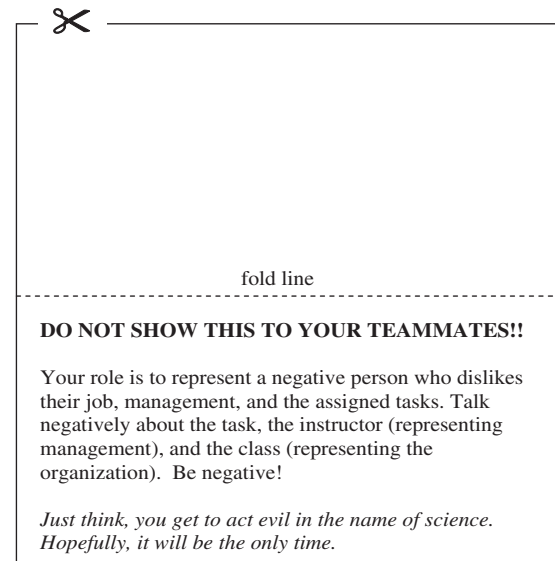
Positive-affect playing card

One member of each team in the positive-affect condition receives this role card. All other team members receive a neutral role card. We printed positive-affect condition role cards on lavender paper.




Negative-affect playing card

One member of each team in the negative-affect condition receives this role card. All other team members receive a neutral role card. We printed negative-affect role cards on white paper.



Observer role-playing card

We give this role to students who choose not to play-act. We also assign this role to students when class size is not conducive to uniform group sizes.



fold line

DO NOT SHOW THIS TO YOUR TEAMMATES!!

Your role is to be an observer. Please rate the group you observe on the following dimensions on a scale of 1 – 10 with 1 being a low score and 10 being a high score.

This group appeared to have fun doing the task.....

This group discussed subjects irrelevant to the task.....

Group members became irritated while doing the task.....

This group worked hard to complete the task.....

Appendix B

Instructions and timing

Running the MEAP exercise (rules and procedures)

- (1) Randomly assign students to groups and have them physically arrange themselves in their groups. Moveable chairs and tables are best for this exercise. However, we have run the exercise with good results in tiered classrooms containing fixed chairs. If uniform group size is important, assign extra students to observer roles.
- (2) Inquire as to which students have done, or currently do crossword puzzles on a regular basis. We subsequently assign the role of free rider to experienced puzzle solvers.
- (3) Make sure students put away all other materials and that the group has only one pencil/pen to share between members. Give each group one puzzle and one clue sheet, color-coded to match the groups' experimental condition. Place puzzles and clue sheets face down in the center of each group's work area. Announce to students that you expect them to correctly answer as many puzzle clues as possible in the 15-min exercise period. Also, instruct students to refrain from turning material over until you give permission to proceed.

- (4) Inform students that you will now provide each of them with a role card that they are NOT TO SHARE. Rather, they are to "get into" their roles in preparation to "act out" their designated roles as they work on the group task.
- (5) Offer students the chance to trade roles if they are uncomfortable playing the role assigned. If any students opt for this option provide them with an observer role-playing card and give their original role assignment to someone else in the group.
- (6) After passing out roles and allowing students time to "get into" their roles, begin the exercise by announcing, "you may begin."
- (7) At the end of the allotted time, announce, "please put pencils/pens down."
- (8) Have students count and record the number of correct and incorrect puzzle answers. We use both calculations to illustrate quantity and quality outcomes on the problem-solving task.
- (9) Publicly record group calculations within each condition (see Appendix C).
- (10) After recording each group's statistical reports, average results (assuming there are two or more groups in a given condition) and then invite students to discuss, among themselves, any patterns and/or surprising results. Allow students 8 minutes for this discussion. Optional: at this time, instructors can add current results to cumulative results to demonstrate the effects of conditions on the group task over a large number of groups.
- (11) Have students share insights with the class. The debriefing consists of a discussion on patterns and/or surprises that students detect in the results as well as several pre-determined subjects the instructor may choose to prompt.

Timing

Prior to running the exercise, facilitators must select a puzzle, enlarge, copy, collate, and color coordinate the puzzles, clues, instructions, and role-play cards. Subsequent preparations take about 20 minutes, as only the puzzles need to be replicated. All other materials are reusable. Allow 60 minutes to run the exercise in class. Following is a breakdown of approximate times:

- | | |
|---------|---|
| 10 min: | Class instruction and distribution (puzzles, answer sheets, and roles). |
| 15 min: | Actual exercise. |
| 5 min: | Calculate exercise results in groups and record publicly. Allow a couple of |



- extra minutes when combining results with existing data.
- 15 min: Class discussion of results and emotional impact of roles on each other and on group performance.
- 15 + min: Immediate debriefing.

Appendix C

Sample classroom displays for individual and collective results

Individual group results for one class of 29 students, consisting of two groups of four students in each

Condition	Group #	# Correct words	# Incorrect words	Group scores	Average group score
Neutral	1	32	3	29	29
Positive	3	36	3	33	64/2=32
	4	32	1	31	
Negative	5	28	4	24	44/2=22
	6	20	0	20	
Free-rider	7	9	0	9	28/2=14
	8	25	6	19	

Appendix D

Aggregated group scores by condition

Collective results of 15 groups each consisting of four members in the positive- and negative-affect

conditions, and nine groups each consisting of four members in the neutral condition, and 13 groups each consisting of four members in the free-rider condition.

Condition	# Groups	Aggregate # correct words	Aggregate # incorrect words	Aggregate score	Average condition score	Average group performance compared to neutral group (%)
Neutral	9	231	17	214	24	100
Positive	15	470	13	457	30.5	128
Negative	15	217	37	180	12	50
Free-rider	13	318	19	299	23	96

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