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Abstract

Management educators are preparing students for careers that do not exist yet. Thus, the broad focus should be on developing learning skills such as critical thinking (the Partnership for 21st Century Skills; Batelle for Kids). Demonstrating critical thinking skills represents the highest level of cognitive development, according to Bloom's Taxonomy of Learning (1956). In this roundtable session, we will discuss the challenges of developing critical thinking skills and share ideas on how to encourage students to practice those skills in various management courses.

Keywords: *critical thinking skills, challenges, experiential learning*

Title: **Developing Critical Thinking Skills: A Mixed Bag of Approaches (roundtable discussion)**

Introduction

Critical thinking skills can be challenging to teach (and learn) in the management classroom for many reasons and those reasons might vary, depending on the backgrounds of the students (and instructors). Simultaneously, there is agreement among politicians and educators that it is important for college students to become critical thinkers (Haber, 2020) as it represents the highest level of cognitive development, according to Bloom's Taxonomy of Learning (1956). Baldoni (2010) summarized critical thinking is questioning assumptions, adopting different perspectives, seeing potential, and managing ambiguity. As it pertains to management educators, McEvoy et al. (2005) criticized HRM education for focusing solely on specialized HR knowledge. In essence, we are preparing students for careers that do not exist yet and we need to facilitate the development of broader skills. In this roundtable session, we will discuss the challenges of developing critical thinking skills and share ideas on how to encourage students to practice those skills in various management courses.

Theoretical Foundation/Teaching Implications

What is "critical thinking"?

First, we define "critical thinking" as a structured way of thinking to formulate arguments (Haber, 2020), as opposed to using one's intuition or feelings to reach

conclusions. To frame the challenge of teaching critical thinking skills, we can start with Bloom's Taxonomy of Learning (1956). The levels of cognitive development from lowest to highest are knowledge, comprehension, application, analysis, synthesis, and evaluation. The 2001 revision (Krathwohl, 2002) placed creation at the top with evaluation as the next highest level of cognitive development. Critical thinking skills are included at the evaluation level, at which one is able to "judge the value of material for a given purpose based on definite criteria and rationale" (Athanassiou & McNett, 2003: 536). Some instructors have incorporated the original taxonomy in their courses as a guide for students to analyze their own work (Athanassiou & McNett, 2003). The Partnership for 21st Century Learning Framework (Batelle for Kids) lists creativity and innovation, critical thinking and problem solving, communication and collaboration under learning skills. In a comprehensive review of literature in the time period 2000–2016, Van Laar et al. (2017) identified critical thinking skills as a frequently reported 21st century skill in 75 articles.

In the context of management courses, students can engage in critical thinking when they analyze protagonists' actions in business cases, participate in debates, answer questions that prompt them to evaluate concepts or business actions, among other activities. Students can also participate in simulation games and consulting projects. There are many approaches educators can use to encourage students to practice critical thinking skills in the classroom that can also enhance student engagement. This roundtable is meant to be an opportunity for educators to discuss the challenges of including critical thinking activities in their own contexts (i.e. student population, country, etc.) and share their best (and worst) practices.

Why do we need to talk about teaching critical thinking skills?

According to Arum & Roska (2011a), 45% of students in their study demonstrated no significant improvement in several skills, including critical thinking, during the first two years of college. This suggests that a large percentage of college students might not be experiencing enough opportunities to develop their higher order cognitive skills, which includes critical thinking. Even though it is not clear why some students made progress (the 55%) while others did not (the 45%), educators can offer more opportunities for students to go beyond merely learning theories and concepts and repeat them back on exams. While Arum & Roska (2011b) suggest some systemic solutions (e.g. enhancing K-12 education, raising standards, etc.), the focus of this roundtable will be on how individual management educators can create opportunities to help *all* students develop their skills while in college. In the management classroom, there might be specific challenges that educators can address to improve their teaching practice. Student feedback from a course using web-based simulations revealed that the team-based environment, the competition with other teams, and the interactive nature of the simulation were the most helpful in developing critical thinking skills (Lovelace et al., 2016). Given that we are preparing students for jobs that do not exist yet, the onus is on educators to offer opportunities for students to develop critical thinking skills through a variety of classroom evaluation methods and activities.

Potential Challenges of teaching critical thinking skills

Critical thinking skills can be taught in a course focused on critical thinking skills or as part of any course (Moore, 2004). For example, Lovelace et al. (2016) studied how three different web-based simulations in three different courses (business management, HR management, and Leadership) were beneficial for students in developing critical thinking skills. They can be incorporated in stand-alone or semester-long assignments. There are several possible challenges of teaching and helping students develop critical thinking skills to consider when designing experiential activities or exam questions. We have provided a short list of some considerations below:

1. Broadly speaking, having class discussions that require critical thinking skills can introduce a risk that students might not want to experience. To enable students to speak freely, instructors need to create an environment of psychological safety (Edmondson, 1999). Students need to be reassured that a counter argument is not a personal attack or that being wrong is an opportunity to learn.
2. Once students feel comfortable enough to offer their thoughts, it is important to recognize that critical thinking itself is challenging and it can feel contrived (vanGelder, 2005). In reality, why should students care about developing their critical thinking skills? This is the same argument one might ask about learning algebra in high school. The instructor's role should be to explain course design and continuously remind students of the benefits of developing critical thinking skills through various approaches.
3. There might also be social reasons that prevent students from fully participating in class discussions that are meant to encourage them to engage in critical thinking. This might be especially challenging for international students who do not want to participate because they may have never done so in their home country due to differing cultural norms.
4. Students might be conditioned to think that there is only one right answer. If there is only one right answer, why do we need to discuss anything?! Just tell me the answer!
5. Students may feel disconnected from discussions and assignments that are more theoretical in nature. Instructors should carefully design activities that help students apply and integrate the course material to solve existing business challenges. Instructors should provide examples of how a topic manifests itself in business or can encourage students to recognize and solve those instances on their own.

Session Description (can also be hybrid mode with participants attending online and in person)

1. Introductions (10-15 minutes) - Who are the participants? What courses do we teach? In which countries do we teach? Is critical thinking an important part of what we teach? Did the pandemic change the topics discussed in the classroom? Did

you change your approach to introducing critical thinking if you were teaching online?

2. Challenges of teaching critical thinking skills - e.g. “cancel culture”, psychological safety, fear of engaging in debates, not wanting to offend others (self-censorship) - there is a good amount of risk in offering arguments in front of peers, the contrived nature of critical thinking, class size, class modality, etc. (10-15 minutes)
3. Experiential Activities/Techniques for teaching critical thinking skills

To start the conversation, we will present a few activities/ideas that we use in our courses. The following are examples we will use to start the discussion:

- a) creating a fictional character, named “Uncle Mitt,” who is used in midterm and final exam questions that require students to engage in critical thinking.
- b) creating assignments that go beyond standard papers or essays that require students to engage in critical thinking while enabling them to see how critical thinking might be useful outside the classroom (e.g. for business ethics courses, write a letter to the editor about a recent scandal)
- c) using simulations or other games to allow students to make decisions and adjustments based on data, performance rankings, and feedback from professor and peers
- d) work with actual organizations to offer recommendations in the form of consulting reports and presentations to solve business challenges related to the course content (e.g., onboarding programs, organizational change)

To make the session useful for all participants, we will take notes on all of the shared ideas and send them to all participants after the session via e-mail. We will have break-out groups if there are enough participants and there is a variety of courses represented. We will use a flipchart or other visual means to show a table with “Challenges” in one column and “Possible Activities” in another column to show how we might create techniques that address the challenges we discussed. We will summarize the main takeaways (30-40 minutes)

References:

Athanassiou, N., McNett, J. M., & Harvey, C. (2003). Critical thinking in the management classroom: Bloom's taxonomy as a learning tool. *Journal of Management Education*, 27(5), 533-555.

(a) Arum, R., & Roksa, J. 2011. Academically adrift: Limited learning on college campuses. Chicago: University of Chicago Press.

(b) Arum, R., & Roksa, J. (2011). Limited learning on college campuses. *Society*, 48(3), 203.

Baldoni, J. (2010). How leaders should think critically. *Harvard Business Review*, 1(20), 2010.

Battelle for Kids. Partnership for 21st Century Learning skills.

<http://www.battelleforkids.org/networks/p21>

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350-383.

Gelder, T. V. (2005). Teaching critical thinking: Some lessons from cognitive science. *College teaching*, 53(1), 41-48.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice*, 41(4), 212-218.

Lovelace, K. J., Eggers, F., & Dyck, L. R. (2016). I do and I understand: Assessing the utility of web-based management simulations to develop critical thinking skills. *Academy of Management Learning and Education*, 15, 100-121.

McEvoy, G. M., Hayton, J. C., Warnick, A. P., Mumford, T. V., Hanks, S. H., & Blahna, M. J. (2005). A competency-based model for developing human resource professionals. *Journal of Management Education*, 29(3), 383-402

Moore, T. (2004). The critical thinking debate: how general are general thinking skills?. *Higher Education Research & Development*, 23(1), 3-18.

van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72(July 2017), 577-588.
<https://doi.org/10.1016/j.chb.2017.03.010>