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COMMENTARY

Evidence-based case studies in I-O education for public impact

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Rogelberg et al. (2022) acknowledge the imperative for industrial and organizational psychology (I-O) to reach the public and provide a series of useful suggestions; however, the authors have largely neglected to consider how I-O academics may contribute to achieving this goal through different educational activities. I believe adopting evidence-based case studies within our curriculums can create a positive cascade from our students to the public. Specifically, I suggest the cascading benefit occurs because evidence-based case studies help students think about real-world problems from an I-O perspective, as well as develop their ability and confidence to translate scholarship into practical recommendations. By integrating more evidence-based case studies into our programs, we can leverage the some 1,500 new I-O graduates each year (in the United States alone; National Center for Education Statistics, 2021) to be advocates for I-O science. Our students will be better equipped to be effective practitioners, and in doing so they can share the value of I-O science with others (e.g., coworkers, family, and friends).

An evidence-based case study approach is as a structured method to teaching students how to meaningfully combine "critical thinking with use of the best available scientific evidence and business information" using case studies (Rousseau & Barends, 2011, p. 221). A case study reports on or realistically simulates organizational problems to foster student learning and engagement (Rippin et al., 2002). This approach emphasizes the development of students' ability to translate rigorous scholarship into practice, thus facilitating their effective communication with both academic and nonacademic audiences. Although popular in business schools, I argue such case studies remain underused in I-O education.

I begin by defining an educational approach to I-O evidence-based case studies and then provide three examples of evidence-based case studies. I conclude with reflections on my students' experiences. In doing so, I make several potential contributions. First, I illustrate how evidence-based case studies can be effectively used to help I-O science reach the general public through an impact cascade that begins with our students. Second, numerous scholars argue bridging the gap between I-O science and the public may be best left to senior scholars (Clinebell & Clinebell, 2008), possibly because such activities are not part of traditional academic reward systems (Rogelberg et al., 2022). However, a case study approach empowers a greater number of I-O academics to engage the issue because most academic positions include at least some teaching. Third, although several scholars have espoused adopting similar educational approaches (e.g., Rousseau & McCarthy, 2007), there are few concrete examples and little evidence of teaching utility. I address this gap by providing three exemplary evidence-based case studies and data from my teaching.

What is an evidence-based case study?

Consistent with the view that education is "the acquisition of the art of utilizing knowledge" (Whitehead, 1929, p. 4), I define an evidence-based case study as a structured activity that develops students' ability to combine high-quality scientific evidence with organizational information using critical thinking skills. The primary goal of this activity is to explicitly equip students with the necessary skills to translate academic knowledge into practical solutions. That is, student learning outcomes of an evidence-based case study include the acquisition of both knowledge and skills in facilitating the effective translation of evidence into practice (Rousseau & McCarthy, 2007). Contrary to using curated case studies that report simulated issues (Rippin et al., 2002), I emphasize using real-world cases. An evidence-based case study approach to I-O education is consistent with calls for curricula evaluation to include the extent to which courses of study prepare students to be effective practitioners (Pfeffer & Fong, 2002). Such an approach also reflects the robust body of I-O literature that can be translated into practical recommendations with confidence (Charlier et al., 2011). Evidence-based case studies can help scholars reconcile the tension between academic rigor and practical relevance often inherent in I-O education (Byrne et al., 2014).

Three evidence-based case study formats

I outline three evidence-based case study formats varying in their level of complexity and the extent to which they support I-O science reaching the public through student education. All three case study formats develop students' critical thinking skills, problem solving ability, communication skills, and deductive reasoning, which are central to being effective I-O practitioners (O*NET, 2021; Zelin et al., 2014). By developing relevant knowledge, skills, and abilities, evidence-based case studies (a) encourage students to think about I-O science when faced with an organizational problem, (b) support students' ability to apply I-O science and generate practical recommendations, and (c) build student confidence to use and communicate I-O science. Students help bring I-O science to the public when they actively use it as a sense-making lens, bridge science and practice, and feel confident sharing I-O insights with others. Instructions and rubrics are available from http://doi.org/10.13140/RG.2.2.21956.96648 and 10.13140/RG.2.2.35378.73929.

Basic evidence-based case study

The "basic" evidence-based case study format entails identifying a real-world organizational problem reported in the popular press and connecting it to an I-O concept or theory. Specifically, students (a) provide a brief overview of the reported problem, (b) connect the problem to I-O psychology by identifying key concepts/theory, and (c) generate learning points. This case study format is basic because popular press articles are relatively short and include a limited number of concepts (Leenders & Erskine, 1989). This activity encourages students to look at real-world phenomena through an I-O lens and fosters their ability to communicate the relationship between theory and practice. The sharing of cases also facilitates collective learning and helps students understand the breadth of phenomena that can be informed by I-O theory.

Intermediate evidence-based case study

The second evidence-based case study format is "intermediate" and extends the basic format by requiring students to (a) conduct secondary research, (b) write an in-depth literature review, and (c) provide practical recommendations. Specifically, students find additional information to diagnose the organizational context (e.g., company websites and stock market reports). The purpose of obtaining additional organizational information is to better understand the context in which the problem is occurring (Rousseau & Barends, 2011) and identify additional relevant

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details not otherwise included in the initial description. Moving beyond simply identifying I-O concepts, students conduct an in-depth literature review requiring the synthesis of scholarship. The discussion includes a consideration of how I-O science informs the organizational problem while acknowledging the context. Students must ensure their recommendations are appropriate to the organization and identify potential boundary conditions. This case study format requires a greater depth of analysis, particularly in considering the role of the organizational context that supports the development of their judgement and decision making. This format also helps students understand how I-O science can be applied to organizational problems and develops their confidence in applying theory.

Advanced evidence-based case study

The "advanced" format extends the intermediate by using an in-depth interview with a manager for the case study. Each student interviews a manager and is trained on the use of a semistructured interview agenda made up of three parts. First, students collect basic demographic information. Second, questions focus on the organization (e.g., what is ABC Inc.'s core business?) Third, managers are asked about an I-O-related problem their organization is facing. Managers are provided with a definition of I-O psychology and a list of potential topics (e.g., motivation, well-being, and performance). Manager responses are recorded and act as the foundation for the case study. This format affords students first-hand experience applying I-O knowledge to a real-world problem. Following feedback and revision, students provide the managers with executive summaries and provide evidence-based recommendations that highlight the utility of I-O science. This format is advanced because interviews often yield large amounts of complex information that relate to many I-O concepts (Leenders & Erskine, 1989). Such information requires in-depth analyses of the problem and context. This format emphasizes deductive reasoning and complex problem solving, as well as builds interpersonal skills, professionalism, and accountability. This activity brings together many of the knowledge, skills, and abilities required of effective I-O practitioners (Zelin et al., 2014) and gives students a personally relevant example of how they used I-O science to inform a real-world problem that they are likely to share with others. Additionally, students directly engage with managers as part of the development and resolution of their cases which enhances the visibility of I-O science. This project illustrates the complete impact cascade from the case study, to the students, and onward to managers.

Student experiences of evidence-based case studies

The evidence-based case study approach is predicated on engaging I-O students as primary drivers of an impact cascade that begins with their case studies. Thus, their experiences are highly relevant. I conducted a thematic analysis of qualitative student feedback from the 2020 cohort ($N = 77$, response rate = 53%) applying a total of 428 codes. I summarized the codes as first-order themes using percentages. The most salient themes were application of research to a real-world problem (22% of codes), enjoyment and engagement (10%), challenge (10%), development of research skills (10%), role of case study in shaping career aspirations (9%), problem-solving skills (8%), topic specific knowledge (8%), critical thinking (6%), and task autonomy (6%), and other (11%). As is evident in the student feedback, the evidence-based case studies develop the knowledge, skills, and abilities that are required of I-O practitioners (O*NET, 2021; Zelin et al., 2014). Furthermore, many students enjoyed the experience, which may motivate them to speak positively about I-O science and how it can be practical with others. The following are illustrative quotes:

> *"[The case study] helped me develop the skills required of an evidence-based practitioner. Working with my team . . . I feel confident in providing my research-backed recommendations." S1*

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"I am currently a candidate to enter the police academy. My interviewer was very impressed when I discussed the work I had done on mental health in paramedics and the potential implications for the police force." S2

"My case study about performance, well-being, and work design landed me a summer internship as an HR consultant at Deloitte." S3

"What really stood out for me was the fact that our assignment was based on going to an actual organization and being able to apply our knowledge to the real world, which a lot of the time we don't get the opportunity to do!" S4

Together, the results suggest that students appreciate the evidence-based case study approach and that it can support them in achieving important career outcomes (S4). Notably, the case studies also developed students' confidence and ability to make evidence-based recommendations that showcase the value of I-O psychology to others (S1, S4). As per the feedback, the cases supported the development of students as evidence-based practitioners who also shared their experiences using I-O science to solve complex cases (S2). A caveat is that many students find case studies challenging. Therefore, I would encourage a progressive approach from basic to advanced formats as well as the inclusion of support structures (e.g., detailed guidelines). Providing students with ample support contributes to their development as evidence-based practitioners who will be better equipped to share I-O science with the public.

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