

COMMENTARY

At the frontier of teaching and practice: Relevant issues for nontraditional undergraduate I-O psychology

Chelsea A. LeNoble*  and Donna L. Roberts

Embry-Riddle Aeronautical University

*Corresponding Author: lenoblec@erau.edu

This commentary expands upon the focal article's (Kath et al., 2021) outline of fundamentals in applying industrial and organizational (I-O) psychology research to the practice of teaching by addressing the needs of undergraduate students in nontraditional circumstances. Although positioned as applicable to large and small classes as well as students who may not pursue I-O psychology as a career, the scope of their recommendations did not address two important cases of undergraduate I-O teaching: course modality and nonpsychology student populations. As remote instruction in the age of the novel coronavirus pandemic is more relevant than ever before, these cases require further attention. We therefore offer insights and considerations into teaching I-O psychology to undergraduates by drawing from our own experience in building an undergraduate I-O minor within a college that serves nonpsychology students via primarily asynchronous courses. As a result, this commentary is relevant for teaching I-O psychology to undergraduates who are distributed across countries and time zones, veterans (often with disabilities), and adults with full-time careers—characteristics of students likely to be enrolled in online courses and programs (Ortagus, 2017).

Beyond connecting material: toward an inclusive undergraduate I-O curriculum

Although the focal article articulates that connecting student work experience and course content is a medium change, we argue that for nontraditional modalities (e.g., online learning) or nonpsychology-focused institutions (e.g., trade schools), this is a fundamental requirement. There may be institutions for whom an underlying challenge is encouraging students to even enroll in I-O courses or take on a minor. Core concepts that are applicable across worker experiences are often not enough for certain students, whose specialized degree requirements offer little to no room for general exploration. The “if you build it, they will come” approach indicated by the focal article may fail in these circumstances, much to the disappointment of I-O course developers and instructors. There must be a way to directly communicate the value of learning I-O concepts for their specific industry and career path to motivate enrollment in I-O courses or an I-O minor. One strategy that we employ in the development of our I-O minor is the customizability of the minor to include relevant courses from the student's own degree program. We provide an example of this inclusive I-O curriculum approach in Figure 1.

The authors of the focal article indicate the pervasive lack of familiarity with the I-O field. This, combined with the inherent broad applicability of I-O concepts across numerous disciplines—the focal article authors claim it is relevant to “a group that includes almost all workers” (p. 3)—argues for the development of inclusive programs (i.e., minors, majors, dual majors) that incorporate a choice of relevant courses from a variety of other degree programs. This approach is similar to that of interdisciplinary problem-based learning, which refers to the development of majors and

I/O Psychology Minor with Interdisciplinary Coursework – 15 credit hours	
The Industrial and Organizational Psychology minor focuses on the human performance in the workplace environment and the application of psychological principles to organizations.	
Required Courses: 9 Credit hours	
<ul style="list-style-type: none"> • Industrial/Organizational Psychology • Group and Team Behavior • Social Psychology or Personality Development 	
Remaining Courses - Select 2 according to student major discipline: 6 Credit hours	
Emergency Services	<ul style="list-style-type: none"> • Fire & Emergency Services Personnel Management • Fire-Related Human Behavior
English/ Communication	<ul style="list-style-type: none"> • Business Communication • Collaborative Writing and Presenting • Communication and Organizational Culture
Psychology	<ul style="list-style-type: none"> • Aviation Psychology • Introduction to Cognitive Psychology • Social Psychology or Personality Development (option not taken as core)
Business	<ul style="list-style-type: none"> • Human Resource Management • Organizational Behavior • Leadership
Aeronautics	<ul style="list-style-type: none"> • Human Factors in Aviation Safety • Ergonomics • Human Reliability and Safety Analysis

Figure 1. Example Inclusive Undergraduate I-O Curriculum: I-O Psychology Minor.

minors that combine disciplines to address some of the greatest challenges facing society today (Sternberg, 2008). Not only would this attract more students to the I-O curriculum and infuse I-O concepts into the consciousness of other curriculum, but, by this integration, it would also help breach the identified gap between teaching I-O psychology and the potential for its application in the practice of these concepts. In other words, to help I-O psychology better meet its potential to prepare undergraduates for the complexities of the modern world, we must work to more meaningfully integrate I-O teaching into interdisciplinary curricula.

This inclusive curriculum approach is particularly relevant to developing an I-O program in an institution with a niche focus (i.e., a technical school or specialty university) and/or one that does not have established psychology degree programs and thus lacks a cadre of dedicated psychology students. If, as I-O instructors, we meet these students at their current level of understanding of I-O topics, we are more likely to increase enrollment in I-O courses. We argue that this can be achieved by carefully considering four main issues, detailed below.

1. Emphasizing major and career/industry application

When undergraduate I-O course goals are developed with overarching themes, as suggested in the focal article, these goals can be achieved through a variety of assignments with built-in flexibility that helps ensure engagement and relevance. With respect to the suggested consideration of goal orientation theory in the teaching of I-O psychology, this integration of students' chosen fields further supports the adoption of mastery goals by allowing them to tailor the fundamental I-O concepts to disciplines meaningful to them and thus helps support retention beyond the I-O course(s). In the pursuit of fundamental I-O learning objectives, students can be given the freedom to adapt assignments to a specific field that is relevant to their focus of study. Incorporating this relevance into assignments helps prevent them from becoming a series of unrelated tasks on a to-do list, which, as noted, will increase student motivation.

We agree that once enrolled in I-O courses, undergraduate students can certainly help to encourage their peers to join in on the fun. At the end of a course, these students need to feel like I-O psychology truly helps them to do even better in their major and their career discipline as a whole. To facilitate this, assignments should achieve three main objectives. First, there should be I-O-related products or deliverables that they can take from the classroom experience and add to their resumé, such as a job analysis or performance assessment. Second, assignments should provide students with opportunities to address and resolve issues that may arise in their own workplaces, whether face to face or virtual. This could be integrated into a research paper or group project. Finally, each assignment should help students to identify points of connection between I-O concepts or theories and other courses in their major.

2. Careful development of online teamwork

Empirical findings suggest that online students like teamwork even less than do face-to-face students (Konak et al., 2019). This may be because virtual, distributed teamwork poses a number of complex challenges, many of which are not present in the colocated, face-to-face teamwork that is representative of in-person courses (Berry, 2011). Instructors who have used the x-culture.org recommendation in the focal article (or who participated in x-culture as a student, a population that includes an author of this commentary) are especially likely to know these challenges intimately. The recommendations of collaborative team testing and flipped classrooms are less likely to be effective or even possible in asynchronous online courses where students are often collaborating across time zones and with very different schedule availabilities (Johnson et al., 2002). Without special care taken in designing group work, these assignments—which represent increasingly common realities of the modern workplace—may pose disadvantages for the majority of our students. Even if their current careers do involve virtual, distributed teamwork, these students may feel as though they are being evaluated against unfair criteria that are unrelated to course objectives. Drawing from organizational justice theory (Greenberg, 1990), if these students feel that there is distributive or procedural injustice involved in team assignments (which are likely to occur in an online setting; Wilson et al., 2018), they will be less motivated to fully engage with the assignments.

To address these challenges, we offer two recommendations. First, instructors must consider how teamwork will occur in online courses without dedicated “class time.” As students in online courses are unlikely to do optional work (Alexander, 2006), teamwork assignments should ensure that time for teamwork is integrated into the instructions, expectations, and evaluation. Second, online peer evaluation tools are likely to increase accountability and therefore satisfaction with online teamwork (Saghafian & O'Neill, 2018). We recommend those developed by The Individual and Team Performance Metrics Lab (ITP Metrics), which are free to use, allow for email distribution to an entire class grouped into teams, and provide automated reports. In sum, the development of team projects and assignments for online I-O psychology courses must

Table 1. Recommendations for Enhancing Online Connection

Objective	Recommended practices
Get to know students and help students get to know each other	Use ice-breaker activities to begin course; offer virtual office hours (options of audio, video, instant messaging).
Foster meaningful discussions between students	Respond to discussion posts by inviting further dialogue (e.g., if two students post separately on the same topic, ask their opinions on one another's posts).
Encourage high-quality writing and critical thinking in discussion posts	Model behavior you would like to see in discussion boards (if instructors simply comment, <i>Great post, I agree with what you said here</i> , students will, too).
Demonstrate care and interest in student development	Use video feedback systems to record assignment feedback instead of or in addition to written feedback.
Reduce the burden of high-quality connection in online settings	Develop a repository of supplemental materials (e.g., videos, web-based tools, articles, tutorials) to draw from when responding to students or providing feedback.
Replicate components of face-to-face classroom experience	Consider incorporating virtual social environments (e.g., eUnion platform: https://worldwide.erau.edu/eunion).

account for the nuances of virtual, distributed teamwork and allow for flexibility for a diverse student population (i.e., differences in time zones, languages, work schedules).

3. Developing connections with students in online environments

Inviting students for coffee is rarely a possibility in our circumstances. Doing so with only the students in a globally distributed class that share geographic proximity to the instructor would certainly be ill advised. With these students' schedules, activities that require voluntary engagement outside of graded assignments will not be well attended. Instead, we suggest a shift in the paradigm of what it means to connect with students. Certain characteristics of online learning that may be considered limitations for traditional face-to-face students are often the very reason our students enroll in online courses. They may not be able to attend office hours during standard work hours or may have a disability that makes synchronous engagement particularly challenging. For these students, the most helpful connection with an instructor takes the form of communicating understanding and flexibility, consistently providing timely, in-depth assignment feedback, and offering mentorship. To foster connection between instructors and students as well as between students in the course, we recommend incorporating the practices listed in Table 1.

4. Partnering with instructional design

For the purposes of building inclusive, high-quality online I-O courses, we encourage the development of a strong partnership between departments teaching I-O classes and the institution's instructional design team. Although we do not advocate for I-O instructors taking the time and effort to add learning a new area of expertise to their plates as the focal article describes (albeit for the different topic of diversity/inclusion), we do agree with the importance of building one's knowledge in the areas most important for teaching. We believe this can instead be achieved by working closely with those who are already experts. Our approach involves partnering with instructional design throughout the entire course development process. This collaborative effort allows us to develop inclusive learning objectives; include design elements that are less likely to create challenges for students with disabilities or other diverse experiences; build strong course rubrics; incorporate innovative course materials, assignments, and student enrichment opportunities; and incorporate new elements of technology and instructional applications for not only I-O

course content but also course infrastructure (e.g., providing video feedback on assignments, embedding live chat or video functions for group work, and establishing virtual office hours via instant messaging and video conferencing).

Conclusion

The focal article brought much-needed attention to a field that needs to do a better job of pedagogically practicing what it preaches. As the focal article was primarily concerned with traditional undergraduate I-O courses, the goal of this commentary was to provide additional insights and recommendations for the improvement of online undergraduate I-O teaching and program development. This is especially important because many online courses are intentionally designed to include what the authors suggest as novel changes, and online instructors of these courses often face additional challenges the focal article may not help them address. For this special case of teaching I-O undergraduates, we provided suggestions for promoting undergraduate teaching by emphasizing the application to students' major and career or industry, considering the nuanced challenges of online course teamwork, partnering with instructional design experts, developing connections with online students, and working toward a more inclusive curriculum for programs teaching undergraduate I-O psychology.

The authors of the focal article state early on that if I-O instructors do not take action upon reading their article, they have failed. We respond to this by saying perhaps it is not that they have failed, but that there are instructors teaching I-O psychology under these special conditions that require additional insight to improve their approach. Although the focal article attempts to provide recommendations that are applicable to any type of I-O class, we believe that online courses broadly, and asynchronous courses in particular, may provide additional challenges that can only be addressed by considering issues that are outside of the scope of the focal article. We therefore hope to have provided this insight, especially for those teaching I-O psychology in online environments, for special student populations, and for undergraduates who are nonpsychology majors.

References

- Alexander, P. M. (2006). Virtual teamwork in very large undergraduate classes. *Computers & Education*, *47*(2), 127–147.
- Berry, G. R. (2011). Enhancing effectiveness on virtual teams: Understanding why traditional team skills are insufficient. *Journal of Business Communication*, *48*(2), 186–206.
- Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, *16*(2), 399–432.
- Johnson, S. D., Suriya, C., Yoon, S. W., Berrett, J. V., & La Fleur, J. (2002). Team development and group processes of virtual learning teams. *Computers & Education*, *39*(4), 379–393.
- Kath, L., Salter, N., Bachiochi, P., Brown, K., & Hebl, M. (2021). Teaching I-O psychology to undergraduate students: Do we practice what we preach? *Industrial Organizational Psychology: Perspectives on Science and Practice*, *13*(4), 443–460.
- Konak, A., Kulturel-Konak, S., & Cheung, G. W. (2019). Teamwork attitudes, interest and self-efficacy between online and face-to-face information technology students. *Team Performance Management: An International Journal*, *25*(5/6), 253–278.
- Ortagus, J. C. (2017). From the periphery to prominence: An examination of the changing profile of online students in American higher education. *Internet and Higher Education*, *32*, 47–57.
- Saghafian, M., & O'Neill, D. K. (2018). A phenomenological study of teamwork in online and face-to-face student teams. *Higher Education*, *75*(1), 57–73.
- Sternberg, R. J. (2008). Interdisciplinary problem-based learning: An alternative to traditional majors and minors. *Liberal Education*, *94*(1), 12–17.
- Wilson, L., Ho, S., & Brookes, R. H. (2018). Student perceptions of teamwork within assessment tasks in undergraduate science degrees. *Assessment & Evaluation in Higher Education*, *43*(5), 786–799.

Cite this article: LeNoble, C.A. and Roberts, D.L. (2020). At the frontier of teaching and practice: Relevant issues for nontraditional undergraduate I-O psychology. *Industrial and Organizational Psychology* *13*, 487–491. <https://doi.org/10.1017/iop.2020.82>