

FOCAL ARTICLE

# Teaching I-O psychology to undergraduate students: Do we practice what we preach?

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## Abstract

As industrial-organizational (I-O) psychologists, we have expertise in applying psychological and/or organizational science to the workplace. However, many of us haven't taken the time to think about how our I-O psychology knowledge can apply to our teaching practice. We walk through some examples of how I-O psychology research can help us be better teachers, and the goal of our paper is to encourage readers to make evidence-based changes to their teaching based on I-O psychology research. We organize our discussion around four areas: training and development, diversity and inclusion, groups and teams, and leadership. Within each, we offer small, medium, and large changes that could be incorporated into classrooms. We hope that readers will be inspired to build on what they do in their classrooms to help students learn about (and be inspired by) our field.

**Keywords:** diversity; I-O psychology; leadership; teaching; teams; training

Teaching I-O psychology<sup>1</sup> to undergraduates can be a rewarding experience because we have the ability to motivate our students to make positive changes in their future places of work. However, sometimes we get complacent about updating our teaching methods and content. In this article, we have a lofty goal for you: we want you to make some changes and improve the way you teach I-O psychology to undergraduates. The changes you make need not be enormous, but we invite you to get reinvigorated about the material in a different way—specifically by incorporating what you already know about I-O psychology research into your classroom. You don't have to come up with the ideas yourself. We will help you by providing three sizes of potential changes (small, medium, and large) so you can choose the size of change that is right for you.<sup>2</sup> We also start each section with a self-assessment question that allows you to do a mini needs assessment on yourself, so you can figure out which level and what type of change you may want to tackle first. But we want to be completely honest from the beginning: If you read this article and then do nothing, we have failed.

<sup>1</sup>When we refer to teaching I-O psychology to undergraduates, we include those of you who teach I-O psychology content in classes with any number of different names: Management, Human Resources, Organizational Behavior, Labor Relations, etc. Similarly, when we discuss I-O instructors, we include tenured/tenure-track professors, adjunct instructors, lecturers, graduate students, and really anyone tasked with guiding the learning of undergraduate students. Finally, we note that practitioners often teach clients as well, so there may be some good tips in here for practitioners, although that is admittedly not the focus of this article.

<sup>2</sup>These suggestions are summarized in Table 1, which also contains links to some helpful resources. We have also added these links to the SIOP Teaching Page (<https://www.siop.org/Events-Education/Educators/Teaching-Tools-by-Topic>), where you can find even more resources than we had space to cover in this article.

Before we begin, though, you might wonder, Why make a change at all? After all, if you don't have a strong sense of why you should change, research suggests that you won't invest the energy in change (Ford & Ford, 2010). So, we offer two reasons to get you started. First is the selfish reason: reducing cognitive dissonance. You may have that small voice telling you that you should be innovating in the classroom more, but you tell yourself there's just not enough time in the day. Although it may be easier to continue rationalizing, we are suggesting that you give your teaching practice a tweak or two. Taking us up on one or more of these ideas will turn down the volume of that voice, which is a clear win. With this article, we also seek to make these changes more efficient. We think you already know a lot about how to help students learn. Our goal is to share ideas that can be quickly adopted in your classrooms. Although a few of our recommendations may not work in certain types of classes (e.g., learning students' names is difficult in large classes), nearly all of our recommendations can be used in any type of class.

Second, as I-O psychologists, how often do we get together and bemoan the fact that not enough people know about our great field? What's our biggest platform for reaching large numbers of people young enough to be open to learning about our field? You guessed it: it's our undergraduate classes. So, this is what we call the *Field of Dreams* approach—if you build an amazing class in I-O psychology (i.e., one that is both enjoyable and effective in achieving learning outcomes), then the undergraduates will come. They will talk among themselves, and the popularity of the class will grow. This means more students will learn about I-O psychology, and that's another clear win.

The goal of having more students learn about I-O psychology is not just for those who might be inspired to go on to become I-O psychologists. Core concepts in I-O psychology are helpful for anyone who will be working in teams, leading others, hiring others, and training others, which is a group that includes almost all workers. Teaching undergraduate students, we regularly hear from alumni that no matter what career they are currently in, they still remember what they learned in I-O, and they use it on the job. We believe that retention of core I-O psychology concepts could help students to be more effective workers and more healthy/happy at work.

Here is our general approach: we often think of the practice of I-O psychology as being separate from teaching I-O psychology. What we'd like to note is that there are things that we study and apply to organizations, as I-O psychologists, that we could also be applying to our own teaching practice. We have highlighted four areas in I-O psychology where our practice recommendations intersect nicely with teaching practices: (a) training and development, (b) diversity and inclusion, (c) groups and teams, and (d) transformational leadership. In each of these areas, we offer three sizes of suggestions for change—small, medium, and large—which are recommendations that are based on I-O psychology research. The best teachers iterate, so it's fine to start small. The main thing is to realize that we can all probably do a better job of practicing what we preach, so without further ado: let's go!

## Training and development

The most obvious link between I-O psychology content and teaching undergraduate students is in the area of training and development. As noted above, we will start each section with two questions to help you conduct a mini needs assessment on yourself:

*Will your students retain what they learned well beyond the end of your course?*

*Have you considered your teaching through the lens of any model of training design?*

No matter the training design model you use, they all start with a needs assessment (Noe, 2017), which allows you to identify key training outcomes (i.e., learning objectives). From there, design training to implement the best practices in training strategy and tactics (e.g., consider spacing,

practice, and feedback), and then align your training evaluation (i.e., learning assessment) to best measure your desired outcomes. That may seem like a lot to ask. But we offer three levels of suggested changes below, just to get your thinking started.

### ***Small changes: attend to students' goals and reinforce material***

We know that training motivation is a critical part of the picture, and we know that our students have wildly varying motivations for taking our classes. One approach to looking at training motivation is goal orientation theory (e.g., DeShon & Gillespie, 2005; Vandewalle et al., 2019). Some students will hold mastery achievement goals, which means they are likely to come to class already geared up to bounce back from mistakes and motivated to acquire knowledge. You can support the adoption of mastery goals by *encouraging students to set goals focused on their own learning and behavior* (rather than on their performance relative to other students). The benefits of mastery goals include better learning goals and task-specific self-efficacy (e.g., Kozlowski et al., 2001).

Those with a strong performance orientation (i.e., those motivated to get a good grade), though, may be somewhat easily derailed by a poor grade in an early assignment. To support those students, small changes you can make are to *ensure that the grading standards are clear in the syllabus*, that there are *relatively easy assignments to begin the class*, to create a sense of momentum, and *that there are opportunities to compensate for a poor grade* in any one assignment, quiz, or test. A good resource for creating a strong syllabus is included in Table 1, footnote 1, but your university/college's teaching support center is likely to have excellent resources as well.

After you've considered the different ways in which your students are motivated, how can you ensure that your students won't forget what you've worked so hard to cover? Design your class to support retention of the material presented. Psychological research indicates that it's important to pay attention to the spacing of the material presented (Pashler et al., 2007). It is hard to retain information that is only presented once, so you will want to repeat the most critical concepts throughout the semester. Further, it is important to think of testing as an opportunity for knowledge acquisition as well as knowledge assessment (Roediger & Karpicke, 2006). Combine these two concepts to arrive at our final small change suggestion: *recycle a few questions from previous exams into future exams to reinforce long-term retention of the material* and tell students explicitly that you will do this.

### ***Medium changes: connect material within topics and to students' work lives***

Continuing with the topic of spacing the material presented, you can go beyond recycling test questions to reinforce important topics. A medium change that you could make is to *review your course content to see where previous topics are likely to be related to newer topics*. For example, a discussion of the assessment of individual differences is often included in the context of selection, but it is also related to training needs assessment. Plan to make the connection between these two applications of assessment of individual differences to introduce spacing (planned repetition) of your material through the term.

A good needs assessment can give you information about what your students already know. A key tenet of Knowles' adult learning theory (Knowles et al., 2015) is that it is helpful to acknowledge the experiences of your students in your teaching. Therefore, a medium change we can suggest is to *determine how much (and what type of) work experience your students typically have*. If your students have little job experience, consider bringing in workers to share their experiences relevant to the topics covered (or share video or podcast clips from workers). Alternatively, you can make connections to the types of work they have done, whether as part-time contributors, volunteers, or student leaders in high school. If your students typically have quite a bit of job experience, then ask them to connect class content with their own experiences in discussions and/or assignments. Another key tenet is that your students are more motivated to learn when

**Table 1.** Self-Needs-Assessment Questions and Recommended Changes (additional resources in footnotes)

	Small changes	Medium changes	Large changes
<p><b>Training/development:</b> Will your students retain what they learned well beyond the end of your course? Have you considered your teaching through the lens of any model of training design?</p>	Encourage students to set goals focused on their own learning and behavior (rather than on their performance relative to other students)	Review your course content to see where previous topics are likely to be related to newer topics	Define what success looks like for you and your students to create and communicate strong learning objectives in your syllabus <sup>1</sup>
	Ensure that the grading standards are clear in the syllabus <sup>1</sup> , and start the class with relatively easy assignments to create a sense of momentum	Determine how much (and what type of) work experience your students typically have	Examine the content taught, the activities assigned, and any assessment planned to determine whether they align with the learning objectives <sup>1</sup>
	Include opportunities to compensate for a poor grade on any one assignment, quiz, or test	Explain how course content might be useful to students in the near future	Ensure that students have repeated opportunities to practice in some fashion, receive feedback, and demonstrate that they paid attention to the feedback and improved
	Recycle a few questions from previous exams into future exams to reinforce long-term retention of the material, and tell students explicitly that you will do this		Rearrange the course content around some large questions strongly centered around learning objectives that will allow you to cover all the intended content
<p><b>Diversity and Inclusion:</b> Are you sure all of your students feel included, or are there some who might feel left out? Have you considered whether you are reaching students with diverse backgrounds who are filling classrooms today in unprecedented numbers?</p>	Get to know your students by <ul style="list-style-type: none"> <li>• Assigning them to write a 2-3 page autobiography</li> </ul>	Give group members a superordinate goal to increase group harmony	Become a diversity expert yourself
	<ul style="list-style-type: none"> <li>• Working toward identifying students by name if possible<sup>2,3</sup></li> </ul>	Create an assignment that asks students to take the perspective of a minority student/employee in an effort to cultivate tolerance <sup>6</sup>	Learn to be an effective ally to diverse people <sup>7</sup>
	<ul style="list-style-type: none"> <li>• Regularly inviting different groups of students to meet you for lunch/coffee<sup>4</sup></li> </ul>		
	Understand how you operate in ways that may be biased toward others <sup>5</sup>		

(Continued)

**Table 1.** (Continued)

	Small changes	Medium changes	Large changes
<b>Groups and teams:</b> Do your students know how to work well in teams? Are you explicitly teaching your students how to work more effectively in teams?	Have students form short-term teams within the class to discuss and apply course content	Use team charters <sup>9</sup> to clarify how team members will work together and hold each other accountable	Assign applied team projects that last the entire term <sup>11</sup>
	Use collaborative team testing, where students work together to answer questions on one portion of the exam <sup>8</sup>	Assign both individual and group grades to team projects <sup>10</sup>	Use a flipped classroom style to support these projects <sup>12</sup>
<b>Transformational leadership:</b> Are you modeling the type of leader you hope they will become? Are you able to create dynamic relationships that allow students to exceed typical expectations, thereby transforming themselves?	Establish a shared vision for a course by explaining the “why” behind everything that goes into the course	When brainstorming is required, teach students to brainstorm individually first, and then together as a team	Encourage students to view development of teamwork skills <sup>13</sup> as an explicit goal of the project
		Give more individualized feedback to students on their assignments, which can be done efficiently using well-designed rubrics <sup>14</sup>	Create experiential assignments that require students to apply what they learn (rather than simply memorize facts)
		Pay attention to your students and treat them like individuals	Assign team projects that allow the students to build efficacy and learn from each other <sup>11</sup>

<sup>1</sup>Tips for creating a good syllabus: <https://www.chronicle.com/interactives/advice-syllabus>

<sup>2</sup>General tips for learning student names: <https://www.unl.edu/gradstudies/current/teaching/names> <https://www.cmu.edu/teaching/solveproblem/strat-cheating/tips-studentnames.html>

<sup>3</sup>iOS app for learning names: <https://apps.apple.com/us/app/attendance2/id536206472> Android app for learning names: <https://play.google.com/store/apps/details?id=com.chalk.attendance>

<sup>4</sup>Online software for schedule sign-up: <https://www.picktime.com/> or <https://calendly.com/>

<sup>5</sup>Tips for creating an inclusive classroom: [https://www.chronicle.com/interactives/20190719\\_inclusive\\_teaching](https://www.chronicle.com/interactives/20190719_inclusive_teaching)

<sup>6</sup>Diversity classroom exercises: (I-O focused) <http://siopwiki.wikifoundry.com/page/Diversity+Scenarios> (general) <https://secure.understandingprejudice.org/teach/highact.htm>

<sup>7</sup>Learning about diversity and being an ally: <https://www.tolerance.org/magazine/spring-2018/how-to-be-an-ally> <https://www.tolerance.org/professional-development/leadership> <http://citizenshipandsocialjustice.com/2015/07/10/curriculum-for-white-americans-to-educate-themselves-on-race-and-racism>

<sup>8</sup>Collaborative team testing resources: Vázquez-García (2018). <https://www.physiology.org/doi/pdf/10.1152/advan.00113.2017> Vogler & Robinson (2016). [https://www.researchgate.net/profile/Daniel\\_Robinson7/publication/304347304\\_Team-based\\_testing\\_improves\\_individual\\_learning/links/576c433a08aeb18f3eb271b.pdf](https://www.researchgate.net/profile/Daniel_Robinson7/publication/304347304_Team-based_testing_improves_individual_learning/links/576c433a08aeb18f3eb271b.pdf)

<sup>9</sup>Team charter example: Aaron et al. (2014). [https://www.researchgate.net/profile/Joshua\\_Aaron/publication/265965310\\_The\\_Effects\\_of\\_a\\_Team\\_Charter\\_on\\_Student\\_Team\\_Behaviors/links/56d5fa2008aee73df6c0568d.pdf](https://www.researchgate.net/profile/Joshua_Aaron/publication/265965310_The_Effects_of_a_Team_Charter_on_Student_Team_Behaviors/links/56d5fa2008aee73df6c0568d.pdf)

<sup>10</sup>Behaviorally anchored rating scale for self- and peer-evaluations in team work: Ohland et al. (2012). [https://pdfs.semanticscholar.org/bcde/763f7390942da8eb041f061dc71ea7f2186e.pdf?\\_ga=2.196854892.1921486513.1576636816-400405067.1576636816](https://pdfs.semanticscholar.org/bcde/763f7390942da8eb041f061dc71ea7f2186e.pdf?_ga=2.196854892.1921486513.1576636816-400405067.1576636816)

<sup>11</sup>Team project website: <https://x-culture.org/> Guidance on creating good team projects: <https://learninginnovation.duke.edu/blog/2016/10/ideas-great-group-work/>

<sup>12</sup>Flipped classroom primer: Hussey et al. (2015). <https://journals.sagepub.com/doi/pdf/10.1177/1475725715592830>

<sup>13</sup>Teaching teamwork skills: Goltz et al. (2008). [https://www.researchgate.net/profile/Sonia\\_Goltz/publication/228884587\\_Teaching\\_Teamwork\\_and\\_Problem\\_Solving\\_Concurrently/links/554cd6c60cf29f836c9b7820.pdf](https://www.researchgate.net/profile/Sonia_Goltz/publication/228884587_Teaching_Teamwork_and_Problem_Solving_Concurrently/links/554cd6c60cf29f836c9b7820.pdf)

<sup>14</sup>Developing rubrics: Chowdhury (2019). <https://files.eric.ed.gov/fulltext/EJ1201525.pdf>

they can see the relevance of the knowledge to be gained. Related to this, you can also *explain how course content might be useful to students in the near future*. If you're not sure how they might use what they learned, ask some former students to share what they remember/applied—the results will likely delight you.

### **Large changes: develop course goals and overarching themes**

A very important question to tackle in a needs assessment is, What do you want your students to learn, taking into account what students already know and what they want to know? To be clear, we don't mean just the act of writing learning objectives that conform to the approved methods (for example, see Bloom's taxonomy; Krathwohl, 2002)—we also mean *defining what success looks like for you and your students* (see Wiggins & McTighe, 1998, for one approach to this process). From there, you can *create and communicate strong, concise learning objectives* that will guide every choice you make as an instructor so you can be sure that students learn what you want them to learn (Noe, 2017). Also, when you identify exactly what you want the students to get out of the class, this can help you avoid packing too much material into one term, which is a common pitfall.

A critical next step is to *examine the content taught, the activities assigned, and any assessment planned to determine whether they align with the learning objectives* (Stewart & Brown, 2015). Anything that does not align should be discarded. Additionally, materials, activities, and assessments should be added to *ensure that students have repeated opportunities to practice in some fashion, receive feedback, and demonstrate that they paid attention to the feedback and improved*. We know from the training literature that the opportunity to practice new skills is essential to making the learning transfer to the workplace (Salas et al., 2012), so give them opportunities to practice what they are learning. To do this, you can create assignments or a large, term project that provides opportunities to put new concepts and skills into practice. You could even have small groups of students engage in service learning projects for departments on campus or small organizations to apply what they are learning in class. Doing this effectively will take both up-front work and a mindset (from you!) of experimentation and iteration, but the payoff in terms of both engagement and retention of knowledge is likely to be quite large.

Taking this concept one step further, you could *rearrange the course content around some large questions* that are strongly centered around learning objectives that will allow you to cover all the intended content. For example, you could cover core chapters in an introductory I-O psychology class centered around the following five questions (with related topics/chapters in parentheses):

1. How do you hire the right people for a job?  
(individual differences, job analysis, selection, and legal issues)
2. Once they are hired, how do you train them to do the job well?  
(training and development)
3. How do we know whether they are doing the job well and how to use that information to improve their performance over time?  
(performance management)
4. How do we ensure that our best employees stay?  
(motivation, leadership, job attitudes, organizational culture/climate, diversity, occupational health)
5. How do I-O psychologists know all this stuff?  
(history of I-O psychology, research methods)

Grounding a class in terms of a small number of relevant questions should help students see how the course content is useful as well as organize and retain the knowledge they gained.



## Diversity and inclusion

One classroom topic that is essential for evolving instructors to consider is that of diversity and inclusion. The demographic makeup of classrooms will continue to change radically over the next few decades (Pew Research Center, 2019), and it is the responsibility of educators to reach all students, not just those in the majority. Diversity includes a variety of surface-level characteristics (e.g., race, gender, age, physical disability, socioeconomic status) as well as deeper-level diversity (e.g., personalities, habits, political beliefs).

*Are you sure that all of your students feel included, or are there some who might feel left out?*

*Have you considered whether you are reaching underrepresented minorities, first-generation students, transgender students, international students, veterans, students with disabilities, and many other students with diverse backgrounds who are filling classrooms today in unprecedented numbers?*

To maximize student involvement, you should harness the power of diversity, and we suggest some ways, backed by research, that you can create an inclusive learning environment.

### **Small changes: get to know the students and yourself**

Getting to know the students is one easy way that professors can enhance their understanding of and appreciation for diversity in the classroom (e.g., Lantos, 1997). To do this, you might *ask your students to complete an assignment of writing a two- to three-page autobiography*. To make it I-O relevant, they might include descriptions of jobs they have held, or they might write about five jobs they might like to have (either of which can be talking points for later class discussions).

Another way to get to know your students is to *work toward identifying your students by name*. This can be very difficult in large classes, but for medium to small classes, there are several methods to connect faces and names (see Table 1, footnotes 2 & 3). On the technology side, you can ask students to upload pictures of themselves on your learning management system platform (e.g., Canvas, Blackboard). You could also use an app to match photos with names in a roster (search for “attendance” in your app store). The low-tech version is to give students “name tents” (a large index card folded with their names on them) to set on their desks or have students affix a photograph to a large index card describing themselves that you can keep and review.

A seemingly more involved—but really not that time consuming—idea is to *regularly invite different groups of students to lunch or coffee* to discuss I-O psychology. Your learning management system might have a mechanism for assigning students to groups for invitations, and there are also online scheduling software solutions where students could sign up for available meeting times (see Table 1, footnote 4). Meeting with your students will typically reveal the range of diversity in students that is not simply visible from the front of the class alone. Additionally, such meetings signal to students—all students—that you care about them and have an interest in knowing who they are. Consonant with the I-O literature, feeling included is critical for individuals to thrive (Ferdman, 2013).

In addition to getting to know the students, it is critical for you to *understand how you, yourself, operate in ways that may be biased toward others, especially nonmajority members*. Research shows that teachers’ expectations about students have dramatic consequences on students’ performance (Rosenthal & Jacobson, 1968). Research has found that stereotype threat, which refers to the situational predicament of confirming a stereotype about one’s group status, can affect the classroom (Dennehy et al., 2018). Furthermore, negative expectations about certain groups of students can trigger stereotype threat, leading to poor performance among those students (Dennehy et al., 2018; Steele & Aronson, 1995). Pervasively negative teacher expectations of student performance is particularly problematic for racial and income minorities (Agirdag et al., 2013). Therefore, it is

important to be aware of stereotype threat and the influence that our expectations might have on student performance.

If you strive to become more aware of your expectations (for example, do you low-key expect the stereotypical “frat boy” to do poorly in your class?), you can become more aware of the effect that they can have on your students. If your university/college has a center that supports teaching, they are likely to have resources for helping you become more aware of your biases and for helping you create an inclusive classroom (see also Table 1, footnote 5). These efforts will minimize the likelihood that your expectations aren’t inadvertently causing your students to perform poorly—especially underrepresented or disadvantaged students.

### **Medium changes: assign group projects and perspective taking**

Many instructors assign group projects as part of their classes, and this is another area in which instructors can incorporate research on diversity. Given that diversity can have a positive effect on teams (Wei *et al.*, 2015), you might deliberately create groups to ensure there is diversity within them. The experiences that students have in these classroom groups can be the learning labs for a great number of I-O psychology concepts, in addition to learning how to work with diverse group members. Although interpersonal conflicts can emerge in teams, particularly when people hold different viewpoints and values (Hentschel *et al.*, 2013), students can learn about the ways to minimize such conflict. For instance, research on the jigsaw classroom (Williams, 2004) suggests that *giving group members a superordinate goal can increase group harmony* simply through the act of working together. The content of the group project can be anything, such as having the team act as consultants and examine a case study. This accomplishes two goals: The students learn about I-O psychology, and they learn how to work better with others who are different from them.

Another strategy that might be used in the classroom to promote empathy and cohesion among different people is perspective taking (see Longmire & Harrison, 2018). For instance, you could *create an assignment that asks students to take the perspective of a minority student/employee in an effort to cultivate current and future tolerance*. There are many ways that an assignment such as this could be implemented. On a basic level, a prompt can be given to the students (e.g., “imagine you are an employee in this situation”) and ask them to imagine they are a minority with whom they do not personally identify. However, there are many variations of this. For instance, this could be done as a paper (e.g., “How would you respond to an organization’s culture of toxic masculinity if you were a woman?”) or as an experiential activity (e.g., “Interview an individual who belongs to an employee network group [i.e., LGBTQI+]”). Also, an activity such as this could be incorporated into multiple classes besides just classes on diversity. For instance, in a leadership class, you can ask students to take on the perspective of a minority leader. Additional examples are included in Table 1, footnote 6.

### **Large changes: gain more diversity-related expertise**

One of the biggest things you can do to incorporate diversity into your classes is to *become a diversity expert yourself*. This might involve reading diversity-related literature on inclusion and authenticity, gaining first-hand knowledge with many diverse perspectives, and/or engaging in culturally responsive teaching. Chisholm (1994) suggested that multicultural preparation is imperative for educators; to best serve one’s students, one must do the hard work of gaining a deep understanding of the experiences of diverse people instead of a superficial understanding of general diversity-related issues. This requires not only time and energy but also facing and overcoming one’s biases and ignorance.

Essentially, we are suggesting that instructors *become authentic allies to diverse people*. To do this successfully, Russell and Bohan (2016) suggest that one must go through a foundational change in the way he or she views issues of diversity, inclusion, power, and representation.



They argue that anything less is not sufficient to be a true resource for minority people (see also Grzanka et al., 2015). In becoming a better ally, you can seek to maximally understand, educate, and promote students. How do you become an ally? Many have argued that it is more than simply identifying as such; it is a longer developmental journey (Collins & Chlup, 2014; Sue, 2017). Bishop (2002) suggested that it is a multistage process that you must go through to become a true ally, which includes learning about and understanding oppression, understanding how you might already be benefitting from oppression against others (and any negative emotions associated with this), and then determine how you can use your privilege to help others. We have included a few resources for learning about allyship in Table 1, footnote 7. This can be a time-intensive (and at times uncomfortable) experience for people, but the potential payoff in the classroom can be immense. Also, professors might encourage their I-O students to also become diversity experts and allies in similar ways.

### Groups and teams

Another approach that is useful for engaging students when teaching I-O psychology is to involve them in groups and teams. According to Kozlowski and Bell (2013), teams (or groups, which we will use interchangeably) consist of two or more individuals, perform organizationally relevant tasks, share a common goal, interact socially, exhibit task interdependence, maintain and manage boundaries, and are embedded within an organizational context. Teams cut across a wide variety of different contexts and functions and come together in many different varieties and sizes. But one thing is clear, the use of teams in the workplace is here to stay, and this is exemplified in ubiquitous constructs like team science, transnational or global teams, remote/virtual teams, interdisciplinary teams, medical care teams, task forces, quality circles, and leadership teams.

However, ask undergraduate students what they think of group projects, and you are sure to elicit a fair number of eye rolls and groans. Team projects are often not a favorite for students, but they are the wave of the future. Further, instructors are explicitly encouraged by both the American Psychological Association (2013) and the Society for Industrial and Organizational Psychology (2016) to include team projects in classes. Students learn not only about the projects to which they are assigned but also about how to engage in teamwork.

*Do your students know how to work more well in teams?*

*Are you explicitly teaching your students how to work more effectively in teams?*

There are many ways we can do this.

### **Small changes: use teams during classes**

First of all, I-O research shows us that teams can result in many positive outcomes (see Kozlowski & Bell, 2013, for a review), so incorporating teamwork during your classes is a good first step. Teams can be one tool to help achieve active-learning, in-class activities, which a number of studies show can enhance the depth of processing and memory recall that students have for class information (e.g., Noe, 2017). One easy way to get students to engage in active learning, then, is to *have them form short-term teams within the class to discuss and apply course content*. These teams can be assigned tasks that are simple, such as to answer questions about a reading or topic discussed in your lecture, develop a mini lesson to teach to the rest of the class, or brainstorm solutions to a case study or problem.

Some instructors even *use collaborative team testing*, where they add a team portion to an exam and allow students to work together to answer questions (see Table 1, footnote 8 for links to these helpful articles: Vázquez-García, 2018; Vogler & Robinson, 2016). These two particular studies

demonstrated that subsequent recall for retested items was better when students did the same test individually, then in a group, and were given immediate feedback (as opposed to only doing the test individually and being given feedback). A key consideration in what these two studies did to make the team-based testing effective was allowing group discussion of items to allow for deeper processing recall. Specifically, their designs included team members discussing each item and coming to a consensus before determining its answer, getting immediate feedback, and then continuing to discuss the item (if it was incorrect) to get partial credit until they get to the correct answer (check out these two papers for more details on how they operationalized team-based testing).

### **Medium changes: use team projects outside of classes**

Using I-O research on teams, we might also be able to improve the way that we teach I-O psychology by assigning team projects outside of the class. One research-supported practice for improving group effectiveness is the *use of team charters (or contracts)*. As described by Mathieu and Rapp (2009), charters are agreements created by the team that clarify how team members will work together and hold each other accountable. High-quality charters require team members to (a) articulate objectives; (b) identify stakeholders; (c) note team members' strengths, weaknesses, and work styles; (d) assign roles and responsibilities; (e) clarify decision-making and work processes; (f) create opportunities for feedback; and (g) determine how performance will be evaluated (Mathieu & Rapp, 2009). For student team projects, students could be given dedicated time to fill out a charter to ensure they are all on the same page, and this charter can be graded to make sure students take it seriously.

Mathieu and Rapp (2009) found that teams that establish higher quality charters perform better for two reasons. The first is an improvement in team function, which frees up time and attention, so team members better learn the material that is the focus of the learning objective. The related benefit for the instructor is fewer complaints about teamwork in the class. The second benefit is to demonstrate the use of charters as team-related practice that can be used next time the students lead a team. Check out Aaron *et al.* (2014) for empirical evidence of the effectiveness of team charters on student teams as well as an example of an actual team charter you could adapt yourself (see Table 1, footnote 9 for a link to this article). If you don't like that specific charter, you can search online for "team contract for students" and find a number of examples to explore.

Another suggestion from the literature on teams that can help with outside of class student projects is to *assign both individual and group grades to team projects*. We know from research that social loafing (i.e., when a team member doesn't put in a lot of effort because he or she believes the rest of the group will pick up the slack; Latane *et al.*, 1979) is a challenge in team settings but can be reduced if individuals feel accountability (Liden *et al.*, 2004). By assigning a portion of a group project grade to each person's individual contribution, everyone on the team will feel more accountable and responsible for completing a fair share of the work. Determining these grades can be done by the students themselves; having them peer rate each other can maximize the chance that everyone will feel that their contribution is being noticed. Previous research on student team projects has found individual grades to be effective at reducing social loafing (Dommeyer, 2012). Colleagues in our field have already created a behaviorally anchored rating scale for self- and peer evaluations in team work (Ohland *et al.*, 2012) that you can use/adapt (see Table 1, footnote 10).

Finally, when a team activity or project would benefit from a brainstorming session, a third suggestion from the literature is to *teach students to brainstorm individually first and then brainstorm together as a team*. Often, when students are assigned an out-of-class team project, one of the first things they do is get together to brainstorm how to accomplish the task. However, research suggests that their brainstorming would be more effective if they individually brainstormed (perhaps before they meet) and then brought their suggestions together to discuss (McGlynn *et al.*, 2004). This is not immediately obvious to the students but makes sense when

you explain it to them. Brainstorming as a team often results in students being hesitant to say bad things about each other's ideas, so they therefore just go with the first (instead of the best) suggestion.

### **Large changes: use team projects that last the whole term**

Another approach that could promote both experiential learning and teamwork is *assigning teams an applied project that lasts the entire term*. These projects can be simulations or service learning projects (i.e., projects that benefit the community, which could be your department, university, or local nonprofit organization), and they should be designed to provide practice and application opportunities for the material being covered. As an example, class teams could be charged with creating a change-management effort in a fictional, poorly performing, fast-food chain. Throughout the term, they can work on specific assignments that are designed to get them to relate theories and research in leadership, culture, motivation, and organizational change to create an evidence-based recommendation for their client. Another interesting avenue might be to look into what can be found at [x-culture.org](http://x-culture.org) (also listed in Table 1, footnote 11), where students around the world collaborate on real-world business problems to gain both experiential learning and intercultural competency. Additional resources for adopting this change in your classroom can be found by searching the term “problem-based learning” (see also a review by Wiggins et al., 2016).

In some cases, applied projects that last the entire term may call for *using a flipped classroom style*, where students are expected to cover core material (through reading or videos or both) before coming to class, and they work in their teams in class on the application of the material to achieve project goals. This allows you to provide supervision to their work by walking around and visiting each team, asking for updates and questions. As with many of our suggestions, there are ample resources online, but Hussey et al. (2015) have published a helpful primer for psychology courses (link in Table 1, footnote 12).

For teams to be successful working on long-term projects, you should plan to give your students tools to work well together. The aforementioned team charter would be a good place to start, but also *encourage students to view the development of teamwork skills as an explicit goal of the project*. Plan to require regular teamwork assessments for the students to develop a feedback culture in their team, and teach students how to handle conflict among team members, which will help them move past challenges that are related to surface-level (demographic) diversity and reap the benefits that are associated with deep-level (psychological) diversity (Harrison et al., 2002). If you move the material about groups and teams to the start of your term, you can also cover important topics such as team development processes, team diversity, social loafing/facilitation, and groupthink/group polarization so that they can see these topics in action in their own teams. Combining teamwork skills with problem-solving skills will also set the stage for students to become better future team members and leaders (see Table 1, footnote 13 for a link to Goltz et al., 2008).

### **Transformational leadership**

As an instructor, you are in the unique position to influence the beliefs, attitudes, and behaviors of many students every semester, and transformational leadership (Bass, 1985, Burns, 1978) offers insights as to how this can best be done. According to Northouse (2016), the goal of transformational leadership is to “move followers to accomplish more than what is usually expected of them” (p. 161) and comprises four components: inspirational motivation, individualized consideration, idealized influence, and intellectual stimulation (Bass, 1985). The basic tenets of transformational leadership have been applied to the related discipline of transformational teaching (Slavich & Zimbardo, 2012) or transformational instructor leadership (Balwant, 2016). Underlying each of these approaches is the belief that leaders/teachers create dynamic relationships that allow

followers to exceed typical expectations, thereby transforming themselves. Transformational teaching fosters the learning and personal growth of the students by “compelling students to realize a shared vision for a course, which encourages students to work together to maximize their personal and collective potential” (Slavich & Zimbardo, 2012, p. 576).

*Are you modeling the type of leader you hope they will become?*

*Are you able to create dynamic relationships that allow students to exceed typical expectations, thereby transforming themselves?*

Below, we discuss three levels of changes instructors could consider in order to incorporate transformational leadership into their classes.

### ***Small changes: establish a shared vision through inspirational motivation***

At its core, transformational leadership is about “transforming” followers into better versions of themselves. Inspirational motivation, one of the four components of this style of leadership, refers to communicating a shared vision with your group of a better future. Transformational leaders help their followers see how things could be if everyone worked to improve and grow. If the followers see how things could be for them, they are more willing to do the hard work to get there.

There are many ways this can easily be incorporated into the classroom. First, transformational teachers can *establish a shared vision for a course by explaining the “why” behind everything that goes into the course*: Why are certain assignments given and why are certain topics included? Relatedly, what are the explicit learning goals of the course; what do you as the instructor intend for the students to achieve by the end of the semester? The answers to these questions can (hopefully) show that there is meaning behind the choices that have gone into the course.

In terms of motivation, this step can prevent a class from becoming simply a series of assignments to check off a to-do list. Understanding the learning objectives and the meaning behind class assignments can motivate students to achieve these higher-level goals. These decisions are intended to transform the students not only into more knowledgeable consumers of the topic but also, more importantly, into better thinkers about the topic. Instructors often mistakenly expect students to understand (or accept) their pedagogical choices, but this rationale may not always be obvious to students who may not know what works and what does not work in classes. Therefore, explicitly pointing this out can help students get on board with the class and want to be “transformed.” We argue that communicating this shared vision may seem like a small step for instructors, but having shared expectations of course goals, especially on the first day of class, can influence student satisfaction, motivation, and performance (Hermann *et al.*, 2010; Wilson & Wilson, 2007).

### ***Medium changes: give feedback through individualized consideration***

If instructors wish to make more changes to their classes than just communicating a vision, they may consider individualized consideration. This component of transformational leadership refers to providing a supportive climate focused on the individual needs of followers. Given that students come to a class with varying skill levels and preparation, personalized feedback can also be a valuable tool in reducing existing achievement gaps (Slavich & Zimbardo, 2012). At times, it can be difficult for leaders to attend to all of their followers individually but leader–member exchange theory (Graen & Uhl-Bien, 1995) has also borne out its importance; transformational leaders do not ignore this valued part of a leader–follower relationship.

Individualized consideration can be incorporated into a classroom in two ways. First, you can *give more individualized feedback to students on their assignments*. Students benefit from knowing not just how they did (i.e., their letter grade) but also the specific reasons for their grade (i.e., what

they did right/wrong and more important how they can improve). Although individualized feedback can be time consuming, the use of grading rubrics can significantly cut down on the amount of time it takes; instead of writing out similar feedback to multiple students, marking a level on a rubric can give the same feedback in less time (see Table 1, footnote 14 for a link to Chowdhury, 2019). A numbered sheet with the most common comments (and just putting a number in the paper/assignment where a longer comment would have been needed) can be used similarly, thus creating time for more developmental/personalized comments.

The second way that individualized consideration can be incorporated into a classroom is more basic: *Pay attention to your students and treat them like individuals*. Get to know them a bit, ask them questions, notice when they succeed or fail. Even in small classes, students can assume that they are not noticed. If you are able to notice that they miss consecutive classes or are not participating at their usual level, send them a message to check in to show that you've noticed and that you are concerned.

If you teach large classes, you can still take advantage of every opportunity to show individuals that you care. Do not be afraid to do so, like sending an email to a student whose grade improved a lot on the second exam or getting to class early and chatting with a few of the students. When you tell students in a large class that you care about them as individuals, and then you demonstrate that through your actions with even a few students, the other students are more likely to feel like you care, even if you do not interact with them directly.

Good transformational leaders provide support and recognition to their followers. Although as educators we create challenging environments and set high standards for our students, it does not mean we shouldn't simultaneously help them to achieve the difficult goals we set. Pay attention to students and check in on them to ensure they know they have the support from you they need to succeed.

### **Large changes: create assignments using idealized influence and intellectual stimulation**

For instructors who wish to make more substantial changes to their courses in order to incorporate transformational leadership, we recommend creating new experiential assignments for the course that can be used for multiple topics. New assignments can be tailored in order to use both intellectual stimulation (i.e., challenging followers to think differently and push boundaries) and idealized influence (i.e., the emotional component focused on role modeling). New assignments can be a large endeavor for instructors but can be very beneficial.

Intellectual stimulation can be incorporated into classes through experiential lessons that draw on active learning concepts. *Assignments that require students to apply what they learn* (rather than simply memorize facts) are intellectually challenging but can yield great benefits. Additionally, new assignments can also incorporate idealized influence. For instance, you can assign team-based field research or community service projects where students apply what they've learned to provide answers to real clients with real needs. Students may not be used to thinking in this way, but, consistent with social cognitive theory (Bandura, 1986), you can act as a role model to show how it is done, thereby building self-efficacy by helping students see difficult problems as challenges/opportunities rather than threats (Slavich & Zimbardo, 2012). *Assigning team projects* adds another layer of idealized influence that allows the students to build efficacy and learn from each other. The hands-on nature of the projects (for both students and faculty) also provides greater opportunities for the individualized consideration via more regular feedback and support.

## **Conclusion**

It is natural to compartmentalize our professional roles to some extent and not consider how our roles as I-O psychologists can inform our roles as instructors in the classroom. We hope that this article has broken down some of those artificial barriers and gotten you to think a bit about how



we can build better bridges between what we know about the practice of I-O psychology and how we use that in our teaching of I-O psychology. Space limitations prevented us from identifying all the possible bridges (for example, we didn't discuss training fidelity or training transfer), but we hope your commentaries can help share additional ideas.

One thing that struck us as we were developing this article was the convergence of some of the recommendations across disparate research areas. One common theme seemed to be that *it is important to really get to know your students*. For instance, we talked about the value of this to best attend to student goals (in the Training and Development section), to support their differences and unique aspects (in the Diversity and Inclusion sections), and to inspire them through individual consideration (in the Transformational Leadership section). It is likely that making an effort to get to know your students and develop relationships with them will lead to a culture of students getting to know each other and developing relationships, which will also likely help when you develop projects we suggested in the Groups and Teams section. As we noted above, getting to know your students at this level can involve a bit more time and effort but can benefit everyone in many ways.

Another common theme we noted across this article was the need to *really get to know your course*. In other words: What is your course all about? For instance, we talked about the importance of thinking about the overarching objectives and themes of the course in the Training and Development section, and we discussed conveying this information (as well as the "why" of aspects of your course) to your students in the Transformational Leadership section. At times, we just recycle the same course over and over every semester (with possible minor tweaks) without giving it real thought. But taking some time to think through some of these big-picture ideas can help to really strengthen the course. This can also help to develop some of the new assignment ideas we suggested (such as group work in the Diversity and Inclusion section as well as the Groups and Teams section); once you have a stronger idea about what your course is all about, you will better be able to figure out how to innovate in the classroom.

A third common theme in what we've discussed here is *the benefit of incorporating active learning into your teaching style*. For instance, we suggested assigning applied activities in the Transformational Leadership section and perspective-taking activities in the Diversity and Inclusion section. These types of active learning activities can often be done in teams in class (as we suggested to do in the Groups and Teams section) and can help students to practice what they have learned in order to learn it better (as suggested in the Training and Development section). Active learning methods can engage and inspire students, and a growing body of research suggests that active learning methods are not just more interesting to students; they are also more effective (e.g., Yoder & Hochevar, 2005). Student performance on exams improved by about 6% when their professors used active learning methods versus only traditional lectures, and students in classes with just traditional lectures were 1.5 times more likely to fail their classes, regardless of class sizes (Freeman et al., 2014). Therefore, incorporating some of the active learning techniques that we have suggested here can help your students learn more (and not just be more entertained).

In addition to seeing convergence across our suggestions, another thing we noted was that there is good convergence across best practices found in I-O psychology research and best practices in the Scholarship of Teaching and Learning (SoTL), which is the application of scientific and empirical research methodology to learning how to be more effective as an instructor. For example, earlier we noted that research on student learning aligns with I-O psychology research regarding training/learning objectives (Noe, 2017), stereotype threat (Dennehy et al., 2018), social loafing and team accountability (Dommeyer, 2012), and transformational leadership/teaching (Balwant, 2016). This aligns with the broader field of SoTL, which has many examples of the applying science to learning in psychology classrooms (e.g., Boser et al., 2017; Richmond et al., 2019); there is even a journal devoted solely to SoTL in psychology: *Teaching of Psychology*. That there is overlap is hardly surprising, given the similarities between training/managing in the workplace and teaching in higher education, but it is good to see nonetheless.



We encourage you to find out more about how to incorporate SoTL into your class. Check out some of the accessible how-to guides that have been published specifically for psychology instructors, such as Gurung (2015) and Irons (2013). In addition, bringing I-O psychology into the practice of teaching could lead to publications. We also encourage you to apply your research skills to designing studies that are suitable for publication in SoTL journals.

Before we wrap up, let us also offer a few caveats to what we have presented here. First and foremost, we are certain that many of you are already doing a great job of integrating I-O psychology's best practices into your teaching practice, and to you, we say thank you and keep up the good work! Second, it's quite possible that our designation of "small," "medium," and "large" recommendations might feel misclassified to some of you, and that's OK. Motivation to make change is an interesting thing, and the main point that we wanted to convey was that your change doesn't have to be time intensive for it to be meaningful. Finally, we recognize that not all teaching/teacher environments are the same. Some of you are teaching very small classes, and some are teaching hundreds of students at a time. Some of you are able to devote a lot of time to your teaching practice, whereas others may have less time to invest. As a result, some of these recommendations may feel like they don't apply to or may need to be adapted to fit your specific situation. We hope we have provided enough recommendations that there are at least some that feel within reach.

We started this article with a lofty goal: "We want you to actually change something about the way you teach I-O psychology to undergraduates." We've done some of the thinking for you, in terms of identifying some links between our research and our practice, and we've set forth some recommendations. Now it's up to you to bring it home! Here's what we would like you to think about as you consider your next opportunity to make some changes.

First, there should be no guilt in starting small. We discuss "small" changes in terms of the time (we think) it will take you because that's the thing you're likely to think about first when weighing the idea of making a change. It bears noting, though, that there is probably no correlation between the time it takes you and the influence that it has on your teaching effectiveness. I'm sure we can all think of times we spent many hours (or more) developing complex, intricate new assignments that were intended to accomplish many goals in the course and really drive home student learning only for it to fail miserably once you try it. On the other hand, I'm sure we can all think of times we offhandedly tried something new (without really putting much thought into it) only to find out from the students that it was really effective and changed the way they experience the class. So, just remember that a small change can yield big results.

Second, you should be sure to adopt a learning orientation with your teaching practice (that is, focus more on your own learning than on your performance in the classroom). Many of us have, as early-career teachers, really put a lot of pressure on ourselves for every single term to be a screaming success, but that is not realistic. The very best teachers iterate, and sometimes the new idea needs some tweaking before it is successful. If you try something new, and it doesn't quite work, be transparent and honest with your students about the whole process, and you will be modeling good leadership behavior. That also sets you up to gather helpful feedback on how to make some changes to try again next term, and you will be modeling good training effectiveness practices.

Third, pick the change that feels the most exciting/interesting to you. Don't overanalyze the recommendations and worry about which one you "should" try first. For as analytical as we are trained to be, we believe there is value in getting tuned into your own emotions here. Some excitement is necessary to create and sustain the motivation necessary to make change. We often tell our students to pick paper topics that excite them (rather than what they think will be easiest); we should practice what we preach and take action on the change that is the most appealing.

Finally, celebrate your bravery in making a change. The easiest and safest thing to do is to keep doing everything exactly as you have been. With your learning orientation close at hand, pat yourself on the back for trying something new, even if the first try isn't perfect. Similarly, we often tell

our students that it's OK to make mistakes and that it's more important to learn from them; once again, we can model this ourselves.

Our hope is that your changes in the classroom to bring I-O psychology research findings into your teaching practice will lead to true transformation in the way that you teach I-O psychology. Small changes and iteration will lead to successes that will build motivation for future changes. Modeling the behaviors that you hope they exhibit as future leaders will also add greatly to their learning experiences. But, don't take our word for it. Go collect your own data. We wrote this hoping to inspire people—so if you're brave enough to make some changes, please let us know as time goes by what successes and struggles you've had!

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