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COMMENTARIES

A Good Graduate Industrial–Organizational Education Begins in Undergraduate Classrooms

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Due to current market trends and the increasing competitiveness of the job market, the focal authors suggested we must proactively address how we educate graduate students in our field (Byrne et al., 2014). One way to ensure that our graduates are as prepared as possible is to focus on developing *skills* as well as their knowledge base. Requiring students (either graduate or undergraduate) to memorize facts is not sufficient to ensure a quality education and to guarantee they are competitive in the job market. Employers want to hire people who possess more than knowledge; they want people who are knowledgeable *and* have a wide array of skills from which they can draw on the job. Although these statements may strike readers as patently obvious, this dual focus on knowledge and skills is often at odds with how we teach, particularly at the undergraduate level. In our response, we focus on how instructors can build pathways for success beginning in undergraduate industrial–organizational (I–O) courses. We contend that I–O educators should provide some skill-based training at the undergraduate level that can then be built upon at the graduate level in order to develop satisfied, effective I–O professionals.

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We are not alone in calling for a dual focus on knowledge and skills. The SIOP *Guidelines for Education and Training* (SIOP, 1999), the focal authors (Byrne et al., 2014), and Campion et al. (2011) all argue for knowledge and skill-based education. However, their explicit focus is at the graduate level; we want to extend this discussion to undergraduate classrooms. Undergraduate students may at times see their education as requiring no more than memorizing facts, but this mindset will not prepare them properly for graduate training in I–O psychology. These students need to understand that a graduate education in I–O will require them to be skilled at what they do; we do a disservice to our undergraduate students if we do not give them a ''realistic job preview'' of what they should expect once they enter an I–O graduate program. Changing how we teach undergraduate students will provide them with a better education and a better foundation from which to view the field of I–O and begin a graduate education.

Competencies to Target in Undergraduate I–O Courses

The focal authors discuss a number of competencies and skills[1] that we argue can also be taught in undergraduate classes.

1. Consistent with Byrne et al., we use both ''competency'' and ''skills'' language, and recognize that competencies consist of bundles of related KSAOs.

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Some skills mentioned by Byrne et al. are already taught at the undergraduate level; generally, it depends on the individual institution and/or instructor. We do not argue that these skills can be taught at the same level of depth and sophistication that they can be covered at the graduate level. However, we do suggest that they can be taught at a foundational level that can be built upon in graduate school.

One competency discussed by the SIOP *Guidelines* (1999) that could be incorporated into undergraduate education is consulting and business skills. At the graduate level, Tett, Walser, Brown, Simonet, and Tonidandel (2013) found this to be underrepresented in classes, but this is an important competency for I–O professionals to master. I–O psychology overlaps with the field of business, but our students are not often trained in the language of the corporate world as business graduate students typically are. Therefore, learning to strategically communicate in both oral and written forums is beneficial to I–O psychologists. Although at the graduate level this is highly technical (e.g., how to communicate statistical information to managers), undergraduate students can hone their basic communication skills, which can then be developed into I–O-specific communication skills later in graduate school. Similarly, consulting and business skills entails project management. Although graduate level I–O students will be involved with large-scale, long-term projects, undergraduate students can learn basic project management skills to better prepare them for advanced learning as graduate students.

In addition to communication and project management, the focal authors recommended adding interpersonal skills to the list of consulting and business skills. As applied psychologists, I–O professionals must be able to work with people from other fields. For instance, academics may need to work with government agencies to secure grants, and practitioners may need to work with managers to explain the importance of a new training program. Knowing the theories and concepts is not enough if one cannot work with others to use this knowledge. Undergraduate students often interact with others in cocurricular activities and general social exchanges. However, these interactions do not necessarily ensure the students are *good* at interacting with others; all it ensures is that students have experience at it. In addition, these interactions do not ensure that students are skilled at interacting with others in a professional context. The norms and expectations of the workplace are different than those of a party or student organization, and undergraduate students may not intuitively understand the difference. Therefore, an explicit focus on teaching interpersonal skills in undergraduate classes rather than assuming they learn these skills elsewhere can be beneficial.

The focal authors also recommended adding avoiding counterproductive behaviors to the list of important I–O competencies. Though this may seem intuitive, it is more complicated than simply saying, ''don't do bad things.'' For instance, they cite examples of counterproductive student behaviors such as plagiarism and posting inappropriate context to Facebook—all of which apply to both graduate and undergraduate students. Two of the references they cite explicitly discuss counterproductive behaviors among undergraduate students (i.e., Park, 2003; Peluchette & Karl, 2009). Instead of waiting to begin this discussion in graduate school when many students may have already engaged in counterproductive behaviors, it would be helpful for future I–O psychologists (and professionals in general) to encounter this training in the course of their undergraduate education.

Incorporating Skills Into Undergraduate I–O Education

To begin developing these competencies among undergraduate students, we suggest explicitly making undergraduate I–O classes knowledge *and* skill based. Oftentimes, assessment in undergraduate classes is composed primarily of multiple-choice

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tests. Though these can be useful in assessing if the students posses the requisite knowledge, they cannot easily measure if students have learned skills from the class, and they certainly are not representative of what students will encounter in I–O graduate training. Therefore, undergraduate I–O classes should also incorporate group projects, presentations, and papers into the course requirements and have opportunities for students to receive peer and instructor feedback on their performance in relevant skill domains. These types of assignments will require students to learn how to communicate, manage large-scale projects, and work with others in addition to building their knowledge base. Though a concurrent focus on knowledge and skills development would be valuable across the curriculum, particular emphasis should be placed on these competencies in I–O undergraduate classes because that is what the field requires at both a graduate and postgraduate level.

Emphasizing knowledge and skill development may require a fundamental shift in how undergraduate classes are taught for many instructors. Rather than a traditional lecture-and-multiple-choice-exam structure, this requires more innovative teaching and authentic assessment techniques (Mueller, 2008). In general, skills are more difficult to teach and assess than knowledge, but there are many resources available to I–O instructors (e.g., Fink, 2003; Suskie, 2009). This emphasis may also require a shift in how the students view the class; learning skills is more challenging than learning knowledge, and students may balk at this requirement (i.e., ''none of my other teachers make me do this—why are you?''). Explaining the rationale for and value of a knowledge-and-skills-based class could help alleviate students' displeasure and discomfort.

The call for a dual knowledge-and-skills-based education is not unique to I–O psychology; others in the broader field of psychology and beyond have addressed this need (e.g., Bensley, Crowe, Bernhardt, Buckner, & Allman, 2010; Luttrell, Bufkin, Eastman, & Miller, 2010; Schonrock-Adema, Van der Molen, & van der Zee, 2009). For instance, the Lumina Foundation's Degree Qualifications Profile (Lumina Foundation, 2011) seeks to clarify and standardize the meaning of a college degree by proposing sets of competencies for student learning. The DQP, currently in beta testing at over 200 universities, reinforces the fundamental notion that foundational skills and broad, integrative knowledge are critical for student success. The Association of American Colleges and Universities (AAC&U, 2002) also created a list of ''Essential Learning Outcomes'' for undergraduate education that includes both knowledge and skills. Thus, infusing skill development into undergraduate I–O coursework coincides with a shift in higher education practices.

Infusing skills into undergraduate I–O classes also benefits career advising and counseling. As stated, we do not best prepare our undergraduate students for graduate education in the field if we implicitly lead them to believe that success lies in memorizing facts. As early as their first semester in graduate school, they will be required to work with others and write papers specific to I–O—both of which require skills as well as knowledge. This transition may be challenging if students are not adequately prepared. Beginning to develop these skills in undergraduate classes will help students understand what they will encounter when they attend graduate school in I–O psychology as well as determine if I–O is a good fit for them. Instructors can also identify students who may be particularly strong in or are particularly motivated to master these skills and counsel them toward a career in I–O.

Conclusion

As Byrne et al. assert, I–O psychologists need both knowledge and skills to be effective. Knowledge that cannot be translated into action is of little utility. However, I–O psychologists in training need not wait until graduate school to begin developing their

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skills; the foundation for strong skills can be established in undergraduate classrooms. Traditionally, we have done well at teaching knowledge to our undergraduate and graduate students. Reframing undergraduate I–O courses to also include a skills component will acquaint students with key I–O competencies, ultimately enabling undergraduate students to more clearly envision a career as an I–O professional. Those students who decide to pursue graduate training will then be better poised to develop into capable I–O professionals of the future.

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