

Psychology Students' Understanding of the Skill-based Learning Fostered through
University Assignments

Tanya S. Martini

Ashley Rail

Cole Norton

Brock University

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Abstract

We examined first-year psychology majors' (N=195) beliefs about the relevance of two types of university assignments (individual essay, group wiki) and their connection to the development of career-related skills. Students reported that assignments were only somewhat relevant to their career goals, and relevance ratings were typically justified by referring to assignment features (content; type) rather than skill development. Our results suggest that it is important for faculty to be explicit with students – particularly those in the early stages of their degree – about the career-related skills that their course-based activities are intended to foster.

Keywords: learning outcomes, transferable skills, skill development

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With both universities and the general public demanding greater accountability of universities, there has been an increased emphasis on undergraduate learning outcomes (Miller, 2008). While some outcomes relate to the acquisition of discipline-specific knowledge, many are “generic” or “transferable” skills (e.g., critical thinking, teamwork) (Crebert, Bates, Bell, Patrick & Cragolini, 2004). Within psychology, the *Guidelines for the Undergraduate Psychology Major 2.0* emphasize the importance of specific SBLOs for our students (American Psychological Association, 2013). Unfortunately, there is some evidence that psychology instructors do not spend a great deal of time explicitly discussing them in the classroom (Martini, Judges, & Belicki, 2014). One potential implication of such a finding is that students may fail to realize how course-based activities and assignments are furthering the development of their transferable skill set.

We investigated first-year psychology majors' ratings of the relevance of university assignments in relation to their future career, and the extent to which they understand that course-based assignments are a means of fostering transferable skills, as well as promoting an understanding of course content.

Undergraduates' Understanding of SBLOs

Researchers have suggested that university instructors are more likely to communicate explicitly about course content than the skills they are attempting to foster through course-based activities and assignments (Evers, Rush & Berdrow, 1998; Light, Chen & Ittelson, 2012). Evidence supporting this assertion comes from a recent study in which upper-year psychology students at one university ($N=141$) indicated that

instructors had placed little emphasis on the skills being fostered by their assignments ($M = 3.09$ on a 7-point scale) (Martini et al., 2014). Possibly, instructors assume that students will inherently realize the skills being developed through their assignments, thus making explicit discussion unnecessary. If this assumption is faulty, however, students may focus exclusively on how the assignment furthers their understanding of content and miss skill development as an intended outcome (Cranmer, 2006; Evers et al., 1998).

Why is it important that students understand the association between course-based assignments and the development of transferable skills? One long-term reason is that such connections may ultimately help student to connect course-based learning experiences to the skills that employers describe in job ads. More proximally, however, students may gain more from a learning experience if they are fully cognizant of both the knowledge and skills that the experience is fostering. Furthermore, an understanding of the skills being promoted by an assignment may persuade students – particularly those who are less engaged with the course content – about the potential long-term applicability of the assignment.

For many students, assignments whose content does not obviously relate to their long-term goals may be viewed as irrelevant, reducing the likelihood of student engagement in the project and, potentially, perceived learning (Ling-yee, 2011). For example, Ling-yee (2011) had business undergraduates complete measures of subject-related self-efficacy, learning strategies (deep vs. surface) and perceived project outcomes (perceived learning; desire to learn more about the subject matter). She also had students rate the relevance of various project-related tasks in terms of preparing them for their future career (“task value”). Results demonstrated that students’ subject-related

self-efficacy and learning strategies were both associated with project outcomes. More interesting, however, was the fact that task value moderated these relations: When task value was high (i.e., when students believed that the assignment-related tasks were more relevant in terms of preparing them for their career), the relationship between the two predictors (self-efficacy, learning strategies) and the project outcomes strengthened. Put another way, the extent to which factors such as self-efficacy and learning strategies impacted student beliefs about learning outcomes was dependent on the extent to which students believed that the project-related tasks were supporting their career aspirations.

Ling-yee's (2011) conclusions included the importance of making students explicitly aware of the personal significance of course-based assignments (e.g., the extent to which they can help in promoting career-relevant skills). A separate study carried out with engineering students supports this idea, and further suggests that doing so need not be onerous for instructors (Hagerty & Rockaway, 2012). Without modifying course content, these researchers examined the effects of more explicitly emphasizing critical thinking skills. Simply asking students to reflect on critical thinking skills in the context of their coursework improved student performance and attitudes toward assignments. Providing a link between these assignments and a transferable skill such as critical thinking allowed all students, even those who may not have had an intrinsic interest in the course content, to see the relevance of the course to their personal goals.

The Present Research

The present study investigated first-year psychology undergraduates' ability to recognize that course-based assignments help to develop transferable skills, as well as promoting a greater understanding of content. Students were asked forced-choice

questions about the relevance of two assignments in terms of their preferred careers, as well as open-ended questions that probed the reasons behind the ratings that they provided. We did not have any hypotheses about the quantitative relevance ratings (i.e., how relevant students believed the individual assignments to be). However, based on previous literature (e.g., Evers et al., 1998), we anticipated that participants' relevance ratings would be driven by beliefs about the extent to which the assignment fostered an understanding of both course content and career-related skills.

Method

Participants

Psychology majors enrolled in a first-year psychology course ($N = 195$; 160 female; mean age = 19.6 years, $SD = 4.07$, range = 18 to 47 years) provided data as part of a homework assignment prior to small-group seminars (approximately 20 students) related to skill-based learning.

Procedure

Seminar leaders distributed a survey link to the homework assignment by email to the students in their respective seminars. After providing consent and completing a demographics form, students answered a series of questions that were presented in 4 sections. Data for the present study (relevance ratings for two assignments in relation to students' future career, and the reasons behind those ratings) were gathered in the first section of the assignment.

Materials

The two assignments evaluated by students included a 10-page individual essay and a group-based wiki project (which required that students work in a group of four to

create a Wikipedia page that conformed to that site's writing standards). These assignments were selected in keeping with our wish to have students evaluate both an individual and group-based assignment. They were adapted from assignments found on two psychology course websites at North American universities. Students read descriptions of (but did not complete) these assignments for the homework assignment.

The two assignment types were crossed with two examples of assignment content (focus on a famous person in the field of psychology *or* focus on a major shift in thinking related to psychological theories, concepts or methods that had taken place during the past 25 years), as we recognized that students might respond differently to different topics within the field. Participants therefore answered questions about either the relevance of an essay related to a major shift in psychology and a group wiki assignment related to a famous person in psychology (Condition A; $n = 112$) or an essay about a famous person in psychology and a group wiki assignment related to a major shift in psychology (Condition B; $n = 83$). Within a given seminar, all students were assigned to the same condition and seminars were randomly assigned to Condition A or B.

After reading each of the two assignments, participants were asked to answer two questions. The first was "To what extent do you see this assignment as relevant to your future career goals?" and was answered on a 7-point scale from *extremely irrelevant* to *extremely relevant*, the midpoint being *neither irrelevant nor relevant*. The second question was open ended and asked participants to explain the reasoning behind their relevance rating.

Results

Relevance ratings. We examined relevance ratings using a 2 x 2 mixed analysis of variance (ANOVA). Assignment type (individual essay vs. group wiki) was a within-subjects variable and condition (A vs. B, which identified the content associated with each type of assignment) was a between-subjects variable. Results indicated significant main effects of both assignment type and condition, as well as a significant interaction between the two ($F(1,189) = 31.80$; $p < .001$; partial eta squared = .14).

Pairwise comparisons carried out with a Bonferroni correction suggested that, though relevance ratings for the group wiki assignments about a famous person in psychology ($M = 4.09$, $SD = 1.65$; 95% CI [3.76, 4.42]) and a major shift in the field ($M = 4.57$, $SD = 1.99$; 95% CI [4.18, 4.97]) did not differ from one another, the essay about a famous person ($M = 4.25$, $SD = 1.78$; 95% CI [3.91, 4.58]) was judged to be significantly less relevant than the essay about a major shift in the field ($M = 5.51$, $SD = 1.29$; 95% CI [5.23, 5.80]). Furthermore, relevance ratings for the two assignments provided by students in Condition A differed significantly from one another, while those provided by students in Condition B did not.

Coding student reasons for relevance ratings. A coding scheme was developed to evaluate the themes conveyed in students' explanations of their relevance ratings. In keeping with our hypothesis, two central themes emerged in students' justifications for their relevance ratings. The first was related to the extent to which the assignment promoted the development of transferable *skills* (e.g., the assignments' utility in developing writing or teamwork skills). The second theme related to the *assignment features*, which included references to either the *assignment content* (i.e., examining a

significant person or major shift in the field) or the *type of assignment* (i.e., individual essay or group wiki).

Each student's response was assigned a single code indicating whether their response included a reference to the features of the assignment, transferable skills, or both. A very small number of students (between 1-2%) did not provide any open-ended responses, or provided responses that were uncodable. Inter-rater reliability was established by having a second person code 50 student responses (26% of the sample); Cohen's kappa was calculated to be .92.

In terms of the essay assignment, students overwhelmingly justified their relevance ratings exclusively in terms of assignment features (98%), though a very small number cited transferable skills (1%) or both assignment features and transferable skills (1%). For the group wiki assignment, 75% of students justified their relevance ratings exclusively in terms of assignment features. A further 10% cited the development of transferable skills and the remaining 15% cited both assignment features and transferable skills. When citing transferable skills, most students spoke in general terms, but a small number noted the development of specific skills including writing and formatting (3%) and teamwork (1%).

These frequency data were supplemented by a more formal analysis that examined the relationship between assignment type and the tendency to mention skills. Given that the data were within subjects (i.e., participants rated both assignments), McNemar's chi-square test was employed in conjunction with a simplified binary coding system (mentioned skills/did not mention skills). McNemar's test was significant ($p <$

.001), indicating that participants were more likely to mention skills in response to the group wiki assignment than the individual essay assignment.

Discussion

Data from this study suggest that students found the assignments that they rated neither irrelevant nor relevant to their career aspirations (as evidenced by mean relevance ratings near the midpoint of the scale). The results also indicate that students' spontaneous evaluations of the assignments' relevance were guided to a large extent by their perceptions of whether the features of the assignment (i.e., its type and content) were in keeping with their professional goals.

The fact that students' justifications were less likely to reference transferable skills than assignment features suggests that their somewhat low relevance ratings might stem from the fact that these students were unable to see past the content-related features of the assignment and recognize the career-related transferable skills that could be fostered through its completion. Of course, these data do not rule out the possibility that (a) first year students' assessment of an assignment's relevance is unconnected to whether or not it promotes transferable skills, or (b) that these students don't yet understand that "transferable" skills such as communication and critical thinking are relevant to success in the workplace, even though they are not specific to the particular career that may interest them.

It is interesting, however, that while only 2% of students made reference to transferable skills in relation to the essay assignment, fully 25% mentioned skill development when justifying their relevance rating for the group wiki assignment. Why would skill development be more obvious when evaluating this assignment? The group

wiki differed from the essay in several ways. For example, the group wiki assignment was likely to seem more novel to students, its “product” is publically accessible, and it required students to work in groups rather than individually. Any of these factors, or a combination of them, may have prompted students to give greater consideration to the skills this assignment would promote, as compared to the essay.

The conclusions that we have drawn in this study must be tempered by its limitations. First, this study is limited by the fact that its participants come from a single university. If discussions concerning skill-based learning are more explicit at other institutions then their psychology undergraduates may have a greater appreciation for the connection between course-based assignments and transferable skills. Second, our findings may reflect the fact that these students were in first year. Possibly, senior students are more attuned to the skills that can be developed through course-based projects and, as a consequence, would be more likely to see the relevance of the projects described. Finally, our findings may underestimate participants’ understanding of the connection between course activities and transferable skills because students did not actually complete the assignments that they rated. It may be the case that having an instructor discuss the assignment in class, or simply doing the assignment, would heighten students’ awareness of its relevance to their preferred career.

These limitations notwithstanding, we believe that our results provide some insight into how students think about assignments in the absence of any clear direction about how they might foster skills. Indeed, we believe that the central message in our data is that it is important for faculty to be explicit with students – particularly those in the early stages of the degree – about the career-related skills that their course-based

activities are intended to foster. This could be accomplished either through in-class discussion, or by ensuring that the assignment itself includes written information about its connection to transferable skills, as well as details about what students are expected to do, grading procedures and deadlines.

It may actually be helpful for instructors to go beyond enumerating the skills being fostered by the assignment and emphasize how those skills are in demand by both employers and potential graduate supervisors (National Association of Colleges and Employers, 2012). Two potential benefits may be realized if instructors were to be more explicit about the relationship between course-based assignments, transferable skills and the broader job market. First, such discussions may promote a greater understanding among students about the full range of competencies that underlie key skills (e.g., communication skills include the ability to listen and read critically, as well as the ability to speak and write). A second benefit of faculty being more explicit about connections between assignments, skills, and the job market is that it may help students to consider how the same set of key skills is being fostered through a variety of learning experiences, both inside and outside the classroom (Kuh, 2010). For example, the communication skills that are developed through a student's part-time employment in retail (oral and listening skills) may be complemented by those that are fostered through assignments such as an essay (writing and reading critically).

In summary, we believe that our findings offer a useful starting point for discussing psychology students' beliefs about the link between course-based assignments and the development of transferable skills that employers value. Efforts to improve our majors' appreciation of these connections would likely render them more likely to

maximize their learning during course-based assignments and better able discuss their skill set with potential employers or graduate supervisors in a comprehensive and compelling manner.

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