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Enhancing psychology majors' meta-cognitive understanding of desirable workplace skills using a short discussion-based in-class activity

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Enhancing psychology majors' meta-cognitive understanding
of desirable workplace skills
using a short discussion-based in-class activity

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A thesis submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

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Abstract

The skills psychology students possess that employers look for in job applicants include: reliability, integrity, work ethic, communication, technology, critical thinking, teamwork, and professionalism (Rodgers, 2012). I conducted a study to determine whether participating in a brief classroom activity would improve students' ability to effectively describe their skills. Students were asked to write a cover letter before and after the activity. The activity included a discussion of four skills and student reflection on their experiences that demonstrated these skills. I hypothesized that overall letter-writing would improve, that students' self-reported levels of preparedness to find a job would improve, that students with previous experience of applying for a job and writing cover letters would perform better on the pre-test compared to students with no such experience, and that ratings for skills each group discussed during the activity would improve more than skills that were not discussed. The final sample size included 30 students. Multivariate ANOVAs and dependent-samples t-tests were used to determine if the activity systematically impacted student performance.

Introduction

The purpose of this project was to enhance psychology major students' meta-cognitive understanding of how their college experiences relate to important jobs skills. Psychology faculty believe that the psychology major helps students to develop the skills needed for many career opportunities (Roscoe & Strapp, 2009). However, several studies have shown that psychology students as well as psychology program alumni report not feeling prepared for the workplace upon graduation (Landrum & Harrold, 2003). Evidently, psychology students do not recognize the skills that they have and do not accurately evaluate their level of preparedness for the workplace. According to a study by Landrum, Hettich, and Wilner (2010), psychology graduates reported obtaining important workplace skills on the job after graduation as opposed to during their college careers. Similarly, program assessments demonstrate that current psychology students at James Madison University believe that professional development is the program area that needs the most improvement; their ratings of their own job preparedness was rated the lowest compared to the other 9 program domains. This issue of perceived under-preparedness for the workplace, which is relevant to many social science disciplines, has been widely discussed (Posner, 1981; Landrum & Harrold, 2003; Landrum et.al., 2010), but very little has been done to address this problem. I designed an activity that could help psychology students understand what skills and personal characteristics are sought by employers, what skills they have acquired during their college experience, and how they can convey their skills and personal characteristics to employers when they apply for post-graduation positions. This project was intended to demonstrate that a single, brief, discussion-based activity can help psychology majors to connect their college experiences to the skills

desired by employers; helping students to make this connection is likely to make them better job candidates.

A degree in psychology helps students to develop a variety of skills that are applicable to many jobs. Skills that psychology students acquire in college should enable them to become successful employees and should also provide them with a competitive advantage, because these skills are highly valued by employers. Consistent with data from a variety of sources, Rodgers (2012) identified eight employability skills or personal characteristics that employers look for when recruiting candidates for positions. These include: reliability, integrity, work ethic, communication skills, technology skills, critical thinking skills, teamwork skills, and professional skills. Most psychology majors develop and demonstrate these skills while they are in college and, therefore, should be well-prepared for a wide variety of positions. Teaching these core skills is a part of many courses in a psychology program, because some of them are essential for successfully completing coursework and graduating with a bachelor's degree in psychology. However, the instructor might not have made explicit the connection between tasks that are required to complete the course, and how completing these tasks might make students better employees upon graduation (Baxter Magolda, 2007). Students are often taught the correct way of addressing a specific problem, which provides them with mechanical skills, but such learning does not necessarily enhance their metacognitive understanding of a deeper issue behind the problem, and does not enable them to adapt their existing skills to resolve similar challenges in the future. My expectation was that the activity developed for this project would help students to make connections between the activities they undertake in their courses and other college experiences, and important workplace skills.

The impact of this activity was measured by using a written task and a student self-report measure.

Literature review

Value of an undergraduate psychology degree and skills emphasized

I would like to begin by briefly discussing the value of a college degree in psychology as perceived by some prominent researchers in the field. An article by Landrum, Beins, Bhalla, Brakke, Briehl, Curl-Langager, and Van Kirk (2010) serves as a comprehensive summary of the topic because it discusses desired outcomes for psychology graduates from various perspectives and provides goals and suggestions for those different perspectives to help attain these outcomes. The authors assert that psychology students have the knowledge, skills, and values from their courses, and should therefore be able to apply this information after college. They discuss the uniqueness of the psychology discipline suggesting that psychology applies the processes of observation, problem solving, and communication directly to daily problems and human behavior. In the broader context of a liberal arts education, students still attain professional skills necessary in the workforce, such as thinking and language skills, information gathering and synthesis, research methods and statistics, interpersonal skills, and applicable ethics and values. The article also summarizes previous research on the topic. According to Appleby (2000), there are five major categories of skills that psychology students learn during college, while Landrum and Harold (2003) suggest that employers value 10 important skills and abilities. Regardless of a specific number mentioned in these articles, they all seem to mention similar skills as the most important for students to learn in college and to bring to the workplace. Therefore, these skills

should also be taught to the students, and their importance should be emphasized during college.

A study by Stoloff and others (2012) examined the frequency and variability of skill development activities in undergraduate psychology programs across the country and how these activities relate to student success and satisfaction. The measures assessed were American Psychological Association's 10 learning objectives for the undergraduate psychology major, class size, and student experiences (development of research skills, development of communication skills, development of technology skills, field placement, study abroad, co-curricular activities, career preparation, interaction with and faculty). The findings suggested that more students attended graduate school from programs where a higher percentage of students applied knowledge through research, teaching, and presentation experiences; students had more practice using various types of software; more students were involved in activities external to the traditional classroom; and more frequent student-faculty interaction occurred. Moreover, higher student satisfaction was related to greater participation in field placement or service learning activities and more frequent study abroad. The information provided in this article serves as an explicit illustration of a variety of skills and experiences that psychology programs around the country have to offer in order to prepare students for the workplace.

Skills sought by employers

I have already discussed the variety of skills and experiences available to psychology students, and the next logical step is to talk about the importance of these skills to employers.

Faculty and recruiters are highly influential in students' employment decisions, but there have been very few studies comparing employment preferences of students with the perceptions of recruiters and faculty (Posner, 1981). In this study, recruiters were asked to rate a list of the following factors about a potential job applicant on a scale from 1 (Not very important) to 7 (Very important): personal appearance, scholastic records (grades), communications ability, future potential, personality, future ambitions, extra-curricular activities, faculty recommendations, personal recommendations, good health, sense of humor, maturity, work experience, and preparation for the interview (knowledge about position and company). Students and faculty were also offered similar lists of job characteristics and asked to rate each of the characteristics on the same 7-point scale as the recruiters.

The findings of the study suggest several similarities between recruiters, faculty, and students. For instance, communications ability and future potential were rated as the most important job applicant characteristics. Grades and work experience were rated in the middle in terms of importance, although these characteristics may also be seen as predictors of "future potential." Extra-curricular activities and recommendations were rated as the least important job applicant characteristics. Faculty and recruiters also appeared to project their own personal preferences into their assessments of students' choices. Overall, the findings of the study provide strong support to the importance of career counseling and education and suggest that students' perceptions of important job skills are out of synch with opinions of those who have a significant impact and influence on their entry into the workforce, which is an issue that needs to be addressed.

According to Landrum and Harrold (2003), skills that employers value and look for the most when hiring a new employee include: listening skills, desire and ability to learn, willingness to learn new and important skills, getting along with others, and ability to work with others as part of a work team. While specific skills and the number of characteristics listed as the most important to employers may vary from one researcher to another, a common belief is that psychology majors have many opportunities to learn those skills and should therefore be in high demand among employers when they seek employment after graduation.

Previous research has found that employers look for characteristics like enthusiasm and motivation, grades, communication and interpretation skills, the nature of students' non-college jobs, and types of extracurricular activities in their job applicants (Eison, 1988). Appleby (2000) found that employers ranked social skills, personal skills, and communication skills highest. Thus, the categories of interpersonal skills, teamwork, and work ethic appear to be the most important to employers.

Do graduating psychology majors have these skills?

College graduates and employers are dissatisfied with the job capabilities of new college graduates (Casner- Lotto & Barrington, 2006; Spellings, 2006). Similarly, psychology alumni rated themselves relatively low on preparedness and relatedness of their undergraduate major to their employment (Borden & Rajecki, 2000).

To gain further insight into alumni emotional and personality changes, Landrum, Hettich, and Wilner (2010) surveyed psychology alumni on their opinions on the importance of various workplace tasks and behaviors, their changes in emotional qualities

since graduation, and their recommendations to help colleges and universities facilitate workplace transitions. Specifically, they focused on the following questions: 1) To what extent do graduates perceive they were prepared for the workforce in terms of specific skills, qualities, and behaviors? 2) To what extent do graduates' perceptions of emotional and personality descriptors change over time after graduation? 3) What suggestions can alumni offer to colleges and universities to help impart to students those qualifications and skills deemed most important in the workplace? Surveys were mailed to one third of all Boise State psychology alumni, with 78 responses. Participants ranged from 21 to 70 years old, and were mostly women (76.7%) and mostly Caucasian (90.7%). Respondents had worked at their current employer for an average of 4.99 years, and the average amount of time since graduation was 10.2 years. Section I of the survey asked about 54 areas of work readiness, for which respondents rated the perceived level of preparedness expected in the workforce, their own perceived level of preparedness at graduation, and their perceived level of current competence; all on a scale of 1 = low, 2 = medium, and 3 = high. For Section II, respondents reviewed the 54 items from Section I and ranked the top ten most important skills or qualities for success in the workplace. Respondents were also asked to provide an example of a college activity that helped or would help students to succeed in that area. Section III asked respondents to self-report any perceived change in 33 emotions and personality traits since they received their undergraduate degree. In regard to the skills, tasks, and behaviors needed for workforce readiness, the top ten items that were rated on level of preparedness expected in the workplace were: possess self-discipline, including punctual attendance and dependability; act responsibly and conscientiously; work well with others; meet the needs of others, such as clients or

customers; set priorities and allocate time efficiently to meet deadlines; identify, prioritize, and solve problems; make defensible and appropriate decisions; possess the ability to work without supervision; work independently; and manage several tasks at once. These skills also match up with the characteristics employers want (Landrum & Harrold, 2003). Regarding perceived changes in emotional and personality qualities, alumni gave the highest scores for being more confident, more independent, more mature, more assertive, and more valued. Respondents rated the top ten skills most important for success in the workplace: work well with others, manage several tasks at once, possess self-discipline, apply knowledge from formal educational experience, demonstrate self-motivated learning, motivate oneself to function at optimal levels of performance, write formal reports, business correspondence, informal notes, and memos, possess the ability to work without supervision, demonstrate highly developed social skills, and demonstrate initiative, motivation, and perseverance. Along with these ratings, respondents provided examples of college-level activities that help or would help be successful in these skills. According to the researchers, the overall pattern was that professors should have higher expectations for classroom performance and timeliness, expect more from students, and offer classes on the transitions graduates will face. Respondents also stated that opportunities like honors courses, research assistantships, community involvement, and forming mentor relationships with professors were all important.

Several authors discuss related research in the field of workforce readiness. Spellings (2006) states “employers complain that many college graduates are not prepared for the workplace and lack the new set of skills necessary for successful

employment and continuous career development.” Additionally, The Conference Board (Casner-Lotto & Barrington, 2006) reported that employers listed the most important skills as professionalism and work ethic, oral and written communications, teamwork and collaboration, and critical thinking and problem solving. They also identified deficiencies in 4-year college graduates in the areas of written communication, writing in English, and leadership. The 2007 *APA Guidelines for the Undergraduate Psychology Major* (APA, 2007) help link the psychology curriculum to workplace skills. The ten goals outlined in the *Guidelines* include knowledge base of psychology, research methods in psychology, critical thinking skills in psychology, information and technological literacy, communication skills, sociocultural and international awareness, personal development, and career planning and development. The authors express important links between the *Guidelines* and their current findings. Work is needed in psychology departments to connect their course work to the workplace and for both students and faculty to recognize this connection in their work.

Why is there a gap? A developmental approach

A gap between faculty and employers’ expectations for recent graduates and the students’ actual level of preparation might be explained using a developmental approach. Faculty and employers expect students to be on a certain cognitive level and assume that students are already on that level when in fact they might not have developmentally reached it yet. In other words, the faculty assume that the students are capable of making the connection between the skills and college experiences when they are not. Baxter Magolda (2008) touches on this problem by addressing it as part of the development of self-authorship theory. According to the theory, there is a hierarchy of levels that young

adults go through before they can achieve self-authorship. Faculty might think that it is obvious how a specific task assigned in class helps students to acquire a skill that will later be needed at the workplace, e.g. how completing a group project consisting of several parts that each have to be turned in before a deadline helps students learn teamwork and time management skills that will later be essential for being a successful employee. Surprisingly, students often do not see this connection. Therefore, we believe that there should be an effort made to close that gap and to help psychology students to describe what they learned through their course experiences as valuable and marketable skills desired by employers.

Sources of motivation could serve as another explanation for the difference in students of different levels. According to Van Etten, Pressley, McInterney, & Liem (2008), academic grades serve as the biggest source of motivation for students at all stages of their college careers, but there are more factors that play a role in motivating college seniors compared to freshmen. According to the information collected during interviews with freshmen students, their level of motivation is dependent on more external and authoritative factors, such as rewards and feedback from instructors, as well as from family, friends, and classmates. While the same factors contribute to building the motivation of college seniors, there is also a set of internal factors that is added to the list. Internal factors include students' beliefs about control, effort, strategy, and learning and mastery; academic planning; personal characteristics, and expectations. Therefore, findings of this study suggest that upper-classmen are a more appropriate audience for participation in this activity because they are more likely to perceive the information as useful to them personally and likely to put more effort into processing and memorizing

the content offered to them compared to under-classmen. Underclassmen might focus too much on external motivating factors such as a grade or a teacher's opinion, which will not be directly offered in this study. Upper-classmen, on the other hand, are more likely to see personal benefits from participating in the activity, which should motivate them to engage and actively participate.

Attempts to close the gap

There have been several attempts to close the gap and to get the students to fully understand the skills they possess.

A study by Roscoe and Strapp (2009) looked at a psychology professional issues course and the corresponding student evaluations of the course, and compared preparedness ratings with psychology students who took the course and psychology students who did not take the course. The course assignments and activities included a group presentation on a specialty area, a self-assessment paper, a goal statement and timeline, research on graduate schools, practicum presentations, a personal reflection journal, application materials, peer feedback, required meetings with the instructor, and a resume guest speaker. Students rated required meetings with the instructor as the most helpful, as well as rating the goal statement, timeline assignment, and resume guest speaker as more helpful than personal reflection journals and practicum presentations. The researchers note that journaling provides insight into goal setting and self-direction without students being aware of the process, so they may have actually benefitted more from journaling and self-assessment than they realized. Students who took the professional issues course felt more satisfied about their preparation for graduate school and for entering the job market than students who did not take the course.

A study by Lakin & Wichman (2005) aimed to show students the relevance of social psychology to their nonacademic lives through active learning exercises. The researchers hypothesized that self-efficacy would increase because the assignments would decrease the perceived difficulty in relating social psychology concepts to the real world. Along with this increase in self-efficacy should come an increase in motivation, effort, perseverance, and performance (Bandura, 1993, 2001; Zimmerman, Bandura, & Martinez-Pons, 1992). This study looked at perceptions of task ease and perceived learning, as well as the short- and long-term effectiveness of the active learning assignments. The active learning assignment used involved introductory social psychology students writing an essay in which they found three real-world examples and applied their social psychology knowledge to them. One group completed the target paper assignment while a second group completed a different paper assignment. After completing their assignment, students completed the dependent measures, as well as a survey nine months later on their beliefs about social psychology. Immediately following the paper assignment, students answered two questions on their perceptions of task ease. The survey conducted nine months later asked students how easy they thought it would be to apply social psychology to the real world, and about the value they placed on social psychology. Students who completed the target paper assignment thought it was easier to apply social psychology to the real world than students who completed the alternative paper assignment; completing the target paper was linked to an increase in students' perceptions of task ease. Final course grade was positively correlated with perceived ease, suggesting that students who thought it was easier to apply social psychology to the real world performed better. The target assignment also predicted perceptions of ease 9

months later and led to a greater appreciation for the field and the learning in the courses for which the target assignment was completed. This use of active learning through the connection between real-world examples and course concepts could be applied to other courses as well.

Rationale behind the current project: Enhancing metacognition, pedagogy, active learning

Mair (2012) conducted a study on the effect of reflection on metacognition and realistic predictions in undergrad psychology students. Metacognition has been defined as awareness and management of one's own thoughts, or knowledge or beliefs about factors affecting one's own cognitive activities (Kuhn & Dean, 2004). Metacognition is a predictor of successful learning and academic performance, intelligence, and confidence, but also requires personal reflection. Mair developed an online structured spreadsheet for critical reflective practice that was private, familiar, and accessible. The spreadsheet allowed the students to engage in meta-reflection and learning through self-reflection. The reflections were not read or assessed by anyone else. Students also predicted their outcome on two assessments. Metacognition significantly increased over the six-week study, but did not improve grade prediction accuracy.

An article by Harpine (2007) examines the effectiveness of integrating an applied learning experience into an upper level undergraduate motivation theory class. Students analyzed and interacted with theoretical concepts of motivation and applied these concepts to the real world. The students also provided one-on-one tutoring to at-risk children. The course required that students participate in a 2-hour field experience, complete an assignment based on their participation, and develop solutions for problems

they saw during their experience. The students worked in two-person groups to develop solutions to problems using theoretical principles; this group-problem-solving technique of integrating class material allowed them to better understand motivation theory. These two-person groups were then combined into four-person groups where they came up with changes to propose to the class. End-of-semester class evaluations revealed that this exercise enhanced students' knowledge and understanding of motivation, and 84.6% stated that it helped them better understand the text, therefore, demonstrating the effectiveness of applied learning. A 2-hour applied learning experience can be included in other class schedules tailored to the course.

An article by Dennick (2012) provides 12 tips for incorporating educational theory into teaching; these tips were developed from Constructivist theory, Experiential Learning Theory (ELT), and Humanistic theory, all of which have been found to be the most useful in teaching health professionals. The first tip is to ascertain and activate prior knowledge, which allows the teacher to relate to the students, to review previous work, and to bring relevant knowledge to the surface. The second tip is to build on existing knowledge and challenge misconceptions. Learning can be beneficial when students are in a state of uncertainty because they want to resolve this conflict. Tip 3 is to facilitate the social construction of meaning using group work, and to stress the context and the "situation." Students learn better through interpersonal communication and learning in groups. Tip 4 is to use active learning techniques, such as using problem solving activities. The 5th tip is to encourage learners to think about how they learn and give them responsibility for their learning. This involves metacognition; ELT provides tips to enhance this. Tip 6 is to ensure that learners get the experiences they need. The 7th tip is

that logbooks, portfolios, and feedback help reflection. Tip 8 is to build up mental models, practical skills, and attitudes. Tip 9 is to allow learners to engage in hypothesis testing and action planning; humanistic learning theory offers advice on how to do this. Tip 10 states that teachers should respect learners and acknowledge them and where they are coming from. The 11th tip is to ensure that physical, psychological, and emotional needs are taken care of. The 12th and final tip is that teaching and learning is a relationship.

Formal education in the USA largely entails knowledge building through subject matter content coverage, which often comes at the expense of skill building. Instead of teaching students what to think, they should be taught how to think (Tsui, 2002). Class discussion between the students, praise from instructors, and the evidence of instructors using students' ideas enhance students' higher-order cognitive skills, such as their ability to think critically. I chose a discussion-based format for my thesis current project because it has been shown to enhance students' thinking skills and metacognitive understanding of the information being presented (Cooper, 1995). Discussion among students and verbalization of the material help students to process the content better and increase the likelihood that information will be placed in long-term memory. Moreover, discussing in small groups enables students to receive immediate feedback from the peers and possibly from the facilitator. A small group is a form of a cooperative-learning structure, which allows students to process information faster and more effectively than more traditional forms of instruction such as lecture format. Student-to-student and student-to-faculty interactions also seem to have the most impact on a number of cognitive and affective student outcomes (Johnson, Johnson, & Smith, 1991).

A person who participates in a cooperative-learning structure by explaining information benefits from this activity by elaborating on the content and using other metacognitive strategies that foster critical thinking (Dansereau, 1988). Moreover, Vygotsky (1978) and others indicated that students may learn better when taught by persons at more proximal developmental stages than their professors (Cooper, 1995).

Design

Based on the literature review, I decided to design an activity that would be beneficial for psychology students in enhancing their workplace skills. The activity consisted of a short presentation and an active learning component. The impact of the activity was measured by using a pre-test and post-test questionnaires and a rating rubric. The study utilized a split-half quasi-experimental design to determine the effectiveness of the intervention and to compare the participant groups. The procedure involved:

- Pre-test: a demographic questionnaire and a cover letter written by each student in response to one of two randomly assigned job descriptions;
- Intervention: an in-class activity presenting a subset of the eight employability skills (teamwork, integrity, communication, and critical thinking skills; or reliability, technology, work ethic, and professionalism skills), and a small group discussion of the subset of skills;
- Post-test: a self-report questionnaire and a cover letter written by each student in response to another job description.

I created two versions of the discussion-based activity, each focusing on a subset of four skills from the list of eight employability characteristics discussed by Rogers

(2012). The first version included teamwork skills, integrity, communication, and critical thinking skills. The second version included reliability, technology skills, work ethic, and professionalism. I did not expect the two different versions of the activity to have a large differential effect on the groups overall, as I tried to equalize the skills presented in each version as much as possible. Two different interventions were used to demonstrate that the participants' performance improved because of the intervention itself and not because of external factors. I expected that students would receive higher post-test ratings on the four skills that were presented in their version of the discussion. While both groups' overall ratings were expected to increase by about the same amount from pre-test to post-test, if one participant group received higher ratings on the individual skills on which they were trained, that would suggest that the activity was effective.

I expected students with previous internship/career development experience to perform better than students with no such experience. I also expected to see an increase in cover letter ratings from pre- to post-test, and to find that students would report feeling better prepared for the workplace after participating in the activity. My hypotheses were the following:

Hypothesis 1: The intervention will improve the ability of students to describe how they are good candidates for post-graduation employment. There will be a statistically significant increase in overall rubric ratings of students' cover letters from pre-test to post-test.

Hypothesis 2: There will be a significant increase in participants' self-report ratings of preparedness for employment from pre-test to post-test.

Hypothesis 3: Students who have had previous experience of writing cover letters and applying for job positions/ internships will receive higher overall pre-test ratings compared to the students who have not had such experience.

Hypothesis 4a: Students who participated in a version of the activity addressing teamwork, integrity, communication, and critical thinking skills will receive higher rubric ratings for these skills on the post-test compared to the post-test ratings of the skills not discussed in this version of the activity.

Hypothesis 4b: Students who participated in a version of the activity addressing reliability, technology, work ethic, and professionalism skills will receive higher rubric ratings for these skills on the post-test compared to the post-test ratings of the skills not discussed in this version of the activity.

Method

Participants

Participants for this study were recruited from several courses or other group experiences offered by the department of Psychology at JMU. Professors or supervisors for these groups volunteered to allow their students to be recruited.

- The first group of participants were 32 students enrolled in the peer advising program. These students were juniors and seniors who go through two levels of training, with seniors being in the program for a longer time and having more training. The Peer Advisors were randomly assigned to participate in either the first or the second version of the activity, which were facilitated simultaneously in two different rooms.

- Another group of participants consisted of 10 research students from two sections of the independent research courses conducted by different professors. These students were mostly upperclassmen, described by the faculty as students with advanced skills because they had participated in research projects for one year or longer. Half of these students participated in the first version of the activity and half participated in the second version.
- The third group of participants consisted of 63 students enrolled in a lower-level, graduate school preparation course. This course was a lower-level elective, but the enrolled students were mostly juniors and seniors. Their level of preparation and previous professional development experience was unknown. This group was expected to be more diverse than the other two participant groups; while some students in the class might have had previous research or other advanced-level experiences, the general skill level of this group was expected to be lower than the students recruited from the other two groups. This group was potentially a better representation of the average psychology major. As with the other two participant groups, half of the students in this group participated in the first version of the activity and another half participated in the second version of the activity.

The data from all participant groups were collected during regular class meeting times for each group. Since professors supervising the groups volunteered to allow their students to participate, all data collection procedures were embedded into corresponding

courses or group meetings and were presented to students as additional course assignments. The intervention itself was in the form of a class activity and did not require any atypical efforts on the students' part other than regular class participation. Since the instructors for all participating classes believed that the students could benefit from the information presented in the activity and allocated a regular class time for me to conduct the activity, the activity was treated like a normal class and there were no alternatives presented for students who did not wish to participate. However, all students were asked for permission to include their pre-test and post-test data in the analysis. Students who wanted to discontinue their participation at any point had an option of not granting me permission to use their data. Minimal risks were associated with participation in this project.

While almost all participants were present during the in-class activity, there were multiple issues with students' involvement in completing the pre-test and post-test assignments. Therefore, the sample used for the final analyses only consisted of 30 participants. The students in the final sample were mainly female (80%) psychology majors who have taken approximately 75 academic credits at JMU ($M = 75.43$, $SD = 32.81$, $min = 1$, $max = 126$). Most participants, therefore, were juniors, and most of them had not taken the I/O psychology course with Dr. Zinn. The question about whether the participants had taken Dr. Zinn's course was included because the course contents includes information similar to what would be presented to the students during my intervention; therefore, I wanted to control for participants' pre-existing knowledge of the material. Because only 3 students from the sample had taken the course before, this was not considered a significant confounding factor for the project.

Materials

All materials used in this study were created by the research team responsible for the project. Instruments used to collect data from the participants included a pre-test and a post-test self-report questionnaire (Appendix A) and two versions of a cover letter written measure (Appendix B). Other materials used in the study included a cover letter rating rubric (Appendix C), employability skills activity scripts (Appendix D), and an employability skills activity PowerPoint presentation. Descriptions of these materials are provided below.

Self-report questionnaires were developed in order to assess students' perceived levels of job preparedness before and after the discussion-based activity and to collect basic demographic information about the participants. The first version of the questionnaire, with questions collecting the descriptive data and asking students about their perceived job preparedness level, was distributed to the students during the pre-test. The second questionnaire, asking about perceived job preparedness level and the perceived effectiveness of the activity, was distributed to the students during the post-test. Copies of these questionnaires are presented in Appendix A.

Another instrument that was used for data collection was a cover letter written measure. Two sample job advertisements were created. All participants were asked to write a draft of a cover letter in response to one of the job descriptions during the pre-test and to the other scenario during the post-test. The prompt to prepare the cover letter was worded like this, "Please write a draft of the cover letter in response to the following job description. You do not have to focus on the formatting as this is only a draft. Please limit your response to one page. Submit your response in a form of a Microsoft Word file

attachment to the last question in the Qualtrics survey”. I wanted students to concentrate on illustrating appropriate skills they have that would make them a strong candidate for the position, rather than focusing on formatting issues. Participants were randomly assigned to one of the job advertisements at pre-test, and received a different advertisement at post-test. Copies of the two job advertisements appear in Appendix B.

Rating rubric

A rubric was used to evaluate students’ cover letters. The rubric lists the eight employability skills, and raters evaluated each cover letter based on the number of examples provided for each skill and the specificity of each example. The same rubric was used to rate all cover letters at the pre-test and at the post-test. Prior to the rating process, raters were trained to use the rubric. A copy of the rating rubric is presented in Appendix C.

I had to alter my original rubric plan because participants wrote differently than I expected. My original rubric assumed that participants would identify a particular skill (1 point) and then in a specific phrase mention one or more specific examples of how they demonstrated that skill (1 additional point for each example). For example, I assumed that they might write “I have excellent communication skills (1 point), I have written numerous papers (1 point) and I have been the editor of an online publication (1 point);” this would have been a 3-point answer with respect to communication skills. However, most participants who provided several specific illustrations of a particular skill did write a general sentence about their skill, but instead only mentioned examples. For these participants I simply counted the number of examples and used that number as a final

rating. For example, a participant who wrote “I have written numerous papers (1 point) and I have been the editor of an online publication (1 point)” was assigned two points.

Approximately 35% percent of all cover letters were rated by both raters, and the ratings were compared. If the ratings for the same cover letter differed by more than 2 points, this cover letter was discussed by both raters until an agreement on how to adjust the rating was reached. Overall, the two raters agreed in over 85% of the cases.

Procedure

First, participants were informed about the study by their instructors. As a homework assignment due the following class period, 5-7 days later, participants were asked to turn in a draft of a cover letter in response to a job description provided via e-mail and they were asked to respond to a short pre-test questionnaire. Pre-test data were collected electronically via Qualtrics. The process was the same for all groups of participants.

During the following class period for each group of participants, the researchers distributed consent forms and facilitated an in-class discussion-based activity, which took approximately 40 minutes. Larger classes, (the peer tutors and the graduate school preparation course students), were divided into two groups and presented with different versions of the activity in order to have a more equal and representative group of students participating in each version of the activity. For example, the graduate school preparation class of around 60 people was randomly divided into two groups of 30 individuals each. One group of students stayed in the same room and participated in the first version of the activity with one facilitator, while another group of students went to a different room and

participated in the second version of the activity conducted by a second facilitator. Scripts for both versions of the activity are in Appendix D.

During the activity, each group of students was presented with a subset of four of the employability skills identified by Rodgers (2012). One group was presented with information about teamwork skills, integrity, communication, and critical thinking skills. The other group was presented with information regarding reliability, technology skills, work ethic, and professionalism. Two versions of the activity were created in order to have enough time to present all skills, and for the participants to discuss each of the skills. The students in each bigger group presented with the same version of the activity were then divided into small teams of 3-4 people. These teams were asked to come up with examples of experiences they have had in college that could illustrate that they possess each of the skills presented. At the end of the activity, each team of students was asked to share their examples with the bigger group. The researcher typed the examples on a PowerPoint slide and used a projector to show the slide to the participants so that they were able to get a visual representation of the information.

Two days after the intervention, participants received an e-mail asking them to complete the post-test for the study. They received a Qualtrics link to the post-test self-report questionnaire and they were asked to write a draft of a cover letter in response to a job description different from their pre-test assignment. Participants were debriefed in a written form via e-mail upon completion of the data collection process.

Once the data collection process was complete, cover letters written by students at the pre- and post-test were rated by two independent raters using the rating rubric presented in Appendix C. Prior to the rating process, raters were trained to use the rubric.

In the original research plan, the rating process was supposed to be completely blind with respect to the student's skill-development activity and whether each cover letter had been written at the pre-test or post-test. However, because there were only two researchers carrying out the project and rating the cover letters, including myself, and due to time pressures to complete this thesis project on time, I personally de-identified the data before the rating process, therefore the rating process was only partially blind. I did not read the cover letters as I assigned identification codes, used random numbers between 1 and 1000 as identifiers for the cover letters, and I coded all letters in a batch process prior to starting the rating process. I believe these procedures made it very unlikely that my ratings were systematically biased. The high rate of agreement with the second rater who did not assist with the assignment of identification codes supports this conclusion.

Results

Self-report data and cover letter ratings were evaluated to determine whether the activity enhanced students' meta-cognitive understanding of their skills applicable to the workplace. Pre- and post-test cover letter ratings were matched by participant and split based on the group membership and the intervention type. The data were analyzed using dependent samples t-tests and repeated-measures analysis of variance. I will present results corresponding to each hypothesis in the order in which the hypotheses were presented in the introduction:

Hypothesis 1: The intervention will improve the ability of students to describe how they are good candidates for post-graduation employment. There will be statistically significant increase in overall rubric ratings of students' cover letters from pre-test to post-test.

This hypothesis was analyzed using a paired-samples t-test: $t(29) = -5.824$, $p < .001$, $d = -.68$. There was a significant increase in overall cover letter ratings from pre-test ($N = 30$, $M = 6.00$, $SD = 3.06$) to post-test ($N = 30$, $M = 7.93$, $SD = 2.9$), therefore, the first hypothesis was supported.

Dependent-samples t-test were also computed for the pre- and post-test ratings of each individual skill in order to identify the skills that participants wrote the most about and increased the most after the intervention. Mean pre- and post-test ratings for each of the eight skills and t values are provided in Table 1.

Table 1. Means (standard deviations) for each skill

Skill	N	Rating		
		Pre-test	Post-test	t value
Reliability	30	.63 (1.03)	1.33 (1.16)	-4.026*
Integrity	30	0 (0)	.20 (.55)	-1.989
Work ethic	30	1.17 (1.18)	.77 (.90)	1.588
Communication	30	1.63 (1.10)	1.90 (1.35)	-1.278
Teamwork	30	.67 (.96)	1.40 (1.10)	-3.266*
Technology	30	.57 (.77)	.63 (.85)	-.360
Critical thinking	30	1.27 (1.29)	1.63 (1.07)	-1.515
Professionalism	30	.07 (.25)	.07 (.25)	.000

*Significant at $p < .01$

Reliability and teamwork were the only two skills for which the pre-test and post-test ratings were statistically different. Pre-test and post-test ratings for integrity were marginally different at $p = .056$, which is reasonable, considering that integrity was the only skill that no students mentioned in their pre-test cover letters.

It turned out that students were more likely to write about some skills, such as communication and critical thinking, before any intervention. Some skills, such as integrity and technology, were rarely mentioned by the students even after hearing about the importance of this skill to employers during an intervention.

There were some difficulties with the rubric that created challenges for accurately measuring the impact of the intervention on letter writing. I previously described adjustments that had to be made to the rating process to deal with the unexpected manner in which students described their skills. Additionally, some skills overlap and could not be clearly categorized within each of the eight skills and dispositions. For instance, it was sometimes difficult to distinguish between work ethic and reliability because they are very similar and often call for the same examples from the participants. The classification of a particular element within a cover letter as work ethic or reliability was somewhat subjective, and sometimes the two raters did not agree. If we combine ratings of work ethic and reliability the total pretest score is 1.80, and the total posttest score is 2.00. Thus it is possible that the change in performance on specific items from pre-test to post-test may be somewhat of artifact of the rubric used. This problem had no impact on the overall scores, so the general conclusion for hypothesis one is still supported. Overall performance on the post-test letters showed improvement.

Hypothesis 2: There will be a significant increase in participants' self-report ratings of preparedness from pre-test to post-test.

The second hypothesis was also analyzed using a paired-samples t-test. There was a significant increase in participants' self-report ratings of preparedness from pre-test to post-test. Two ratings that were analyzed separately for this hypothesis were participants' responses to the questions: "On a scale from 1 (not at all) to 5 (very well), how strongly do you feel that your psychology courses have prepared you for jobs after graduation?" and "On a scale from 1 (not at all) to 5 (very well), how prepared do you feel about going through the job application process and successfully finding employment now?" Participants' average response ratings to the question regarding psychology courses increased from 3.70 ($SD = .952$) at pre-test to 4.00 ($SD = .136$): $t(29) = -2.34$, $p = .026$, $d = -.14$. When asked how prepared they felt to apply a get a position now, participants response ratings changed from an average of 3.23 ($SD = 1.135$) at pre-test to an average of 3.73 ($SD = 1.081$) at post-test, which also indicated a statistically significant increase: $t(29) = -2.92$, $p = .007$, $d = -.49$. Therefore, the second hypothesis was supported as well. Students felt slightly more confident about their preparation for seeking post-graduation employment after completing the intervention.

Hypothesis 3: Students who have had previous experience writing cover letters and applying for job positions/ internships will receive higher ratings compared to the students who have not had such experience at the pre-test.

This hypothesis was analyzed using an independent-samples t-test. During pre-test, participants reported a number of cover letters they had previously written and a number of job applications they had previously completed. For the question regarding the

number of cover letters written, the range of responses was 6, with 19 out of 30 participants saying that they had not written a cover letter before. Similarly, responses to the question regarding the completed number of job applications ranged from 0 to 12, with 10 of 30 participants saying that they had never applied for a job. Therefore, it seemed reasonable to create two categories for each of these questions: people with no experience in writing cover letters vs. people with some experience, and people with no experience in applying for a job versus people with some experience. There were no statistically significant differences in overall pre-test cover letter ratings of participants who had no experience writing cover letters ($M = 5.84, SD = 2.97$) compared to participants who had some previous experience with this task ($M = 6.27, SD = 3.35$): $t(1, 28) = -.37, p > .05$. Similarly, there was no statistically significant difference in overall pre-test cover letter ratings of participants who had no previous experience with applying for a job ($M = 5.6, SD = 2.88$) and participants who had some previous experience with applying for a job ($M = 6.2, SD = 3.21$): $t(1, 28) = -.50, p > .05$. Hypothesis three was not supported, in part because there was not enough data.

Hypothesis 4a: Students who participated in a version of activity addressing teamwork, integrity, communication, and critical thinking skills will receive higher rubric ratings for these skills on the post-test compared to the post-test ratings of the skills not discussed in this version of the activity.

Hypothesis 4b: Students who participated in a version of activity addressing reliability, technology, work ethic, and professionalism skills will receive higher rubric ratings for these skills on the post-test compared to the post-test ratings of the skills not discussed in this version of the activity.

Hypothesis four was analyzed using a repeated-measures analysis of variance. In order to compare two versions of the activity that discussed four different skills each, rating score were computed for each participant including only the four skills that were presented in a particular activity version. Activity one pre- and post-test ratings for each participant included the sum of reliability, technology, work ethic, and professionalism ratings at the pre-test and the post-test, respectively. Similarly, activity two pre-and post-test ratings for each participant consisted of a sum of communication, integrity, teamwork, and critical thinking ratings at the pre-test and post-test. These pre- and post-test subset ratings were used for analyzing this hypothesis. These results indicated that there was a main effect for time of activity 1, $F(1, 28) = 16.37, p < .001$, and a main effect for time of activity 2, $F(1, 28) = 28.95, p < .001$. However, there was no significant interaction between activity 1 and activity 2, $F(1, 28) = 2.09, p > .05$. Thus, the activities did have an effect on participants' post-test cover letter ratings, but there was no differential impact of experiencing activity 1 or activity 2, with respect to cover letter ratings.

These findings demonstrate that cover letter writing generally improved from pre-test to post-test. It is possible that the increase in student performance on the post-test may have been due to practice effects. Alternatively, the activity may have had a general positive impact on cover letter writing. Moreover, the activity appears to have benefitted students' perceptions of their preparedness to successfully find employment and has enhanced students' understanding of how psychology courses prepare them for the workplace. The findings also suggest that previous experience with writing cover letters and applying for jobs did not significantly affect students' performance on the pre-test;

Students who have had such experience did not seem to have any advantage and perform any better than students with no prior experience. The findings also did not demonstrate that two versions of the activity had a differential effect on students' performance. While post-test cover letter ratings of students who participated in each version of the activity increased compared to their performance on the pre-test, a specific version of the activity did not correspond to the specific skills that students described in their post-test cover letters.

Discussion

Implications and suggestions for future research

This study was a first attempt to address an important issue: The psychology majors' perceived under-preparedness for the workplace. This project had serious limitations and the study itself needs to be modified and replicated in order to be more meaningful; nevertheless, I believe that there are some important conclusions that can be drawn from this project.

Before conducting this study I thought that the identifying the specific skills and dispositions employers seek when recruiting employees would be something that would be unfamiliar to the students. It turned out that participants already knew about most if these skills and dispositions. It appears that the thing that students learned from the experience was the importance of illustrating personal skills with specific examples when applying for a job appeared to most resonate with the participants. Also, from the data collected it is evident that students acknowledge and find it easier to provide specific examples for such skills as communication, critical thinking, and work ethic, while they

generally have difficulty coming up with specific examples that could illustrate their reliability and professionalism skills. Based on these findings, I believe that the contents of the activity should be reviewed in the future if this intervention were to be used as an in-class or extracurricular activity for psychology majors to teach them and help them acknowledge important workplace skills. Since students seem to better understand some skills and dispositions such as communication and critical thinking, maybe these skills do not need to be discussed, and the time should rather be spend on talking about skills and dispositions that seem to be more difficult for the students to comprehend, such as reliability and integrity. Moreover, a different format for the activity could be considered. Instead of facilitating a generic presentation about a number of skills and dispositions and then asking students to come up with personal examples of these traits, it could be more useful to tie the contents of the presentation to a real life scenario. For instance, an actual job advertisement could be used to facilitate a discussion about skills and dispositions that would be applicable to that position. There are multiple ways in which the contents and the format of the activity could be modified to make it more effective.

Along with the contents and the format of the activity, alternative ways to access its effectiveness could also be considered in the future. If the activity is incorporated into a class as a graded assignment, there will most likely be no need to do that; however, this would be an important consideration if the activity was ever to be replicated as a scientific experiment. I chose to use cover letters as a measure for students' learning because it appeared to be the most feasible and convenient option. However, a cover letter might not be the best measure for the task because some of the skills such as professionalism are not very likely to be discussed in a cover letter. After reading

participants' cover letters, I realized that hardly anyone wrote about this skill during either points of the data collection. That could potentially be explained by reviewing the examples of how to demonstrate and practice professionalism: dressing professionally, acting and communicating appropriately, and so on. While this skill is very important to have, it is very difficult to write about in a cover letter. Professionalism is usually exhibited through certain behaviors that are much easier and more typical to demonstrate in person as opposed to write about them in a cover letter. Therefore, alternative ways of assessment that would be more inclusive in regards to all skills and dispositions should be considered in the future.

Another implication of this study has to do with the data collection issues that I ran into. The original number of participants was expected to be 105, which included students from 4 different classes: peer advising practicum students ($N = 32$), PSYC 200 "Preparing for Graduate School" students ($N = 60$), and students enrolled into two different research labs ($N = 13$). All participants were randomly assigned to the study conditions and it was assured that every condition had an approximately equal number of participants that would also be appropriate for the data analysis. It was expected that the instructors for each of the participating classes would incorporate the study into their courses, therefore, no issues with the data collection were anticipated. However, the participant sample that was used for the data collection at the end only consisted of 30 participants, which is significantly smaller than the original sample that I expected to be available for statistical analyses.

Since there were no stakes involved for the students and no direct consequences for not completing all steps of the project, many students decided not to participate at all

or withdrew before the data collection process was completed. At the pre-test, 83 responses were collected via Qualtrics. Most students who completed the pre-test were also present during the intervention, partially because the intervention was a part of their regular class time. However, I ran into major difficulties while collecting the post-test data. After several attempts to encourage students to complete the post-test, a total of 45 post-test responses was obtained via Qualtrics. A matched sample consisted of 44 participants, but then I ran into another problem. Some participants completed all steps of the data collection, but appeared to not treat the assignment seriously. Several participants who submitted blank Word documents as their written measure assignments, others submitted the same cover letter for both the pre-test and the post-test, while a few wrote one or two sentences instead of a cover letter or even used vulgar language. Moreover, some participants' cover letter ratings actually decreased from pre-test to post-test. Apparently, these participants did not feel the need to put effort into the post-test once they realized that there would be no negative consequences for them.

It is obvious from the information provided above that the participant recruitment and data collection process should be modified in the future. It would be beneficial to make this a higher-stakes activity in order to truly motivate the students to demonstrate their learning. For the current project, participants were simply asked by the faculty to help a graduate student with a research project. While it was helpful to have an opportunity to administer the intervention during participants' regular class times, homework assignments suffered from the lack of participants' involvement. I believe that the project would have had better success and would be more beneficial for the students if it was fully integrated into a course, for credit, or if it was presented to students as a

required activity as opposed to how it was presented to them in this case. To encourage greater student engagement, it is crucial that instructors convey the benefit of understanding workplace skills as critical to the students' future experiences. In order to send a clear message to the students about the usefulness of this information, it might be advantageous to use actual job advertisements as discussion prompts instead of facilitating a generic skills presentation. Moreover, making the activity a graded assignment would also make it higher stakes for the students as well as make it more easily measurable.

Limitations

A limitation of this project that certainly stands out the most is a number of issues with the data collection that I ran into. Lack of participants' involvement with the study severely decreased the amount of valid and usable data available to me. In order to cope with data I felt was not valid, I excluded some cases from the final analysis. My advisor, research assistant and I agreed to exclude cases in which the overall post-test cover letter ratings were less than "4" and the change score from pre-test to post-test was negative. As previously mentioned, the final sample consisted of 30 observations. It is also important to mention that while the data analysis suffered from a small sample size, most findings were not affected by the exclusion of some cases from the sample. In other words, the findings would still be statistically significant if those cases were included in the analyses. However, it would be ideal to have a larger sample size if this study is replicated in the future.

Conclusion

Overall, an effort to help psychology upperclassmen understand the skills they gain through their college experiences by using a short activity appeared to be effective. This was just an attempt, but I believe that this project could be modified and used as a professional development activity for psychology students. This project might be considered a first step towards addressing the issue of psychology students' under-preparedness for the workplace. It could be replicated in the future and could also be used as a basis for other similar projects that would address this important issue.

References

Association of American Colleges and Universities. (2008). College learning for the new global century: Executive summary with employers' view on learning outcomes and assessment approaches. Retrieved March 6, 2015, from https://www.aacu.org/leap/documents/GlobalCentury_ExecSum_3.pdf

American Psychological Association. (2007). APA guidelines for the undergraduate psychology major. Washington, DC: Author.

Appleby, D. (2000). Job skills valued by employers who interview psychology majors. *Eye on Psi Chi*, 4(3), 17.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117-148.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1-26.

Baxter Magolda, M. B. (2007). Self-authorship: The foundation for twenty-first-century education. *New Directions for Teaching and Learning*, 2007(109), 69-83.

Borden, V. M., & Rajewski, D. W. (2000). First-year employment outcomes of psychology baccalaureates: Relatedness, preparedness, and prospects. *Teaching of Psychology*, 27(3), 164-168. doi:10.1207/S15328023TOP2703_01

Casner-Lotto, J., & Barrington, L. (2006). *Are they really ready to work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the*

21st century US workforce. Partnership for 21st Century Skills. 1 Massachusetts Avenue NW Suite 700, Washington, DC 20001.

Cooper, J.L. (1995). Cooperative Learning and Critical Thinking. *Teaching of Psychology*, 22(1), 7-9.

Dennick, R. (2012). Twelve tips for incorporating educational theory into teaching practices. *Medical Teacher*, 34(8), 618-624.

doi:10.3109/0142159X.2012.668244

Dansereau, D. F. (1988). Cooperative Learning Strategies. In C.E. Weinstein, E.T. Goetz, & P.A. Alexander (Eds.), *Learning and Study Strategies: Issues in Assessment, Instruction, and Evaluation* (p. 103-120). New York: Academic.

Eison, J. A. (1988). How can I get into graduate school, and what do I do if I want a job? In P. J. Woods (Ed.), *Is psychology for them? A guide to undergraduate advising*. (91-95). Washington, DC: American Psychological Association.

Harpine, E. C. (2007). Faculty Forum: Applying Motivation Theory to Real-World Problems. *Teaching Of Psychology*, 34(2), 111-113.

doi:10.1080/00986280701293164

Johnson, D.W., Johnson, R.T., & Smith, K.A. (1991). *Cooperative Learning: Increasing College Faculty Instructional Productivity* (ASHE-ERIC Higher Education Report No. 4). Washington, DC: The George Washington University, School of Education and Human Development.

Kuhn, D., & Dean, Jr, D. (2004). Metacognition: A bridge between cognitive psychology and educational practice. *Theory into Practice, 43*(4), 268-273.

Lakin, J. L., & Wichman, A. L. (2005). Applying Social Psychological Concepts Outside the Classroom. *Teaching Of Psychology, 32*(2), 110-113.
doi:10.1207/s15328023top3202_7

Landrum, R. E., Beins, B. C., Bhalla, M., Brakke, K., Briihl, D. S., Curl-Langager, R. M., & Van Kirk, J. J. (2010). Desired Outcomes of an Undergraduate Education in Psychology From Departmental, Student, and Societal Perspectives. *American Psychological Association.*

Landrum, R. E., & Harrold, R. (2003). What employers want from psychology graduates. *Teaching of Psychology, 30*(2), 131-138. doi:
10.1207/S15328023TOP3002_11

Landrum, R. E., Hettich, P. I., & Wilner, A. (2010). Alumni perceptions of workforce readiness. *Teaching of Psychology, 37*(2), 97-106.
doi:10.1080/00986281003626912

Mair, C. (2012). Helping Students Succeed through Using Reflective Practice to Enhance Metacognition and Create Realistic Predictions. *Psychology Teaching Review, 18*(2), 42-46.

Posner, B. Z. (1981). Comparing recruiter, student, and faculty perceptions of important applicant and job characteristics. *Personnel Psychology, 34*(2), 329-339.

Rogers, M. (2012). Measuring employability among college students: A validation study. Master's thesis. *James Madison University Libraries*.

Roscoe, L. J., & Strapp, C. M. (2009). Increasing psychology students' satisfaction with preparedness through a professional issues course. *Teaching of Psychology, 36*(1), 18-23. doi:10.1080/00986280802529426

Spellings, M. (2006). *A test of leadership: Charting the future of US higher education*. US Department of Education.

Stoloff, M. L., Curtis, N. A., Rodgers, M., Brewster, J., & McCarthy, M. A. (2012). Characteristics of successful undergraduate psychology programs. *Teaching of Psychology, 39*(2), 91-99. doi: 10.1177/0098628312437721

Tsui, L. (2002). Fostering Critical Thinking Through Effective Pedagogy. Evidence from Four Institutional Case Studies. *Journal of Higher Education, 77* (6), 740 – 763.

Van Etten, S., Pressley, M., McInerney, D. M., & Liem, A. D. (2008). College seniors' theory of their academic motivation. *Journal of Educational Psychology, 100*(4), 812-828.

Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Edited by M. Cole, V. John-Steiner, S. Scribner, & E. Souberman. Cambridge, MA: Harvard University Press.

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, 29(3), 663-676.

Appendix A*Student questionnaire (pre-test)*

1. What is your gender? (circle one)

Male

Female

Other

2. What is your academic major?

3. How many academic credits do you currently have that you have earned at JMU?

4. For which class are you participating in this study? (circle one)

Research Group

Peer Tutor

PSYC 200

Other

5. What is your academic grade level? (circle one)

1 (Freshman)

2(Sophomore)

3(Junior)

4(Senior)

6. Approximately how many job applications have you prepared? (put a number or put "0" if none)

7. Approximately how many cover letters to a potential employer have you written and submitted? (put a number or put "0" if none)

8. Approximately how many professional development events organized by the Office of Career and Academic Planning (CAP) or any other office at JMU have you attended? (put a number or put "0" if none)

9. How many field placement or internship credits have you earned at JMU?

10. How many independent research credits have you earned at JMU?

11. On a scale from 1 to 5, how strongly do you feel that your psychology courses have prepared you for jobs after graduation?

1	2	3	4	5
Not at all		Neutral		Very well

12. On a scale from 1 to 5, how prepared do you feel about going through the job application process and successfully finding employment now?

1	2	3	4	5
Not at all		Neutral		Very well

Student questionnaire (post-test)

1. For which class are you participating in this study? (circle one)
- Research Group Peer Tutor PSYC 200 Other
2. On a scale from 1 to 5, how strongly do you feel that your psychology courses have prepared you for jobs after graduation?
- 1 2 3 4 5
- Not at all Neutral Very well
3. On a scale from 1 to 5, how prepared do you feel about going through the job application process and successfully finding employment now?
- 1 2 3 4 5
- Not at all Neutral Very well
4. On a scale from 1 to 5, how useful did you personally find the contents of the discussion-based activity and the practice of writing cover letters?
- 1 2 3 4 5
- Not at all Neutral Very well

Appendix B

Written measures (job description scenarios):

Assignment: Please write a draft of the cover letter in response to the following job description. You do not have to focus on the formatting as this is only a draft. Please limit your response to one page.

Market Research Analyst

ABC Strategy Group, a premier consulting firm specializing in market research and political polling, has opened a new office in Los Angeles and seeks to fill an analyst position there.

ABC provides the insights and strategies that help our clients win elections, launch new products, reposition brands, beat back competitive challenges and overcome public affairs crises. We are not a typical research firm – we are part of our clients' strategic team and provide customized approaches to help our clients achieve their objectives. We take an energetic, agile, and analytically aggressive approach to research and consulting. This requires that we continually push ourselves to deliver the best, smartest, and most strategic work we can.

This position represents a tremendous opportunity for a motivated individual to be part of a research and consulting team that shapes the strategies of Fortune 500 companies, political candidates, issue advocacy campaigns, and non-profit organizations. Moreover, this particular opportunity – in our newest office – is ideal for a motivated self-starter with an enterprising spirit who can positively contribute to ABC's growth.

We are seeking to hire someone with a strong work ethic who is eager to learn and apply the latest research and consulting methods in both the political and corporate

arenas. The ideal candidate will be able to work and thrive in a fast-paced environment, handling multiple assignments on tight deadlines.

Essential Functions:

- Conducting background research on issues, companies, candidates and institutions
- Writing polls, strategic memos, presentations and proposals for clients
- Monitoring polls for accuracy as they are executed
- Setting up reports, data tables, charts and graphs
- Supporting senior staff
- Proofreading research studies and client deliverables

Assignment: Please write a draft of the cover letter in response to the following job description. You do not have to focus on the formatting as this is only a draft. Please limit your response to one page.

RESEARCH PROJECT MANAGER

Family Union Center is seeking an individual to provide support to research staff in their work with public and private agencies focused on improving the well-being of children and families. The Research Project Manager will provide administrative support for projects, prepare and present research results, conduct literature reviews, and maintain project databases.

This is a great opportunity to learn about and contribute to the success of child and family policy research. Family Union is an independent policy research center whose mission is to build knowledge that improves policies and programs for children and youth, families, and their communities.

ESSENTIAL FUNCTIONS

Provides administrative support for projects, including writing correspondence, scheduling and coordinating internal and external meetings, making travel arrangements, processing expense reimbursements, and creating and maintaining project filing systems.

Creates, manages, and updates project databases.

Conducts thorough and critical reviews of relevant literature.

Prepares research results, including proofing, formatting, and creating tables and graphs.

Coordinates project research activities, including interviews and data management.

Presents research results to external audiences

Appendix C

Cover Letter Rating Rubric

You will be rating a student's cover letter based on their mention of the following skills and the number of examples they provide. Note that mentioning a skill without providing a specific example indicates a score of '1' for that particular skill, while mentioning a skill and providing a specific example indicates a score of '2' for that particular skill. This rule applies for each skill and the number of examples provided. So if a student provides 2 examples of a particular skill, they would receive a score 3 for that skill. If a student provides 3 examples of a particular skill, they would receive a 4 for that skill, and so on.

Read the cover letter and determine if there is mention of any of the skills listed below, and then provide a number rating based on the number of examples provided.

<p style="text-align: center;">Communication skills</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 10%;"> <input type="checkbox"/> <input type="checkbox"/> </div> <div style="width: 80%;"> <p>(0) No mention of the skill</p> <p>(1) Some mention of the skill</p> <p>_____ Number of examples</p> <p>_____ Total rating (sum of above)</p> </div> </div>	<p style="text-align: center;">Professional Development skills</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 10%;"> <input type="checkbox"/> <input type="checkbox"/> </div> <div style="width: 80%;"> <p>(0) No mention of the skill</p> <p>(1) Some mention of the skill</p> <p>_____ Number of examples</p> <p>_____ Total rating (sum of above)</p> </div> </div>
Technology skills	Reliability

<input type="checkbox"/> <input type="checkbox"/> <p>(0)No mention of the skill (1) Some mention of the skill</p> <p>_____ Number of examples _____ Total rating (sum of above)</p>	<input type="checkbox"/> <input type="checkbox"/> <p>(0)No mention of the skill (1) Some mention of the skill</p> <p>_____ Number of examples _____ Total rating (sum of above)</p>
<p>Critical Thinking skills</p> <input type="checkbox"/> <input type="checkbox"/> <p>(0)No mention of the skill (1) Some mention of the skill</p> <p>_____ Number of examples _____ Total rating (sum of above)</p>	<p>Integrity</p> <input type="checkbox"/> <input type="checkbox"/> <p>(0)No mention of the skill (1) Some mention of the skill</p> <p>_____ Number of examples _____ Total rating (sum of above)</p>
<p>Teamwork skills</p> <input type="checkbox"/> <input type="checkbox"/> <p>(0)No mention of the skill (1) Some mention of the skill</p> <p>_____ Number of examples</p>	<p>Work Ethic</p> <input type="checkbox"/> <input type="checkbox"/> <p>(0)No mention of the skill (1) Some mention of the skill</p> <p>_____ Number of examples</p>

_____ Total rating (sum of above)	_____ Total rating (sum of above)
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Overall Rating: _____

Appendix D

Understanding Your Skills Activity Scripts

Version 1

- Introduction (5-10 min)

Hello! We will be spending a part of the class time today talking about the skills that you need to have and be able to demonstrate when applying for jobs, graduate school admission, and positions that provide support during graduate school (including graduate assistantships), in order to be a successful candidate. This activity is primarily focused on helping you to be attractive to employers, but it is also useful for helping you to be attractive to graduate schools (especially if you are applying for an assistantship).

Now, how many of you by show of hands are thinking about applying for a job upon college graduation? Ok, so the rest of you are probably planning to go to graduate schools at some point. Well, in order to be a strong candidate when you apply for any kind of position, including graduate programs, you need to meet certain requirements and demonstrate certain characteristics. As a psychology student, you already have these skills, but you might not realize that you do. Therefore, today we will focus on identifying some of these skills and coming up with examples of things you do in college that teach you those skills and allow you to practice them. You can then use these examples to present yourself as a competitive candidate in your job and graduate school applications.

- Skills presentation (10 min)

Teamwork

The first characteristic we are going to discuss is teamwork. Most employers would say that an employee with good teamwork skills is someone who works well with other people in different settings, develops and applies solutions to group problems, can work effectively as a team or group member, and collaborates effectively on projects. An example that would demonstrate that someone works well on a team would be showing initiative when working in a group setting and making meaningful contributions to the group project.

Does any of that sound like anything you would do as a college student? If it does, you can demonstrate that you have teamwork skills when applying for a position. Some ways in which you practice teamwork in college include: resolving group conflicts, being an effective group member, showing leadership in groups, and assessing group strengths and weaknesses. If you do any of these things as a student, it means that you have practiced your teamwork skills, and you can highlight these skills and examples when filling out a job or a graduate school application.

Integrity

Next, let's talk about integrity, which is an important skill to have as an employee or when continuing your education. Employers value candidates who act consistently, follow through with promises, are forthright and honest, and adhere to company policies. An example of how an employee might demonstrate integrity would be coming forward to discuss a problem or unethical situation with the supervisor.

Hopefully, all of you demonstrate integrity as students by following the honor code, adhering to ethical guidelines during research, and being truthful. These are examples that you could use and expand on to show that you demonstrate integrity to employers and graduate programs.

Communication

The next important skill that a strong candidate should possess is communication. Employers value people who can make effective presentations, interact well with others, construct effective arguments for different audiences, listen and decode social messages, and use social media responsibly. An example of an employee with strong communication skills would be someone who can give a clear and concise presentation in a departmental meeting.

Examples of communication skills that you learn as a college student include speaking publicly (such as giving class presentations), writing formally (using APA style or conducting literature reviews), communicating with peers and professors, and communicating quantitative data effectively. If you can think of an instance when you gave a class presentation, wrote an APA style paper, or communicated effectively in groups or to professors, this means that you can demonstrate that you possess strong communication skills in your application, which would make you a highly attractive candidate for any position.

Critical Thinking

Another skill that employers value is critical thinking. Someone who can recognize the influence of different biases and backgrounds, describe problems from

different points of view, evaluate sources, make independent decisions, and solve complex problems would be a strong candidate for any position. An example of an employee who is a critical thinker is one who can apply previous knowledge and relevant sources to complete an assigned project.

Your experiences and courses in college have taught you critical thinking skills. Examples of things you might do as a student to practice your critical thinking skills include using scientific reasoning, demonstrating information literacy, thinking innovatively and solving problems, designing and/or conducting research, and assessing different psychological theories. Any of these can be used as examples to demonstrate that you are a candidate with strong critical thinking skills in your application.

- Group activity (10-15 min)

Alright, now that you know what some of the skills are that make you a more competitive candidate to employers, let's see if you can think of specific personal examples of college experiences that would help you to demonstrate that you have these four skills. In order to do that, you will get into groups of 3-4 people; please count out by (6) and go to your group. (Have students gather in groups of 3-4 people).

Good, now let me explain what I'd like you to do. I will ask each of you to think of a specific experience you've had in college when you had a chance to learn or practice each of the four skills that were just presented. Discussing one skill at a time in your groups, each group member should first share their experience with the group, and then the group should choose 1-2 examples that you would like to share with the entire class during the discussion later. Please write down the examples that your group chooses to share with the class and move on to talking about the next skill. You will have

approximately 10 minutes to discuss all four skills and come up with a couple of examples for each to share with the class. To remind you, the skills you'll be discussing in your groups are reliability, technology, work ethic, and professionalism. Any questions? (The facilitator answers any questions from participants). I will also be available to answer any questions during the activity. Please begin now. (The facilitator monitors the groups to make sure that everyone is participating in the activity and answers any questions that participants might have. The facilitator announces when there are 5 minutes and 1 minute left).

- Activity discussion and closing comments (5-10 min)

Alright, let's wrap this up. I would like to go around the room now and for each group to share the examples that they have chosen with the rest of the class. As you can see, this slide has four columns corresponding to each skill that we discussed earlier. Let's first talk about teamwork; what examples of college experiences that would illustrate this characteristic did your group come up with? (Students name the examples, the facilitator types them in a corresponding column on the slide). Thank you. What about this group? (Students name the examples, the facilitator types them in a corresponding column on the slide) Alright, good job! The next group now. (Students name the examples, the facilitator types them in a corresponding column on the slide). Great! What about your group? (Students name the examples, the facilitator types them in a corresponding column on the slide. Continue until all groups of students had a chance to share their examples for the particular skill).

We can move on to integrity now. Any experiences you have had in college that would show the employer that you have this skill? (Go through and have each group share their examples; don't type them up if they are redundant).

Alright, the next skill that all employers want you to have is communication skills. How can you demonstrate that you have good communication skills based on your college experiences? (Go through and have each group share their examples; don't type them up if they are redundant).

The last skill we talked about is critical thinking. What did you come up with for this one? (Go through and have each group share their examples; don't type them up if they are redundant).

Thank you for sharing everyone! Now if you look up on this slide, you'll see a list of experiences that you have had in college that you could use as examples to demonstrate that you have certain skills. This could be used when you apply for a job or for any other position. You just came up with these examples yourself, which means that you know you have these skills and characteristics. I hope you will be able to use this information to your advantage and it will help you create a stronger application and appear a more attractive candidate to employers and graduate programs. Any last minute questions or comments? (The facilitator answers any questions and takes any comments from participants). You will be receiving an e-mail with a follow-up assignment for this activity that will be due for your next class. Thank you for participating!

Version 2

- Introduction (5-10 min)

Hello! We will be spending a part of the class time today talking about the skills that you need to have and be able to demonstrate when applying for jobs, graduate school admission, and positions that provide support during graduate school (including graduate assistantships), in order to be a successful candidate. This activity is primarily focused on helping you to be attractive to employers, but it is also useful for helping you to be attractive to graduate schools (especially if you are applying for an assistantship).

Now, how many of you by show of hands are thinking about applying for a job upon college graduation? Ok, so the rest of you are probably planning to go to graduate schools at some point. Well, in order to be a strong candidate when you apply for any kind of position, including graduate programs, you need to meet certain requirements and demonstrate certain characteristics. As a psychology student, you already have these skills, but you might not realize that you do. Therefore, today we will focus on identifying some of these skills and coming up with examples of things you do in college that teach you those skills and allow you to practice them. You can then use these examples to present yourself as a competitive candidate in your job and graduate school applications.

- Skills presentation (10 min)

Reliability

The first characteristic we are going to discuss is reliability. Most employers would say that a reliable employee is someone who comes to work on time, completes assigned tasks, produces their best quality of work, does not forget their responsibilities, and is responsible for their work. An example that would demonstrate that someone is a reliable employee could be working on projects assigned by their boss and exceeding the boss's expectations.

Does any of that sound like anything you would do as a college student? If it does, you can demonstrate that you are a reliable candidate when applying for a position. Some ways in which you practice reliability in college include: turning assignments in on time, producing your best quality work for all assignments, regularly attending class, meeting your obligations, and exhibiting punctuality. If you do any of these things as a student, it means that you have practiced your reliability skills, and you can highlight these skills and examples when filling out a job or a graduate school application.

Technology

Next, let's talk about technology, which is an extremely important skill to have in the modern world. Employers value candidates who are proficient in the use of computers for various tasks, demonstrate the ability to learn new software, and can automate tasks using computers. An example of how a strong job candidate would demonstrate that they possess technology skills would be developing Excel spreadsheets and analyzing data in Excel.

All of you practice technology skills as students through your use of word processing software, presentation software, spreadsheet software, or statistical software;

working with office software (e.g. Microsoft Office); adapting to changing software (e.g. new updated versions of programs); and learning to use new technology. Each of you has probably done a few of those things, and they are all examples that you could use to demonstrate your technology skills to employers and graduate programs.

Work Ethic

The next important skill that a strong candidate should possess is work ethic. Employers value people who are hard workers; are self-motivated, independent, and accountable; are willing to put in the effort to complete essential tasks and to put in extra effort when necessary to reach goals; and who are willing to do more than the basic assignment. An example of an employee with strong work ethic would be someone who works diligently, but can still go to his or her boss for help when needed.

Examples of work ethic skills that you learn as a college student include focusing activities on important goals, demonstrating self-reliance, working hard, working towards a goal and achieving it, and volunteering. If you can think of a specific instance when you worked hard towards a goal and achieved it or you worked as a volunteer, this means that you can demonstrate that you possess strong work ethic skills, which would make you a highly attractive candidate for any position.

Professionalism

Another skill that employers value is professionalism. Someone who knows how to dress appropriately, has good social skills, knows how to address people appropriately, exhibits self-confidence in their abilities, and has project management skills (such as work and/or time management skills) would be a strong candidate for any position. An

example of an employee who is professional is one who talks to his or her boss about what he or she needs to do to become successful in his or her career.

Do you think there is anything that you do in college that teaches you professionalism skills? You are correct if your answer is “yes.” Examples of things you might do as a student to practice your professionalism skills include creating a resume, being interviewed, exhibiting professional behavior by dressing and acting in a manner that is appropriate for a business or professional setting, planning your career by identifying the steps needed to achieve your occupational goals, developing strategies to learn new skills, and doing your homework. Any of these can be used as examples in your application to demonstrate that you are a candidate with strong professionalism skills.

- Group activity (10-15 min)

Alright, now that you know what some of the skills are that make you a more competitive candidate to employers, let’s see if you can think of specific personal examples of college experiences that would help you to demonstrate that you have these four skills. In order to do that, you will get into groups of 3-4 people; please count out by (6) and go to your group. (Have students gather in groups of 3-4 people).

Good, now let me explain what I’d like you to do. I will ask each of you to think of a specific experience you’ve had in college when you had a chance to learn or practice each of the four skills that were just presented. Discussing one skill at a time in your groups, each group member should first share their experience with the group, and then the group should choose 1-2 examples that you would like to share with the entire class during the discussion later. Please write down the examples that your group chooses to

share with the class and move on to talking about the next skill. You will have approximately 10 minutes to discuss all four skills and come up with a couple of examples for each to share with the class. To remind you, the skills you'll be discussing in your groups are reliability, technology, work ethic, and professionalism. Any questions? (The facilitator answers any questions from participants). I will also be available to answer any questions during the activity. Please begin now. (The facilitator monitors the groups to make sure that everyone is participating in the activity and answers any questions that participants might have. The facilitator announces when there are 5 minutes and 1 minute left).

- Activity discussion and closing comments (5-10 min)

Alright, let's wrap this up. I would like to go around the room now and for each group to share the examples that they have chosen with the rest of the class. As you can see, this slide has four columns corresponding to each skill that we discussed earlier. Let's first talk about reliability; what examples of college experiences that would illustrate this characteristic did your group come up with? (Students name the examples, the facilitator types them in a corresponding column on the slide). Thank you. What about this group? (Students name the examples, the facilitator types them in a corresponding column on the slide) Alright, good job! The next group now. (Students name the examples, the facilitator types them in a corresponding column on the slide). Great! What about your group? (Students name the examples, the facilitator types them in a corresponding column on the slide. Continue until all groups of students had a chance to share their examples for the particular skill).

We can move on to technology now. Any experiences you have had in college that would show the employer that you have this skill? (Go through and have each group share their examples; don't type them up if they are redundant).

Alright, the next skill that all employers want you to have is work ethic. How can you demonstrate that you have good work ethic based on your college experiences? (Go through and have each group share their examples; don't type them up if they are redundant).

The last skill we talked about is professionalism. What did you come up with for this one? (Go through and have each group share their examples; don't type them up if they are redundant).

Thank you for sharing everyone! Now if you look up on this slide, you'll see a list of experiences that you have had in college that you could use as examples to demonstrate that you have certain skills. This could be used when you apply for a job or for any other position. You just came up with these examples yourself, which means that you know you have these skills and characteristics. I hope you will be able to use this information to your advantage and it will help you create a stronger application and appear a more attractive candidate to employers and graduate programs. Any last minute questions or comments? (The facilitator answers any questions and takes any comments from participants). You will be receiving an e-mail with a follow-up assignment for this activity that will be due for your next class. Thank you for participating!