The Employable Skills Self-Efficacy Survey:

An Assessment of and Resource for Fostering Skill Development

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The Employable Skills Self-Efficacy Inventory:

An Assessment of and Resource for Fostering Skill Development

A growing perception is that the primary purpose of college is to provide career training (Pryor at al., 2006). This perception has led, in part, to the criticism that college graduates primarily acquire knowledge rather than employable skills. Although knowledge acquisition is an important aspect of an undergraduate education, developing employable skills such as collaboration, analytical inquiry, and professional development are also valuable outcomes. Organizations, such as the Society for the Teaching of Psychology (STP; Strohmetz et al., 2014) and the American Psychological Association (APA; 2013), encourage the development of employable skills as part of the undergraduate psychology curriculum. Although content will always be a significant factor in pedagogy and curriculum design, skill development should also play a role (Strohmetz et al., 2015). As such, faculty should purposefully design curriculum to emphasize skills and regularly assess their progress to be sure their program aligns with the APA Guidelines 2.0 (APA).

Current assessment tools (e.g., Kruger & Zechmeister, 2001) tap into exposure to experiences and do not assess students’ self-perceived efficacy on the skills themselves. In the Kruger and Zechmeister assessment, students check off obtained experiences that presumably help to foster skills. Although students may be able to check off an experiential box, it does not mean they have self-efficacy for the underlying skill. Moreover, for students to be able to articulate their skills in applications to jobs and graduate programs, they must be able to recognize their own skill set. The Kruger and Zechmeister inventory is also not useful for assessing creative class activities or curricular changes implemented to practice and strengthen students’ employable skills not included in the checklist. The current tool complements the Kruger and Zechmeister by providing a means for assessing students’ perception of the employable skills they are developing through the undergraduate psychology major. Through such assessment, psychology programs can better address the misperceptions concerning the value of the psychology major along with identifying opportunities for strengthening these skills within their curriculum.

**Purpose**

APA’s most recent guidelines (American Psychological Association, 2013) encourage undergraduate psychology programs to consider marketable skills as well as content in their programs. The goal of the assessment tool is to help individual psychology instructors and psychology departments identify and foster employable skills within their courses and curricula. This reliable and valid assessment tool should aid in that process. Based on the work of Appleby (2014), we developed a comprehensive, yet easily administered tool to assess students’ perceived level of attainment of these skills. Users of the assessment may administer the full measurement or select domains or subscales specific to their assessment needs. Instructors and programs can also use this tool to assess the effectiveness of new strategies or initiatives that an instructor or department implements to enhance the development of marketable skills. Overall, this resource will help faculty and departments assess and monitor their teaching of employable skills. The data collected from this resource can be used to enact change at a student, course, and curricular level.

**Scale Development**

**Construct Development**

 In developing the assessment, our goal was to measure students’ perceived self-efficacy on a number of employable skills the psychology major could foster. To develop items reflecting our construct of “employable skills,” we heavily relied on the work of Appleby (2014) and the APA (2013). Both propose specific skills that psychology majors should develop for post-baccalaureate success. Based on this information, we developed scale items that reflect the types of skills that are valued by employers and seen as integral to a baccalaureate degree overall and specifically to the psychology major. These items assess the student’s self-perceived efficacy for each skill (or domain). Specifically, we included the assessment of four skill domains (i.e., communication, analytical inquiry, collaborations, and professional development). Within each domain are subscales to assess subdomains. Therefore, users can select the specific domains or subdomains most useful for their needs.

**Skill Domains and Subscales**

Based on the workforce skills for psychology majors suggested by Appleby (2014) and the APA (2013), the scale is a 51-item inventory that assesses four domains of employable skills, including communication (4 subscales; APA Goal 4), analytical inquiry (2 subscales; APA Goal 2), collaboration (2 subscales; APA Goal 5), and professional development (3 subscales; APA Goal 5). The domain of communication includes subscales to assess reading, writing, speaking, and listening skills (4 items each). Analytical inquiry includes subscales assessing research skills (5 items) and information literacy (4 items). The assessment of collaboration includes subscales for working in groups (5 items), as well as an ability to lead others (5 items). Professional development includes three additional subscales: self-management (4 items), professionalism (7 items), and technological skills (5 items). We provide the scale in two formats. One format outlines each domain and subdomain questions so the user can select the domains and subdomains best suited to the research goals. The second version of the scale includes all items in a randomized order with instructions for self-scoring. Please see the Appendices.

**Psychometric Properties**

To ensure the assessment tool was reliable, we tested the reliability of the assessment tool through three data collection cycles (*N*s = 60, 69, and 114, respectively). The first two cycles specifically examined the internal consistency of the subscales. Based on the results of the first data collection cycle, we removed specific subscale items that depressed Cronbach’s alpha for that subscale. The second data collection again evaluated the internal consistency of the subscales. The third data collection cycle evaluated the test-retest reliability of the subscales while also providing another opportunity to evaluate the subscales’ internal consistency. The test-retest reliability study took place over a one-week period. We present a summary of the reliability assessment efforts in Table 1.

**Applications**

 We designed the assessment to be flexible to the needs of the psychology faculty or departments that use it. Based on the goals or needs of the users, one can use either the full scale or specific domains or subdomains. One may use the empirical evidence collected from this resource to identify opportunities for curricular or programmatic improvement, facilitating a better learning experience for students. One can use the assessment to determine and improve upon the instruction of marketable skills in individual classes or throughout the curriculum. Additionally, one can use the assessment to test empirically the effectiveness of a new skill-building exercise or activity implemented in a class. Psychology departments can also use the outcome data from this assessment to recruit students into the major by advertising how their departments empirically develop undergraduate students’ employable skills. Departments may also use this tool to help current students recognize the skills they are learning in the major, as students often fail to recognize their own skills (Martini, Judges, & Belicki, 2015). This will help students promote their acquired skills to potential employers and internship sites. This may be especially reassuring for students who are uncertain of their specific career goals. By completing these assessments, the students will better recognize the variety of marketable skills they are developing through the psychology major. Here are ideas for how one might use the assessment tool:

1. Identify the strong and potentially underdeveloped skills students have at the beginning of a course as a pretest and then administer a posttest assessment at the end of the semester to identify how the course has improved skill development.
2. Systematically assess skill development within the major by assessing students at various points in the curriculum (each semester or yearly). These assessments may identify the strengths of the program that the department can use to promote the major as well as identify weakness to address through curricular or course design changes.
3. Empirically test the effectiveness of a particular skill-building activity within a class or new conceptual approach to a class or curriculum intended to facilitate skill development by assessing students both before and after this implementation.
4. Engage in comparisons of students’ marketable skills within a program at different levels or through different coursework taken.
5. Use the assessment as the start of a personal professional development plan. Students could self-assess their strong and weak skills and then develop a long-term plan through curricular and experiential opportunities to develop weak skills. They could re-assess their skills set after they implement their professional development plan.

References

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Table 1

*Reliability Summary for Subscales*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cronbach’s Alpha Range | Mean Cronbach’s Alpha | Test-Retest Reliability *r* |
| Writing Skills(4 items) | .74-.80 | .76 | .85 |
| Speaking Skills(4 items) | .72-.74 | .73 | .87 |
| Reading Skills(4 items) | .67-.69 | .68 | .80 |
| Listening(4 items) | .76-.83 | .79 | .78 |
| Research Skills(5 items) | .73-.80 | .77 | .86 |
| Information Literacy(4 items) | .77-.82 | .80 | .76 |
| Working in Groups (5 items) | .83-.86 | .85 | .88 |
| Leading(5 items) | .83-.89 | .87 | .89 |
| Self-Management(4 items) | .65-.72 | .67 | .86 |
| Professionalism(7 items) | .66-.77 | .75 | .87 |
| Technology(5 items) | .69-.74 | .71 | .86 |

**Appendix A**

**Breakdown of the Employable Skills Self-Efficacy Survey**

This inventory assesses respondents’ perceived self-efficacy regarding skills associated with success in the workplace. To provide flexibility, we organized the inventory around four broad domains, with subscales assessing specific employable skills associated with each domain. One can either administer the entire inventory or select specific domains or subscales within a domain to assess. This allows one to choose which specific domains or specific employable skills to assess. Completion of the entire scale takes approximately 10 minutes.

Individuals indicate their level of agreement with each of the following statements using the following scale:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree |

(R) = Item is reverse coded

**COMMUNICATION SKILLS**

***Writing Skills***

1. Writing is not a strong skill for me. (R)
2. Professional writing is easy for me.
3. I can persuasively present my ideas through my writing.
4. People often misunderstand my point when reading my writing. (R)

***Speaking Skills***

1. I can persuasively present my ideas in talking with others.
2. My mind seems to go blank when I have to speak in front of a group of people. (R)
3. I often have difficulty verbally expressing my thoughts to others. (R)
4. People easily understand what I mean when I am talking to them.

***Reading Skills***

1. It is easy for me to follow written directions.
2. I usually understand information that I read.
3. I typically remember all information I read.
4. I often feel lost when trying to read professional publications. (R)

***Listening Skills***

1. It is easy for me to follow verbal directions.
2. My mind tends to wander when someone is verbally telling me what needs to be done. (R)
3. I typically comprehend information that someone tells me verbally.
4. It is difficult for me to remember information I only hear. (R)

**ANALYTICAL INQUIRY SKILLS**

***Research Skills***

1. It is easy for me to use the scientific approach when solving problems.
2. I have the analytical skills to work with data.
3. It is easy for me to use data when making decisions.
4. I am easily overwhelmed by data. (R)
5. I can easily think of ways for testing my research questions.

***Information Literacy Skills***

1. I know where to find relevant information from good sources when I need it.
2. I struggle to gather the information from reliable sources. (R)
3. I have trouble evaluating the quality of information I get from publications. (R)
4. It is easy for me to integrate information from a wide of variety of sources.

**COLLABORATION SKILLS**

***Working in Groups Skills***

1. I think I do some of my best work in group settings.
2. I have trouble working in groups successfully. (R)
3. I feel comfortable working in group settings.
4. I can easily fit into any group work setting.
5. I prefer to work alone on projects. (R)

***Leadership Skills***

1. I am an effective leader in group settings.
2. I like having opportunities to improve my leadership skills.
3. I am confident whenever I need to a lead a group project.
4. I would rather be the person who gets to lead a group project.
5. I have difficulty delegating when working in groups. (R)

**PROFESSIONAL DEVELOPMENT SKILLS**

***Self-Management Skills***

1. I am eager to learn new information.
2. I struggle to manage my time. (R)
3. I rarely procrastinate when working on projects.
4. When I have multiple projects, I can easily set priorities.

***Professional Skills***

1. I do what it takes to finish a project even if I do not find it enjoyable.
2. I have difficulty planning a project from start to finish. (R)
3. I feel uncomfortable in professional settings. (R)
4. I am not sure what it means to dress “professionally.” (R)
5. I struggle with being self-motivated in my work. (R)
6. I prefer not to volunteer for more than I have to already do. (R)
7. Others sometimes believe that I can be somewhat unreliable in meeting deadlines. (R)

***Technology Skills***

1. I am comfortable learning to use new technology when working on a project.
2. I can easily organize information into a database.
3. I struggle to manipulate numbers in a spreadsheet. (R)
4. It is easy for me to find the information that I need using search engines such as Google.
5. I can easily use software to create tables and graphs to effectively display information.

**Appendix B**

**Employable Skills Self-Efficacy Survey**

Please indicate your level of agreement with the following statements using these options:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 |
| *Strongly Disagree* | *Disagree* | *Somewhat Disagree* | *Somewhat Agree* | *Agree* | *Strongly Agree* |

1. I feel comfortable working in group settings.
2. I would rather be the person who gets to lead a group project.
3. People easily understand what I mean when I am talking to them.
4. I struggle to manipulate numbers in a spreadsheet.
5. Writing is not a strong skill for me.
6. I can easily think of ways for testing my research questions.
7. I prefer not to volunteer for more than I have to already do.
8. I can persuasively present my ideas through my writing.
9. My mind seems to go blank when I have to speak in front of a group of people.
10. I have difficulty delegating when working in groups.
11. I feel uncomfortable in professional settings.
12. I have trouble evaluating the quality of information I get from publications.
13. I struggle to gather the information from reliable sources.
14. People often misunderstand my point when reading my writing.
15. I have difficulty planning a project from start to finish.
16. I typically remember all information I read.
17. Others sometimes believe that I can be somewhat unreliable in meeting deadlines.
18. My mind tends to wander when someone is verbally telling me what needs to be done.
19. It is easy for me to follow written directions.
20. I can easily use software to create tables and graphs to effectively display information.
21. I am eager to learn new information.
22. When I have multiple projects, I can easily set priorities.
23. I do what it takes to finish a project even if I do not find it enjoyable.
24. I often have difficulty verbally expressing my thoughts to others.
25. I can easily fit into any group work setting.
26. It is easy for me to use the scientific approach when solving problems.
27. Professional writing is easy for me.
28. I am easily overwhelmed by data.
29. It is difficult for me to remember information I only hear.
30. I am confident whenever I need to a lead a group project.
31. I know where to find relevant information from good sources when I need it.
32. It is easy for me to find the information that I need using search engines such as Google.
33. It is easy for me to follow verbal directions.
34. I am an effective leader in group settings.
35. I usually understand information that I read.
36. I like having opportunities to improve my leadership skills.
37. I am comfortable learning to use new technology when working on a project.
38. I am not sure what it means to dress “professionally.”
39. I typically comprehend information that someone tells me verbally.
40. It is easy for me to integrate information from a wide of variety of sources.
41. I struggle to manage my time.
42. I rarely procrastinate when working on projects.
43. I prefer to work alone on projects.
44. It is easy for me to use data when making decisions.
45. I have trouble working in groups successfully.
46. I struggle with being self-motivated in my work.
47. I have the analytical skills to work with data.
48. I often feel lost when trying to read professional publications.
49. I can persuasively present my ideas in talking with others.
50. I think I do some of my best work in group settings.
51. I can easily organize information into a database.

**SCORING KEY** *(NOTE: “r” indicates the item rating should first be reverse-coded)*

**Communication Skills**

Writing Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of 5r, 8, 14r, & 27)

Speaking Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 3, 9r, 24r, & 49)

Reading Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 16, 19, 35, & 48r)

Listening Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 18r, 29r, 33, & 39)

Overall Communication Skills Score: \_\_\_\_\_\_\_\_\_\_\_\_
(Take mean of writing skills, speaking skills, reading, and listening skills items)

**Analytical Inquiry Skills**

Research Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 6, 26, 28r, 44, & 47)

Information Literacy Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 12r, 13r, 31, & 40)

Overall Analytical Inquiry Skills Score: \_\_\_\_\_\_\_\_\_\_\_\_
(Take mean of research skills and information literacy skills items)

**Collaboration Skills**

Working in Groups Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 1, 25, 43r, 45r, & 50)

Leadership Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 2, 10, 30, 34, & 36)

Overall Collaboration Skills Score: \_\_\_\_\_\_\_\_\_\_\_\_
(Take mean of working in groups skills and leadership skills items)

**Professional Development Skills**

Self-Management Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 21, 22, 41r, & 42)

Professional Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 7r, 11r, 15r, 17r, 23, 38r, & 46r)

Technology Skills Subscore: \_\_\_\_\_\_\_\_\_ (Take mean of Items 4r, 20, 32, 37, & 51)

Overall Professional Development Skills Score: \_\_\_\_\_\_\_\_\_\_\_\_
(Take mean of working in self-management skills, professional skills, and technology skills items)