

## Program-Level Assessment: Annual Report

Program: M.S. in Industrial-Organizational Psychology      Department: Psychology  
Degree or Certificate Level: Master's Degree      College/School: College of Arts & Sciences  
Date (Month/Year): Ending June 30, 2021      Primary Assessment Contact: Edward J. Sabin, Ph.D.  
In what year was the data upon which this report is based collected? Academic Year 2020-2021  
In what year was the program's assessment plan most recently reviewed? December 2020

### 1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle?

Two outcomes were assessed for the M.S. in Industrial-Organizational (IO) Psychology: Outcome 1: Assess the relevant scientific literature in IO Psychology. Outcome 2: Apply the relevant research methodologies in IO Psychology.

### 2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

The artifacts used for this assessment included: Master's thesis documents and Master's thesis oral defenses. These were assessed by faculty committees. Rubrics and analysis are available in separate report titled: IO Psychology 2021 M.S. Program Analysis and Results. The academic programs on the SLU Madrid campus are not related to the Industrial-Organizational Psychology M.S. Program. Due to COVID, guidance from Saint Louis University, and faculty needs, some in-person campus instruction for this program was converted to on-line instruction during this academic year. Oral defenses occurring during this time period were conducted on-line.

### 3. Assessment Methods: Evaluation Process

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and include them in/with this report.

Data were collected from the three thesis committee faculty who jointly discussed and rated relevant aspects of the master's thesis documents and associated oral defenses using rubrics developed to assess the master's thesis document and the master's thesis oral defense. Ratings were averaged by rubric item for all graduate students that completed their thesis and oral defense during this reporting period. Specific tools are given in an associated report titled: IO Psychology 2021 M.S. Program Analysis and Results.

#### 4. Data/Results

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

##### Outcome 1: Assess the relevant scientific literature in IO Psychology

During this reporting period, graduate students in the M.S. Program demonstrated very good performance in assessing the relevant scientific literature related to their thesis research (e.g., they provided relevant history of the problem being studied; detailed major theories related to the problem being studied; provided critical review of findings from the literature; and identified important gaps in current understanding of the problem).

##### Outcome 2: Apply the relevant research methodologies in IO Psychology

During this reporting period, graduate students in the M.S. Program demonstrated very good performance in applying the major research methodologies in IO Psychology for their thesis research (e.g., they provided a clear rationale for their research design; insured proper operationalization of variables; used appropriate statistical analysis; and interpreted statistical results accurately).

Due to COVID and faculty needs some instruction was provided on-line. While there is limited data available to compare on-line vs. in-person there appears to have been no negative impact from the use of on-line instruction.

#### 5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

Master's students met or exceeded expectations for the quality of their written Master's thesis and associated oral defense in relation to assessing the relevant literature and applying appropriate research methodologies in IO Psychology. This suggests that the IO Psychology curriculum that is designed to prepare students to perform independent research is achieving its objectives. The ability to perform self-directed research is an essential part of the scientist-practitioner training model used in the IO Psychology Program.

#### 6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

Ratings from the rubrics related to the artifacts were subsequently reviewed and discussed by all program faculty at an annual IO student evaluation meeting held at the end of the academic year. Subsequently, in course review and planning meetings with all IO Program faculty results were applied for upcoming educational offerings.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content
- Teaching techniques
- Improvements in technology
- Prerequisites
- Course sequence
- New courses
- Deletion of courses
- Changes in frequency or scheduling of course offerings

Changes to the Assessment Plan

- Student learning outcomes
- Artifacts of student learning
- Evaluation process
- Evaluation tools (e.g., rubrics)
- Data collection methods
- Frequency of data collection

Please describe the actions you are taking as a result of these findings.

Outcome assessment findings are applied to reinforce ongoing revisions that include new statistical approaches and research methodologies used in graduate course instruction. Likewise, improvements in technology and data analytic software are sought to improve data processing and the visualization of findings.

If no changes are being made, please explain why.

Item does not apply: changes made.

**7. Closing the Loop: Review of Previous Assessment Findings and Changes**

**A.** What is at least one change your program has implemented in recent years as a result of assessment data?

Important advances in data science are occurring in the IO Psychology profession that are driven in part by the need to handle larger data sets with increasingly complex structures and dynamics. During the past several years to keep pace with the latest advances, faculty have made changes to statistics and research methodology instruction that have included the introduction of new courses (e.g., Multi-level Theory, “R” Language, and Meta-Analysis) as well as modifications to some components of existing courses to provide more experiential learning in addition to traditional classroom instructional techniques.

**B.** How has this change/have these changes been assessed?

The introduction of new courses to the IO Psychology curriculum (e.g., “R” and Meta-Analysis) as well as modifications to some components of existing courses have been assessed through the artifacts of the thesis document and oral defense. These artifacts provide evidence of the effective incorporation of course instruction into the student’s master’s thesis research.

**C.** What were the findings of the assessment?

Changes made by faculty to graduate statistics and research methodology courses had a favorable impact on graduate student research as evidenced by performance on master’s thesis research.

**D.** How do you plan to (continue to) use this information moving forward?

IO Psychology faculty will continue to monitor new developments in the areas of research methodology and data science. Significant advances in these areas will be incorporated into new courses and/or components of existing courses to insure exemplary training in these areas.

**IMPORTANT: Please submit any assessment tools and/or revised/updated assessment plans along with this report.**

**Student Learning Outcomes:  
Assessment of Master's Thesis Document**

The three thesis committee faculty jointly discussed the following aspects of the master's thesis document to reach agreement on the rating for each of the items presented below. Each item was rated on a scale from 1 (poor) to 5 (superior). Data were aggregated for graduate students completing their Master's thesis document during this reporting period and the mean is presented in the table below for each item.

<b>Student Learning Outcomes</b>	<b>Mean Rating (N=2)</b>
<b>I. Student assesses the relevant scientific literature in IO Psychology</b>	
1. Provides relevant history of the problem being studied	4.5
2. Details major theories related to the problem	5.0
3. Provides critical review of findings from the literature	4.5
4. Identifies important gaps in current understanding of the problem	5.0
<b>II. Student applies the major research methodologies in IO Psychology</b>	
1. Provides clear rationale for research design	4.0
2. Insures proper operationalization of variables	5.0
3. Uses appropriate statistical analysis	5.0
4. Interprets statistical results accurately	4.5

**Student Learning Outcomes:  
Assessment of Master's Thesis Oral Defense**

The three thesis committee faculty jointly discussed the following aspects of the master's thesis oral defense to reach agreement on the rating for each of the items presented below. Each item was rated on a scale from 1 (poor) to 5 (superior). Data were aggregated for graduate students completing their thesis oral defense during this reporting period and the mean is presented in the table below for each item.

Student Learning Outcomes	Mean Rating (N=2)
<b>I. Student provides articulate explanations about IO Psychology's approaches that are appropriate to the audience being addressed (e.g., professional or general audience)</b>	
1. Organizes topics effectively in presentation	5.0
2. Discusses ideas at a level of presentation appropriate to a professional audience	4.5
3. When asked can, discuss main points in a style understandable to a general lay audience	4.5
4. Gives suitable explanation of important theories	4.0
5. Gives appropriate explanation of methods used for analysis	4.5
6. Discusses importance of findings	4.0
7. Demonstrates a good understanding of the topic that is not overly dependent on notes	4.5
8. Engages with audience	5.0
9. Paces presentation to facilitate understanding	4.0
10. Is comfortable speaking in front of the group	4.5
11. Uses clear speaking voice that is audible to audience	5.0
12. Maintains eye contact with audience	4.5
13. Makes effective use of body movement and gesture to enhance understanding	4.5
14. Responds effectively to questions from the audience	5.0
15. Makes effective use of time during presentation	5.0