SAINT LOUIS UNIVERSITY.

Program-Level Assessment: Annual Report

Program: Industrial-Organizational Psychology	Department: Psychology
Degree or Certificate Level: Ph.D.	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 evaluated during this academic year: 1. Assess the relevant scientific literature in Industrial-Organizational (IO) Psychology; and 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 following artifacts were used for this assessment: doctoral comprehensive examination documents, doctoral comprehensive oral examinations, dissertation documents, dissertation oral defenses, and professional activity project documents. These artifacts were assessed by IO faculty committees. Rubrics and analysis data are available in a separate report titled: IO Psychology 2021 Ph.D. Program Analysis and Results. The academic programs on the SLU Madrid campus are not related to the IO Psychology Ph.D. 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 using rubrics for the assessment of the doctoral comprehensive examination documents and associated orals and the dissertation documents and oral defenses, and professional activity project documents. IO committee faculty responsible for these evaluations jointly discussed and rated relevant aspects of these artifacts. Ratings were averaged by rubric item for all graduate students that completed their written and/or oral doctoral comprehensive exams and/or dissertation and oral defenses and/or professional activity project documents during this reporting period.   Rubrics used are presented in the report titled: IO Psychology 2021 Ph.D. 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, IO graduate students evaluated in the Ph.D. Program demonstrated outstanding performance in assessing the relevant scientific literature in their comprehensive doctoral examinations and in their dissertation research and oral defense (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

Graduate students evaluated in the Ph.D. IO Program during this reporting period demonstrated outstanding performance in applying the major research methodologies during their comprehensive examinations and in their dissertation research and oral defense (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 during this reporting period. While there is limited data available to compare on-line vs. in-person instruction there appears to have been no negative impact from the use of on-line instruction. The IO Psychology Ph.D. Program is not related to educational offerings on the Madrid campus.

Beyond the standard rubrics used for outcomes assessment there were two other notable outcomes during this time period. The three Ph.D. students who completed their degrees during this time period had a number of peer reviewed articles published in well-respected journals. These three Ph.D. students are now employed in very competitive positions in academic or applied corporate settings. These positions all required outstanding skills in research methodology and statistical analysis.

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5. Findings: Interpretations & Conclusions

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

Students reviewed for this report in the IO Psychology Ph.D. Program met or exceeded expectations for the quality of their written and oral comprehensive doctoral examinations and their dissertation and associated oral defense in relation to the abilities to assess the relevant literature and apply appropriate research methodologies in IO Psychology. This suggests that the IO Psychology curriculum that is designed to prepare doctoral students to perform independent research and apply best practice is achieving its objectives. The ability to perform, interpret, and apply self-directed research is an essential part of the scientist-practitioner training model used in the IO Psychology Program.

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6. Closing the Loop: Dissemination and Use of <u>Current</u> Assessment Findings

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

> All IO Psychology faculty reviewed and discussed ratings from the rubrics related to the artifacts assessed at the 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.

> Assessment outcome findings are used to sustain current effectives practices and to reinforce a continuous process for updating new statistical approaches and methodologies in current courses. Improvements in technology will be sought to improve data handling/storage and the visualization of analytic techniques.

If no changes are being made, please explain why.

> Item does not apply: changes made.

7. Closing the Loop: Review of <u>Previous</u> Assessment Findings and Changes

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

> Use of data science analytics has increased in the IO Psychology profession in recent years. 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., "R" and Meta-Analysis) as well as modifications to some components of existing courses to provide increased experiential learning in addition to traditional classroom instructional techniques. These changes impact students at both the Master's level and Ph.D. level of the IO Psychology Graduate Program. IO faculty monitor developments in academic data science and its use in applied settings to incorporate important advances into our training program in IO Psychology.

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

Introduction of new courses into the IO Psychology curriculum (e.g., "R" and Meta-Analysis) as well as modifications to components of existing courses have been assessed through the artifacts of the comprehensive doctoral examinations, dissertation documents and oral defenses. These artifacts provide evidence of the effectiveness of modifications of course content in research methodology and statistics.

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 comprehensive doctoral examinations and the dissertation document and oral defense. Other results include the favorable rate of peer-reviewed publications by the Ph.D. students that evidence their methodological and statistical competencies.

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

As we move forward, IO Psychology Program 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. Strong research mentoring programs by faculty through their research labs will continue.

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

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Student Learning Outcomes:
Assessment of the Doctoral Comprehensive Examination Document

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The three doctoral examination committee faculty jointly discussed the following aspects of the comprehensive examination 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 comprehensive examination document during this reporting period and the mean is presented in the table below for each item.

Student Learning Outcomes	Rating (N=1)
I. Student assesses the relevant scientific literature in IO Psychology	
1. Provides relevant history of the problem being studied	4.5
2. Details major theories related to the problem	4.0
3. Provides critical review of findings from the literature	4.5
4. Identifies important gaps in current understanding of the problem	4.0
II. Student applies the major research methodologies in IO Psychology	
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 the Doctoral Comprehensive Oral Examination

The four faculty serving on the comprehensive oral examination committee jointly discussed the following aspects of the oral examination 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 comprehensive oral examinations during this reporting period and the mean is presented in the table below for each item.

Student Learning Outcomes	Rating (N=1)
I. Student assesses the relevant scientific literature in IO Psychology	
1. Provides relevant history of the IO topic being discussed	4.0
2. Details major theories related to the IO topic being discussed	4.5
3. Provides critical review of findings from the IO literature	5.0
4. Identifies important gaps in current understanding of topics discussed	5.0
II. Student applies the major research methodologies in IO Psychology	
1. Provides clear rationale for various research design	4.5
2. Provides clear operationalization of variables	5.0
3. Discusses appropriate statistical analysis to address various problems	5.0
4. Interprets statistical results accurately	4.5
III. Student provides articulate explanations about IO Psychology's approaches that are appropriate to the audience being addressed (e.g., professional or general audience)	
1. Answers questions at a level appropriate to a professional audience	4.5
2. When asked can, discuss IO issues in a style understandable to a general lay audience	4.0
3. Responds effectively to a wide range of questions from the committee	4.5
4. Is comfortable speaking in front of the committee	4.5

Student Learning Outcomes:
Assessment of the Doctoral Dissertation Document

The three dissertation committee faculty jointly discussed the following aspects of the dissertation 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 dissertation document during this reporting period and the mean is presented in the table below for each item.

Student Learning Outcomes	Mean Rating (N=3)
I. Student assesses the relevant scientific literature in IO Psychology	
1. Provides relevant history of the problem being studied	5.0
2. Details major theories related to the problem	4.5
3. Provides critical review of findings from the literature	4.25
4. Identifies important gaps in current understanding of the problem	4.75
II. Student applies the major research methodologies in IO Psychology	
1. Provides clear rationale for research design	4.5
2. Insures proper operationalization of variables	5.0
3. Uses appropriate statistical analysis	4.7
4. Interprets statistical results accurately	5.0

Student Learning Outcomes:
Assessment of Doctoral Dissertation Oral Defense

The three dissertation committee faculty jointly discussed the following aspects of the dissertation's 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 oral defense during this reporting period and the mean is presented in the table below for each item.

Student Learning Outcomes	Mean Rating (N=3)
I. Student provides articulate explanations about IO Psychology's approaches that are appropriate to the audience being addressed (e.g., professional or general audience)	
1. Organizes topics effectively in presentation	5.0
2. Discusses ideas at a level of presentation appropriate to a professional audience	4.7
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	4.5
5. Gives appropriate explanation of methods used for analysis	5.0
6. Discusses importance of findings	4.7
7. Demonstrates a good understanding of the topic that is not overly dependent on notes	4.5
8. Engages with audience	4.75
9. Paces presentation to facilitate understanding	5.0
10. Is comfortable speaking in front of the group	5.0
11. Uses clear speaking voice that is audible to audience	4.75
12. Maintains eye contact with audience	5.0
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

Student Learning Outcomes:
Assessment of Professional Activity Projects

Directions: Two IO faculty jointly discuss the following aspects of the Professional Activity Project document to reach agreement on the rating for each of the items presented below.

Student Learning Outcomes	Mean Rating (N=3)
I. Student assesses the relevant scientific literature in IO Psychology	
1. Provides relevant history of the problem being studied	4.5
2. Details major theories related to the problem	4.5
3. Provides critical review of findings from the literature	4.75
4. Identifies important gaps in current understanding of the problem	4.5
II. Student applies the major research methodologies in IO Psychology	
1. Provides clear rationale for research design	4.5
2. Insures proper operationalization of variables	5.0
3. Uses appropriate statistical analysis	5.0
4. Interprets statistical results accurately	5.0