Using Key Courses in the Psychology Curriculum as the Basis for an Undergraduate Research Program

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Abstract
The Bennett College Psychology curriculum was updated in 2009 to place a greater emphasis on research in order to improve performance in core courses, promote transfer of knowledge and skills to upper-level courses, and to enhance student preparedness for internships, career entry, and post-baccalaureate study. First exposure to the value of acquiring research skills and experience occurs during the first year of matriculation in the Orientation to Psychology and General Psychology courses. Subsequently, the curriculum mandates a two-semester sequence of co-requisite laboratory-based research methods and statistics courses, providing multiple opportunities for reinforcement of concepts across these courses. The statistics/methods course sequence emphasizes the development of information literacy skills, ethical research practices, data collection techniques, proficiency with SPSS, and preparation of APA-style documents and presentations. The sequence also serves as a pipeline for each student to develop a research proposal that may be implemented as a senior thesis project, independent study, or as a component of selected upper-level courses. For example, the newly revised Tests & Measurements course, an elective recommended to students interested in research or in pursuing graduate degrees, leverages skills and knowledge acquired in the statistics/methods course sequence. Tests & Measurements students work collectively on projects involving theory development, research design, the IRB approval process, data collection, statistical analysis, and present their work at a campus-wide Interdisciplinary Research Day. These curricular changes are discussed with regard to observed impact and need for further improvement. Non-curricular strategies supporting the research focus, such as field trips to research conferences and utilization of peers and alumnae as role models, are also discussed.

Curriculum pattern except for the BA degree in Psychology showing ideal sequence of courses emphasizing research competencies.

Table 1
Learning Goals and Emphasized Skills: Developing Research Competencies Across the Bennett College Psychology Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Description</th>
<th>Required Courses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS 101</td>
<td>General Psychology</td>
<td>Overview of psychology concepts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS 200</td>
<td>Research Methods</td>
<td>Introduction to research methods</td>
<td></td>
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<tr>
<td>PS 274</td>
<td>Descriptive Statistics</td>
<td>Introduction to descriptive statistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS 275</td>
<td>Inferential Statistics</td>
<td>Introduction to inferential statistics</td>
<td></td>
<td></td>
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<tr>
<td>PS 457</td>
<td>Senior Thesis</td>
<td>Preparation for senior thesis</td>
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</tr>
</tbody>
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Tableau
Introduction / Emphasis / Practice / Mastery

Research

Non-Curricular Strategies
- Support student participation in undergraduate research workshops.
- Take students to undergraduate research conferences.
- Utilize alumnae and upper-level students with research experience as role models and mentors.
- Encourage participation in campus Interdisciplinary Research Day.
- Offer workshops on finding summer REU and other research opportunities.

Observed Impact
- Increased student interest in conducting research, exploring research-focused graduate programs & careers, and pursuing summer research internships.
- Increased understanding that research methods & statistics courses are an integral part of the psychology curriculum & that mastery of these skills can enhance graduate school and career opportunities.
- Enhanced motivation & performance (on average) in statistics classes.
- General math classes & prerequisite math classes.
- Students are better able to see how concepts in Statistics apply to Research methods and vice-versa, rather than considering these as independent.
- More students are electing to do senior thesis projects, even though few of them are required to do so.

Recommendations for Improvement
- Continue emphasizing good scholarship practices and academic integrity in the early stages of the curriculum.
- Improve coordination of statistics & research methods courses; conduct more "cross-over" laboratory exercises (collect data in research methods, summarize/display/analyze data in statistics), and more closely synchronize presentation of related material to maximize student retention & transfer of material.
- Emphasize how mastery of knowledge & skills taught in research methods & statistics courses can contribute to better preparation in other psychology courses. Emphasize that mastery & transfer of this material is expected, especially in courses such as PS 436 Tests & Measures.
- Improve assessment of SPSS proficiency in statistics courses to ensure that students do not depend on others to analyze their data and thus avoid acquiring expected mastery of SPSS; this would eliminate the need to re-teach this material in research-focused elective courses.
- Enable more students to take statistics & research methods courses during their sophomore year. Typical incoming students require 2-3 semesters to complete math prerequisites, so many students do not take statistics and research methods until their junior year.
- Be more proactive in obtaining assistance for students struggling with math so that they meet the prerequisites for research methods/statistics in their sophomore year or junior year at the latest. The percentages of research methods/statistics students who were seniors in 2011-2012, 2012-2013, & 2013-2014 were 13%, 36%, and 24%, respectively. This is much too high.

Reference