Examining the Locus of Difficulty in PSY 217
A Proposal for
Development of Academic Major Programs to Promote Retention and Graduation (Title III grant)

Project Faculty:

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Project Summary

The purpose of this project is to examine student and faculty perceptions of factors barring successful completion of PSY 217 (Introduction to Research Methods), followed by the implementation of support mechanisms (interventions, additional tutorials, writing support, etc.) targeted at those trouble areas. The goal of this work is to help our students successfully complete PSY 217 in a reasonable amount of time to ensure high retention and timely graduation. Assessment of the efficacy of these mechanisms will be assessed during Year 2.

Project Background

The psychology curriculum is one that is firmly rooted in science. As part of this curriculum, all majors are required to take a three-semester sequence of courses geared toward their learning of and participating in the research process. This three-course sequence, usually beginning in their sophomore year, includes:

1. PSY 227 – Statistics. In this course, students learn the statistical tests that dominate psychological research.

2. PSY 217 – Introduction to Research Methods. In this course, students learn the basics of research design and the scientific method, both by textbook learning and by designing and proposing an independent research study of their own.
3. PSY 327 – Research Methods II. In this course, students apply what they’ve learned from PSY 217 by conducting their independent research study plus other studies designed by groups of students and/or the instructor.

Because these courses are our core curriculum, and each course builds on the previous ones in the sequence, a grade of at least C is required to pass. These courses, because they must be taken sequentially over three different semesters, have the potential to derail four-year graduation plans if a course is failed.

A course’s risk rate is defined as the percentage of students who fail or withdraw from the course, and students who elect the credit/no-credit option and don’t pass. In a typical class, the risk rate would include only grades of F, WP, WF, and NC. In the classes above, the risk rate also includes grades of C-, D+, and D. An examination of the above classes from Fall 2005 through Fall 2009 reveals the following risk rates:

- PSY 227 – Statistics: 23.37%
- PSY 217 – Introduction to Research Methods: 36.47%
- PSY 327 – Research Methods II: 17.57%

A PSY 217 risk rate of over 36% means that in any given course, 1/3 of the students must re-take PSY 217 again before they are allowed to enroll in PSY 327. (Note that this analysis was performed by course, so it’s possible that a single student who failed the course three times during the time period of analysis would have been counted three times.) A student who fails PSY 217 may be behind a semester, or may need to take PSY 217 over the summer to try to catch up. Therefore, this project will focus on the difficulties faced by students enrolled in (or previously enrolled in) PSY 217 and not focus on these other courses, whose risk rates are substantially lower.
At this time, it is unknown if or how PSY 217 affects “at-risk” students differently than students who are not “at-risk”. If a student enrolls in PSY 217 with poor computer skills, poor writing skills, and poor study habits, s/he is likely to face a number of challenges in completing the coursework that go beyond the difficulty of the material. Additionally, because students who are low-income may not possess the resources to take summer classes, failing PSY 217 will require that they spend another fall or spring semester re-taking it, delaying PSY 327. Worse yet, if they repeatedly fail the course, their graduation may be delayed or they may become frustrated, prompting them to switch majors as juniors (or later) or even leave Eastern. As part of this project, each participant’s “at-risk” status will be determined, and close attention will be paid to difficulties reported by them compared to difficulties faced by students not “at-risk”.

The survey to be given to students and instructors of PSY 217 will contain questions pertaining to perceived difficulty with PSY 217, as well as demographic questions and student behavior questions. This survey has been developed already (see Appendix), and is currently being reviewed by the Committee for the Use of Human Subjects in Research (CUHSR). Below are the critical components of the student survey.

- Number of times PSY 217 was taken
- Workload (# of credits that semester, work hours)
- Prior Preparation for PSY 217 (# of PSY classes prior, PSY 227 [Statistics])
- Free-Response Items
  - Biggest fears prior to enrollment
  - Perception of course prior to enrollment
  - Biggest challenges
  - How much have they struggled
- Attendance/Help-Seeking Behaviors (why missed class, Writing Center & instructor visits)
- Specific Difficulties
  - Attendance
  - Material (Definitions/Facts, Statistics, Application)
  - Performance (Exams, Homework)
  - Research Project (Idea, Finding Articles, Reading Articles, Design, Measure, Writing, Plagiarism, APA Style)
  - Other

In conclusion, this project will enable us to determine what roadblocks exist to prevent successful completion of PSY 217. Once these roadblocks are identified, proper mechanisms can be put in place to support students as they are taking the course. Ultimately, it is hoped that these supports will lower the risk rate without sacrificing course rigor, thus promoting higher on-time graduation rates and ensuring our students have a more positive experience with PSY 217.

**Project Goals**

**Goal 1:** Identify which component(s) of PSY 217 are the most difficult for students. (Fall 2010)

**Goal 2:** Develop targeted support mechanisms to assist students with those components. This will promote student success, and will decrease the rate of failure and the need to re-take PSY 217 (Goal 1 of Title III grant). (Spring 2011)

**Goal 3:** Assess the efficacy of the support mechanisms by providing them to students in future semesters of PSY 217, and share these results and supports with other faculty members. This will help promote
engagement of our faculty in these support services, especially for “at-risk” students (Goal 2 of Title III grant). (Fall 2011 & Spring 2012)

**Project Methodology**

**Phase 1**: This study will involve an online survey to be filled out by students enrolled in PSY 217 during Fall 2010 or those who were enrolled previously, in exchange for the typical extra-credit that faculty offer students for participating in research (see Appendix). A third survey will be filled out by instructors who teach PSY 217.

**Phase 2**: During Spring 2011, data from the surveys will be analyzed and support mechanisms will be developed to target those course components reported to be most difficult. The exact nature of these mechanisms won’t be fully known until the data are analyzed, although some potential ideas are:

- Vista-based modular tutorials (to assist with understanding material OR writing support)
- Developing homework assignments (to assist with application of material to new examples or situations)
- Coordinating group study sessions or targeted in-person tutorials (to assist with understanding material, designing the project, promoting a social support network for struggling students, etc.)
- Hiring additional tutors, trained by the psychology faculty, to focus on PSY 217
- Asking faculty members to be more proactive in referring students to the Academic Services Center
Phase 3: These mechanisms will be created or planned during Spring 2011 and Summer 2011 so that they may be used by students enrolled in PSY 217 in Fall 2011 and Spring 2012. It is during these two semesters that the efficacy of the support mechanisms will be assessed and the results shared with faculty at Eastern and at professional conferences.

**Project Outcomes**

**Phase 1:** This project will reveal which components of PSY 217 are most difficult for students.

**Phase 2:** This project will produce targeted supports for students enrolled in PSY 217 that will likely assist students for years.

**Phase 3:** Assessment of the efficacy of these supports will be submitted for publication and presentation at professional conferences, as well as shared with faculty members here at Eastern.

**Assessment of Project Outcomes**

With the support mechanisms in place, a student who uses such mechanisms should be more likely to pass PSY 217 than a student who does not. However, it is not sufficient to simply look at the grades of students who used the supports and those that didn’t within a single class because some other factor, such as motivation, could be producing the difference. The only way to know that it was the supports that lead to the higher grades is to have one group of students have access to the supports and one group of students not have access to the supports. Clearly, this is not ideal on a full-semester scale, so multiple assessments will be made during Fall 2011 and Spring 2012 that test the individual supports developed. After each assessment of the “no-support” condition, the relevant supports will be provided to the students and a second assessment will occur.
Additionally, grades (with student information removed) from semesters where supports were provided will be examined and compared to prior semesters without the supports. It is expected that grades will be higher in semesters where the supports were available than in semesters where the supports were not available.

**Budget for 2010-2011**

Until the study is complete, it is impossible to know for sure what will be required, but some potential options include developing online training modules or homework assignments, coordinating group study sessions/targeted in-person tutorials, or hiring additional tutors specifically trained by the psychology department to assist PSY 217 students. Therefore, the biggest monetary need is in faculty time required to develop these supports. If student tutors are needed, these will be hired and trained during Spring 2011 in anticipation for Fall 2011 classes.

$300 \times 3 = \$900$  
Stipends for project faculty members to run the study and analyze the results

$300 \times 1 = \$300$  
Stipend for project faculty member to develop online tutorials

$300 \times 1 = \$300$  
Stipend for project faculty member to develop and coordinate group study sessions/in-person tutorials

$300 \times 1 = \$300$  
Stipend for project faculty member to develop and coordinate tutor training session(s)

$200 \times 1 = \$200$  
Refreshments and supplies for tutor training session(s)

**TOTAL**  
$\$2,000$
Appendix

Survey Regarding Student Perceptions of PSY 217 (Introduction to Research Methods)

Instructions:

Please answer the following items honestly. Your answers are confidential and anonymous, so do NOT include any identifying information, and do NOT name your PSY 217 instructor. You are allowed to skip questions you do not feel comfortable answering. Your responses will assist the research team in identifying the key problem areas in PSY 217, and will allow us to develop mechanisms to assist students in successfully completing this course.

PSY 217 History

1. How many times have you taken PSY 217, including this semester? (Please include the times you’ve withdrawn from the class) ________

2. How many times have you completed PSY 217? (Please include only times when you’ve finished the semester and earned a letter grade, pass or fail… this does NOT include the current semester) ________

Demographic Questions

3. What is your gender?  Female  Male

4. What is your age?  ________

5. What is your racial/ethnic background? (Please check all that apply)

   American Indian or Alaska Native  Asian  Black or African-American

   Hispanic or Latino  Native Hawaiian or Other Pacific Islander  White

Target Population Identification

Why do we ask these questions? This project is being submitted for a grant geared toward improving the retention and graduation rates of first-generation college students who are minority and low-income. You can leave these items blank if you don’t want to answer them, but remember that your responses are anonymous and confidential.

6. Are you a first-generation college student? (This means that your parents, aunts/uncles, or grandparents did not go to college)  Yes  No

7. What is your parent’s approximate yearly income? (Or, your income if you are a nontraditional student)

   less than $10,000  $10,000 – 20,000  $20,000 – 30,000  $30,000 – 40,000

   $40,000 – 50,000  $50,000 – 60,000  $60,000 – 70,000  $70,000 – 80,000
8. In which town did you attend high school? (If you attended multiple high schools, enter the one most recently attended) _______

Workload/Previous Experience Questions

9. How many credits are you currently taking? _______

10. How many hours per week do you work? _______

11. Before enrolling in PSY 217, how many college-level psychology CLASSES (not credits) had you taken? (include PSY 100 in this count) _______

12. Before enrolling in PSY 217, did you complete PSY 227 - Statistics? Yes No

13. If “Yes”, what grade did you earn in Statistics?
   A  A-  B+  B  B-  C+  C  C-  D+  D  F

Free-Response Section

14. Think back to how you felt before enrolling in PSY 217. What were your biggest fears?

15. Before enrolling in PSY 217, what was your perception of the course? How did you develop this perception?

16. Now that you are in PSY 217, what are your biggest challenges?

17. How much do you think you are struggling with PSY 217?

Attendance/Help-Seeking Behavior

18. So far, approximately how many classes have you missed? (Note that as of Friday, November 12th, a MWF class has met 32 times and a TR class has met 22 times) _____

19. Why did/do you miss classes? _____

20. Have you gone to the Writing Center? Yes No

21. Do you plan to go to the Writing Center? Yes Maybe No

22. Do you perceive your instructor to be available?
   Yes, Always  Yes, Sometimes  Not Really  No
   I have not tried to meet with him/her

23. How comfortable do you feel approaching your instructor outside of class?
   Very comfortable  Somewhat comfortable  Neutral
   Somewhat uncomfortable  Very uncomfortable
24. How many times have you seen your instructor outside of class? _____

**Perceived Difficulties in PSY 217**

25. In your experience in PSY 217, how difficult are each of the following tasks for YOU?

1 = this is very easy for me
2 = this is somewhat easy for me
3 = this is neither very easy nor very difficult for me
4 = this is somewhat difficult for me
5 = this is very difficult for me

_____ Attendance
_____ Learning facts/definitions
_____ Statistics
_____ Applying material to specific examples
_____ Exams/quizzes
_____ Homework assignments
_____ Coming up with a project idea
_____ Finding articles/using PsycINFO
_____ Reading/understanding articles
_____ Turning an idea into a research design
_____ Finding an appropriate measure for the variables
_____ Writing the research paper
_____ Plagiarism
_____ APA style
_____ Other (please explain) __________________________________________

Please provide any additional comments here.