Assessment of Student Learning in the Education Sciences Major
Final Report: Summer 2015

Project Lead: Judith H. Sandholtz, Professor, School of Education
Graduate Student Researcher: Sarah Gilliland, School of Education

Overview
　　　　Based on faculty input and our prior work in the undergraduate minor in Educational Studies, we modified our goals and overall assessment plan for 2014-15 from our original proposal. The following are our updated goals:

Goals for 2014-15
1. Review and potentially revise proposed learning outcomes.
2. Compile matrix identifying which outcomes are addressed in each course.
3. Assess use of writing rubrics within the major and explore possibility of developing an upper division writing course within the major.
4. Identify and pilot test an embedded assessment within a core course to examine student understanding of educational research methods.
5. Gather information about the student population within the major, specifically those enrolled in the educational research core courses.
6. Review findings with the Undergraduate Steering Committee.

Learning Outcomes in Core Courses
　　　　We began by addressing goal #2 and compiled a matrix delineating which of the four learning outcomes (included in the proposal for the Education Sciences major) were addressed in each course. The learning outcomes are:

1. Students will demonstrate an understanding of the main theoretical perspectives and research findings on learning and human development in educational settings.
2. Students will demonstrate an understanding of educational research methods and critically evaluate empirical evidence related to educational practices and outcomes.
3. Students will effectively frame and suggest solutions to problems related to educational theory, policy, and practice.
4. Students will apply educational theories and evidence in conducting and reflecting on fieldwork or research

　　　　We accomplished this task through a combination of a faculty survey and analysis of course syllabi. We then focused on the core/required courses. Since there currently is no capstone course in the Education Sciences major, in order to reach all students in the major, we need to focus our assessment on the required courses. For the required courses, we expanded the matrix to include information about the types of assignments (tests, papers, projects, presentations) in each course (based on the analysis of the syllabi). This information, summarized in the table below, is useful in identifying potential embedded assessments.

　　　　As a preliminary step towards goal #1 and as part of our matrix of courses and learning outcomes for the core courses, we also identified which of the learning outcomes from the minor in Educational Studies were addressed in each of the core courses. We used this matrix to

identify similarities and differences in the learning outcomes for the major and the minor as the first step in our review of the proposed learning outcomes for the major. We subsequently met with the director and steering committee of the undergraduate major to further discuss the learning outcomes for the major in Education Sciences.

Course #	Course name	Education Science Major Outcomes				Type of Assessments
		1. Students will demonstrate an understanding of the main theoretical perspectives and research findings on learning and human development in educational settings.	2. Students will demonstrate an understanding of educational research methods and critically evaluate empirical evidence related to educational practices and outcomes.	3. Students will effectively frame and suggest solutions to problems related to educational theory, policy, and practice.	4. Students will apply educational theories and evidence in conducting and reflecting on fieldwork or research	
ED 10	Educational Research Design		X			Exams (3)
ED 15	Statistics for Education Research		X			Homework; Exams (3)
ED 30	21st Century Literacies	x	x	x	Research but not fieldwork	Presentation of research paper; Facebook project and presentation
ED 40	Theories of Development and Learning Applied to Education	X	x	x		Exams (2); Final Paper (structure not specified)
ED 50	Origins, Purposes, and Central Ideas in K12 Education		x	X		Midterm exam, presentation, final assessment (from ED minor)

**Pilot Assessment Data on Learning Outcome #2**

We collected data from the examinations embedded in ED 10 (Educational Research Design) to examine as pilot data for learning outcome #2 (Students will demonstrate an understanding of educational research methods and critically evaluate empirical evidence related to educational practices and outcomes.) We specifically selected learning outcome #2 for our initial assessment due to the focus on conducting and evaluating research throughout the major. We selected ED 10 for two reasons: 1) Winter 2015 was the first time ED 10 (a required course for the major) was offered and the course had a large enrollment (thus enabling us to capture as large a sample of students in the major as possible), and 2) the focus of the course directly related to the learning outcome of interest.

We collected data from the three examinations used for assessment in the course and examined student performance at the group level for 1) overall performance (exam means) and

2) specific content level performance. We first analyzed the overall content of the exams. The exams addressed a broad number of topics, all of which were pertinent to learning outcome #2. These topics ranged from research ethics, to design, to variables and measurement, and issues of reliability and validity. Successful completion of the items on these exams would reflect knowledge of research design and implementation as well as some of the skills needed for critical analysis of educational literature. Student performance on these three exams indicated adequate mastery of the content with the class means at approximately 83% for all three exams. We used the item analyses from the examinations to identify the questions and content areas with the highest and lowest student performance. The topics on which students performed best across all of the exams included: concepts of validity, interpreting graphs, types of measurement, and issues of IRB/ethics. Students struggled the most with identifying different types of research designs and types of variables.
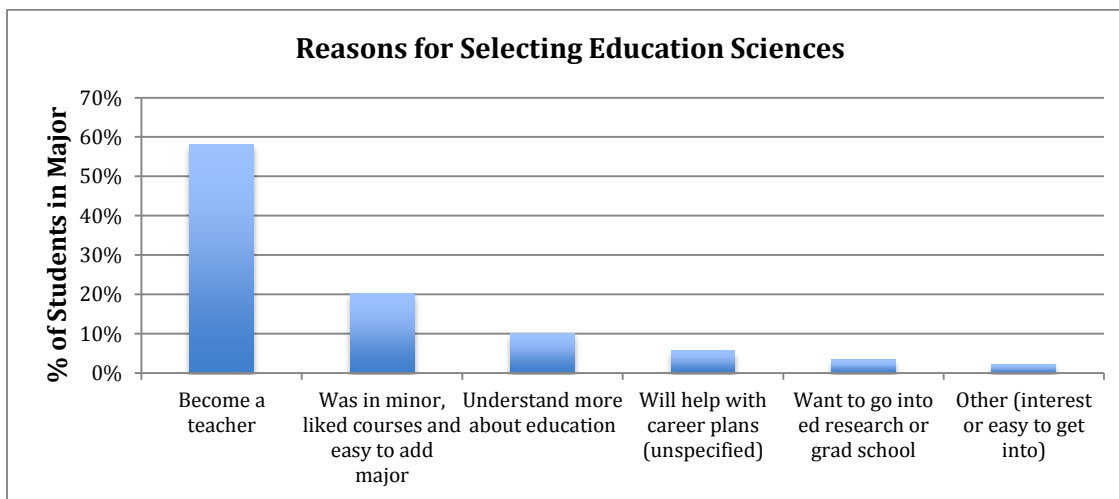
Student Information Data

    With the implementation of the new major in fall 2014, we wanted to gather more information about the students in the major and specifically those who enroll in the educational research core courses. Students may fulfill the requirement of the research core courses through applicable courses offered in other departments. We conducted a survey in the winter 2015 sections of ED 10 (Educational Research Design). This course is a required course for students in the Education Sciences major, was the first educational research course that was offered in the new major, and had a large enrollment (223 students). A total of 203 students responded to the survey (91% response rate). Currently, 420 students are enrolled in the major, and we were able to survey 178 of them through ED 10. Of these 178 students in the major and taking the educational research course, 105 of them are double majors. The most common second major for this group is Public Health followed by Political Science. Data subsequently obtained from the registrar indicate that the most common second major for Education Sciences majors is Psychology and Social Behavior (PSB). Only 3 students who responded to the survey identified PSB as a second major, suggesting that many students had substituted prior coursework in other departments in place of ED 10.

Most Common Second Major
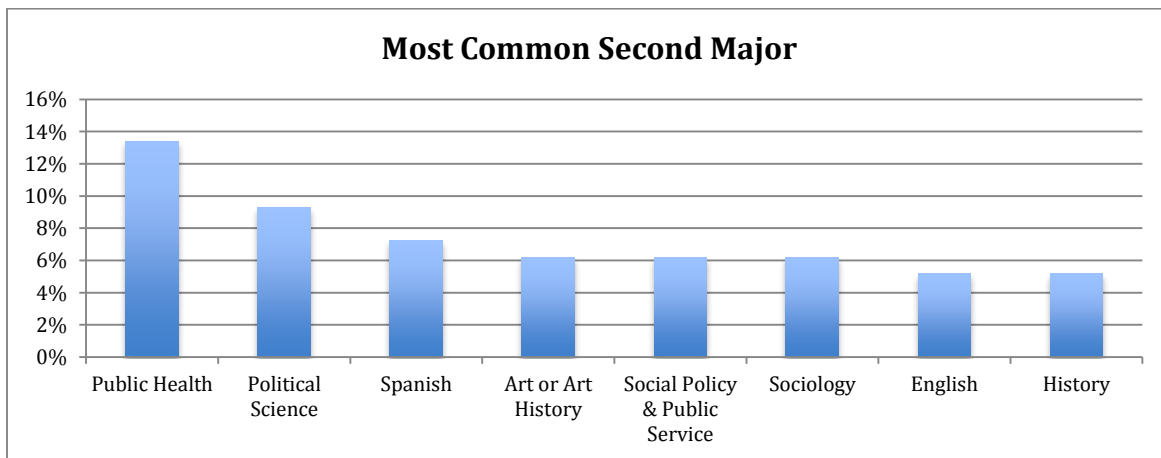
Fifty-four of the 178 students changed to Education Sciences from a prior major. As displayed in the chart below, the most common prior majors were Psychology and Social Behavior and Mathematics.

Prior Majors
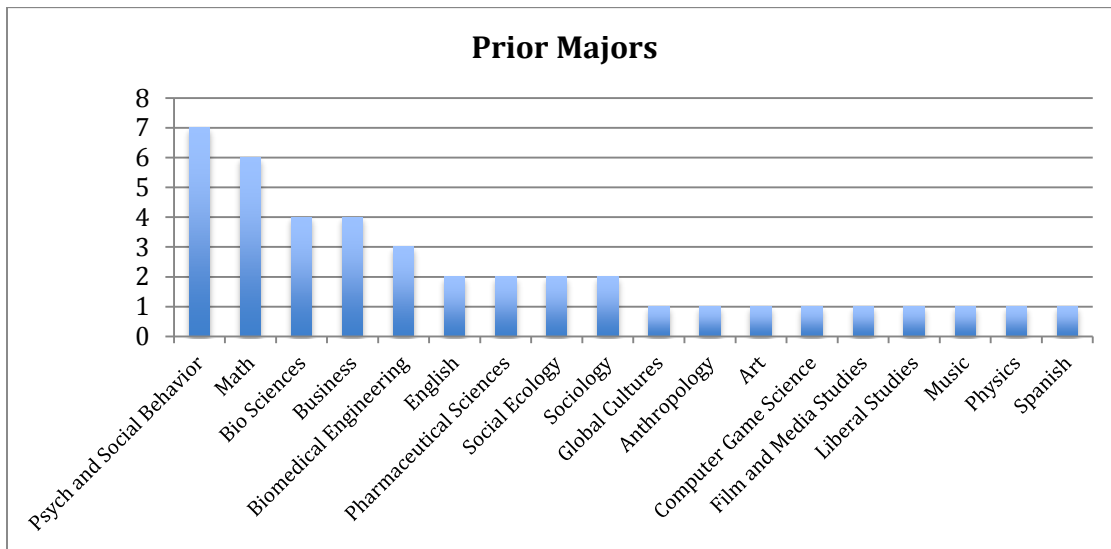
The majority of the students selected Education Sciences as their major because of an interest in becoming a teacher (103 out of 178). Other students opted for the major because they were already enrolled in the Minor in Educational Studies and they enjoyed their courses (36 out of 178).

Reasons for Selecting Education Sciences

The students also represent a unique demographic with 42% Hispanic/Latino and 39% Asian/Pacific Islander. The percentage of surveyed students who are the first in their family to attend college is 44%.

In order to gain more information about the students' perspectives on the major, we provided an opportunity for open-ended comments on the survey. The most common responses indicated the students' enjoyment of the major. Students also offered suggestions for additions to the major such as more multicultural courses, resources, and unit requirements.

Open-Ended Comments
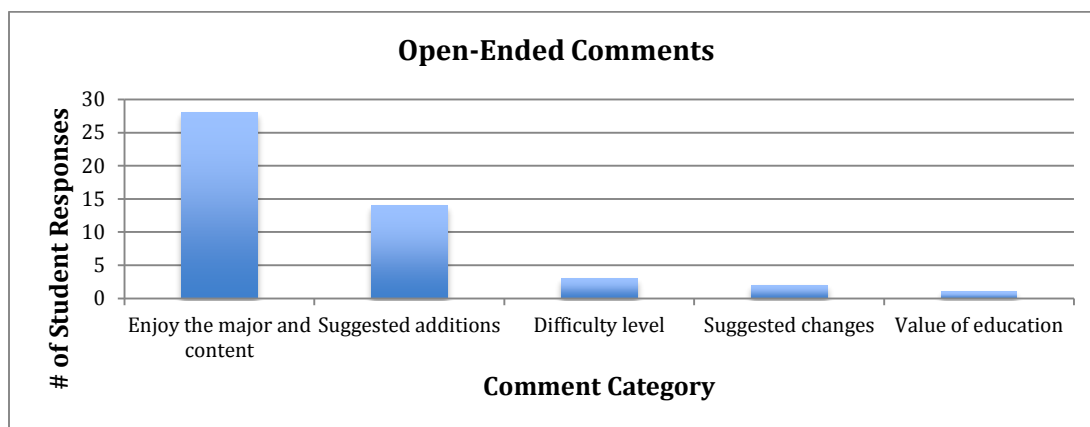
Learning Outcomes, Fieldwork, and Writing

Learning outcomes. We met with the executive committee for the undergraduate major to review the learning outcomes and discussion students writing and fieldwork requirements. The outcomes for the undergraduate minor were developed in 2011 through a consensus process involving all of the faculty teaching in the undergraduate minor. With the executive committee, we discussed the similarities and differences between the learning outcomes from the minor and the new proposed outcomes for the major. The group identified the emphasis on research methods in the proposed outcomes for the major as the most significant difference between the two sets of outcomes. This discussion led to questions about differences in learning outcomes between majors and minors in other departments and whether the School of Education should have one set of learning outcomes for both the major and minor or different outcomes for the two programs.

We met later in the spring with the larger steering committee for undergraduate programs in the School of Education to review the learning outcomes and determine a course of action. The group discussed the importance of including a learning outcome focused on educational research methods as part of outcomes for the major that would not be included for the minor. The group discussed the possibility of developing a merged set of outcomes that draws on the content of both the established outcomes for the minor and the proposed outcomes for the major. Members of the steering committee agreed to examine the connections between the two sets of outcomes and move forward with developing a new set of outcomes based on an aggregate of the two sets.

Fieldwork. During our assessment work on the minor, many faculty members had raised concerns about students who complete outside fieldwork and get signed off rather than completing any assignment or activity to link fieldwork to course learning. Given these types of concerns, the steering committee is currently re-examining the types of experiences that are allowed for the fieldwork component. The steering committee agreed that the most effective use of fieldwork is within a course such that students have support in drawing connections between their classroom learning and fieldwork experiences.

       Writing. In meetings with the executive committee and with the steering committee for undergraduate programs in the School of Education, we followed up on issues raised during the assessment of the undergraduate minor. The primary issue raised during the prior assessment was that writing development was an important aspect of the undergraduate program, yet there were few means within the School of Education to support students in developing their writing. Given these concerns and recommendations from our prior work, the steering committee is currently investigating the creation of a writing intensive course (ED 179W) that would address educational content and qualify as an upper division writing course. For this course, enrollment would be held to a 20:1 student to instructor/TA ratio. The steering committee supports the development of this course and is moving forward with its development. In addition, the steering committee is exploring other ways to support undergraduate student writing development.