Office of
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Research Briefs from the Office of Research and Planning
EOPS Student Learning Outcomes (SLO) Assessment

***Overview*:** In Spring 2010, the Extended Opportunities Programs & Services (EOPS) Department administered a collaboratively developed form to assess student understanding and knowledge of the EOPS program following the orientation. Accordingly, the EOPS Department developed the following learning outcome:

- SLO 1 – New students who attend orientation will be familiar with eligibility requirements and services offered through the EOPS program.

In order to help with the process of learning how SLOs work, the following brief provides an example of the Use of Results (see Figure 1).

***Methodology*:** A pre-post assessment was developed to assess student knowledge of the EOPS program after the Orientation. The ten question multiple choice pre-post assessment was administered to the students at the beginning of the orientation to determine their knowledge level of the EOPS program. At the conclusion of the orientation, students were asked to answer the same ten multiple choice questions to determine how helpful the orientation was at informing students of the EOPS requirements and available resources.

Effect Size and Statistical Significance. The effect size statistic is commonly used in meta-analyses. A meta-analysis uses quantitative techniques to determine the average effect of a given technique. One method of interpreting effect size was developed by Jacob Cohen. Jacob Cohen defined "small," "medium," and "large" effect sizes. He explained that an effect size of .20 can be considered small, an effect size of .50 can be considered medium, and an effect size of .80 can be considered large. Effect size is calculated by dividing the difference of the two means by the pooled standard deviation. It is important to mention that the number of students in each group does not influence Effect Size; whereas, when statistical significance is calculated the number of students in each group does influence the significance level (i.e. "p" value being lower than .05). Accordingly, using Cohen as a guide, a substantial effect would be .20 or higher.

***Sample*:** In Spring 2010 the instrument was completed by a total of 260 students. No identifying information from individual students was collected.

***Findings*:** Students were statistically significantly ($p=<.001$) and substantially (ES=1.04) more likely to answer all 10 questions correct on the post-assessment than on the pre-assessment. Overall, 4% of the students answered all ten questions correctly on the pre-assessment and 42% of the students answered all ten questions correctly on the post-assessment.

Specific questions with the highest rate of knowledge improvement include; question 5: How many contacts must students complete with an EOPS counselor, which improved from 27% of students answering correctly in the pre-assessment to 81% in the post-assessment, and question 7: What grade point average must you maintain for Satisfactory Academic Progress, which increased from 34% correct on the pre-assessment to 91% on the post-assessment.

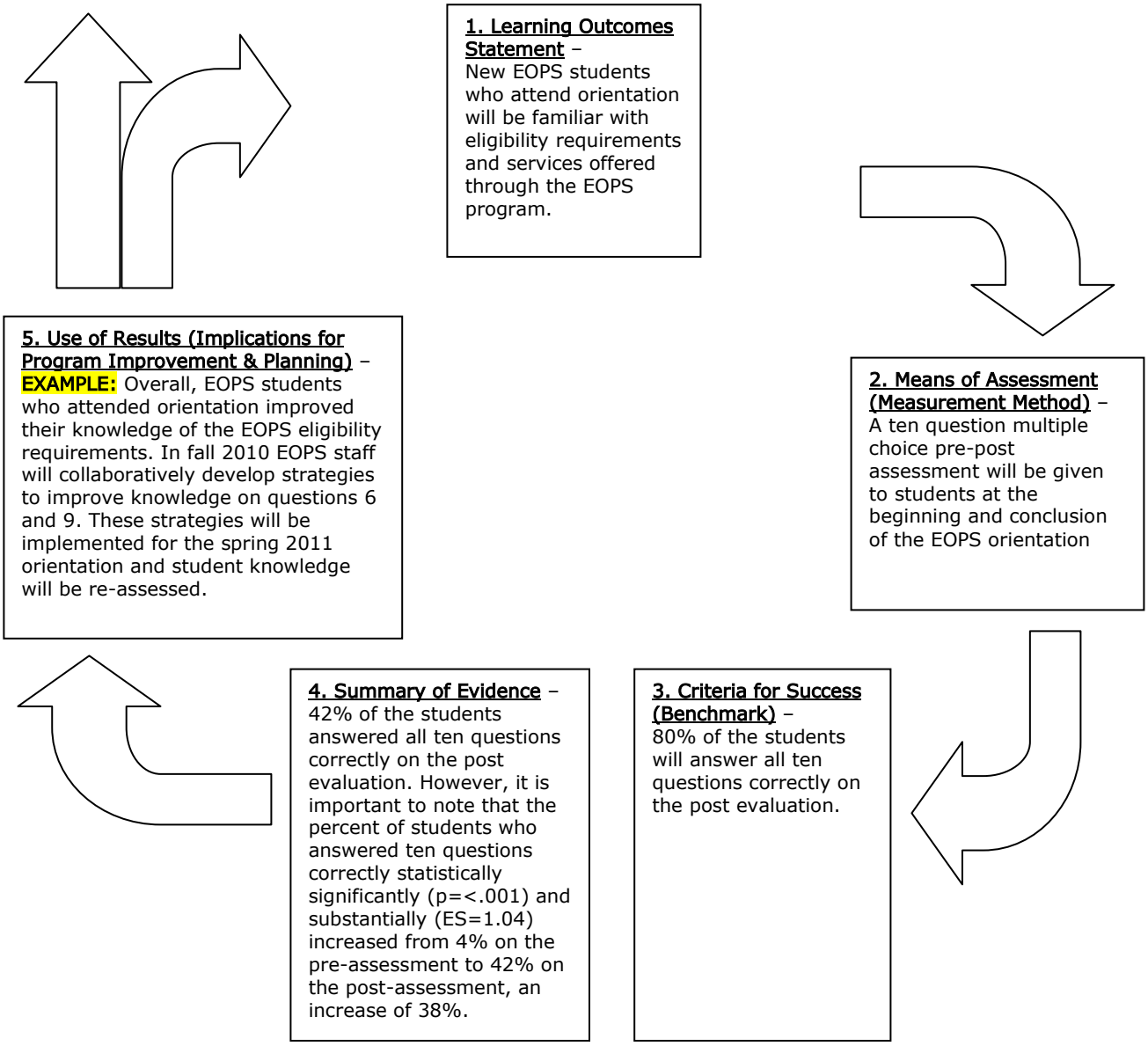
Questions most likely to have correct answers on the pre-assessment were question 1 (92%): EOPS is an acronym for, question 8 (90%): How many units must you enroll in to continue in the EOPS Program, and question 10 (87%): Before adding or dropping classes, what are you required to do? Consequently, these questions also had the lowest percentages of improvement in student knowledge with questions 1 and 8 yielding a 4% increase, and question 10 a 2% increase between the pre and post assessments.

The two questions students were least likely to respond correctly to in the post-assessment include question 6: What must a student do during the 8th or 9th week of each semester (78%) and question 9: What are the time limits for EOPS students to continue in the program (72%). Although the percentage of students who answered question 6 correctly statistically significantly (p=<.001) and substantially (ES=.59) increased from 51% on the pre-assessment to 78% on the post-assessment. Similarly, the percentage of students who answered question 9 correctly statistically significantly (p=<.001) and substantially (ES=.51) increased from 48% on the pre-assessment to 72% on the post-assessment.

Table 1: Means, Standard Deviations, Effect Size and 95% Confidence Intervals, and P Values for EOPS Pre/Post Orientation Assessment

	Pre-Assessment			Post-Assessment			Effect Size & 95% CI Lower & Upper ES			
Question	% Correct	N	SD	% Correct	N	SD	ES	Lower	Upper	P Value
1	.92	260	.279	.95	260	.210	0.12	-0.05	0.29	.077
2	.67	260	.470	.88	260	.325	0.52	0.34	0.69	<.001
3	.47	260	.500	.86	260	.350	0.90	0.72	1.08	<.001
4	.74	260	.440	.92	260	.273	0.49	0.32	0.67	<.001
5	.27	260	.446	.81	260	.392	1.29	1.10	1.47	<.001
6	.51	260	.501	.78	260	.417	0.59	0.41	0.76	<.001
7	.34	260	.475	.91	260	.290	1.45	1.25	1.64	<.001
8	.90	260	.301	.94	260	.234	0.15	-0.02	0.32	.041
9	.48	260	.501	.72	260	.448	0.51	0.33	0.68	<.001
10	.87	260	.334	.89	260	.311	0.06	-0.11	0.23	.412
Total	.62	260	1.922	.87	260	1.777	1.35	1.15	1.53	<.001
All 10 correct	.04	260	.184	.42	260	.495	1.04	0.86	1.22	<.001

Figure 2: SLO Assessment Cycle Diagram for SLO 1: Students will understand the eligibility requirements and available resources of the EOPS program.



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