School of Educational Studies
Research, Evaluation, Measurement, and Statistics (REMS)
Prepared by Laura L. B. Barnes

Degree Program(s) Assessed	Assessment methods	Number of Individuals Assessed
Educational Psychology Ph.D. Emphasis in REMS Educational Psychology M.S. Degree Emphasis in Educational Research and Evaluation	14 REMS and former ABSED Research and Evaluation alumni were emailed a link to an internet-based survey. Eight alumni responded.	7 Ph.D. Students 1 masters student

Method and Findings:

Method: Email addresses were obtained for 14 out of 15 REMS and former ABSED-Research and Evaluation alumni who graduated since 1990. These REMS alumni were emailed a request to respond to an electronic survey; a link to the survey was included in the email. The survey, which is attached to this report, asked them to provide ratings for skills that the program identified as desired outcomes for REMS students and which are reflected in the REMS assessment plan. The survey sought ratings for 17 skills plus 12 specific research methods. Alumni were asked to provide three ratings for each skill: (1) the relevance of that skill to them professionally, (2) their current level of skill development, and (3) the emphasis given that skill while they were students in the REMS/ABSED program. The rating scale for each item was Low, Medium, and High. This year's alumni assessment survey differs from the previous survey (see 2000-2001 Outcomes Assessment Report) in that the current survey focuses on the relevance, emphasis, and current development of very specific skill outcomes.

Findings: Eight out of 14 students responded to the survey (7 doctoral recipients and 1 masters recipient). This represented overall a 57% response rate. Of the 17 skills and 12 methods, respondents identified eight skills and 4 methods as having high relevance to them professionally. If more than half the respondents rated an item as high relevance, it was categorized as having high relevance. These are listed in Table 1 below. Two items were classified as Low Relevance items because they received no high relevance ratings and several low relevance ratings. These were Qualitative Research and Generalizability Theory.

Table1. REMS Alumni Skill Acquisition for Highest Relevancy Skills: Frequency Count by Category of Skill Development and Program Emphasis (Total N=8)

High Relevance Items	Current Skill Development			Emphasis by REMS Program		
	High	Medium	Low	High	Medium	Low
Plan and carry out research	6	2	0	4	4	0
Teach research methods	5	3	0	0	7	1
Provide research consultation to others	4	4	0	1	4	3
Develop research instruments	5	3	0	4	3	1
Evaluate research instruments	5	3	0	3	5	0
Conduct appropriate statistical analyses	7	1	0	6	2	0
Use computers for statistical analyses	7	1	0	1	6	1
Develop personal research agenda	6	2	0	0	4	4
ANOVA	7	1	0	7	1	0
Regression	7	1	0	7	1	0
Multivariate Techniques	6	2	0	6	2	0
Exploratory Factor Analysis	4	3	1	4	na	na

Table 1 shows the level of current skill development and the reported REMS program emphasis for each of the high relevance items. Students reported possessing a generally high level of current skill development for most of the high relevance items. Lower ratings were given to "providing research consultation to others" and "exploratory factor analysis." Alumni reported that the REMS/ABSED program emphasized skills in "conducting statistical analysis", specifically ANOVA, Regression, and Multivariate analysis. *However, a number of skills that these respondents identified as highly relevant were not emphasized in their REMS program.* These were "teach research methods", "provide research consultation to others", "evaluate research instruments", "use computers for statistical analysis", and "develop a personal research agenda." That many reported a high level of skill development in areas that were only moderately emphasized in their programs (e.g., develop a personal research agenda and use computers for statistical analysis) indicates that alumni have continued to develop professionally since graduation. The one alumnus who gave "use computers" a low emphasis rating graduated in 1990; the one who gave this item a high emphasis rating graduated in 2002, which is consistent with an increased emphasis on this skill in the REMS program.

Alumni were also asked to identify the three most important skills they acquired while in the REMS/ABSED program and to identify three skills they wish they would have acquired but did not while in the REMS/ABSED program. For both these categories, the skills broke into three areas: (1) data analysis techniques, (2) conceptual understandings, and (3) practical hands-on skills.   As shown in Table 2, in addition to multivariate analysis, several former students listed psychometric theory and factor analysis as important skills. They also valued their conceptual understandings as well as practical hands-on applications, including the dissertation experience. Table 3 shows that alumni identified computer applications, several advanced research techniques, qualitative methods, and more practical experience as things they wish they had had in the REMS program.

Table 2. Alumni Most Valued Skills Learned in REMS program

Data Analysis Techniques	Conceptual Understanding	Practical Hands-on
Factor Analysis (2)	Statistics as system for understanding error	Contacting professionals for permission to use instruments
Multivariate Analysis (3)	Critical thinking and conceptual background in REMS (2)	Doing major relevant class projects
Psychometric Theory (3)	Understand scientific method	Working on large research project
General Linear Model		Dissertation
Identify research procedures/design (2)		

Table 3. Alumni Wish List of Skills for REMS program

Data Analysis Techniques	Conceptual Understanding	Practical Hands-on
Monte Carlo studies using SPSS	Philosophy of Science	Work with large datasets
Training Evaluation (Kirkpatrick's model & ROI)	Put statistics together in broad overview	Consulting contracts
Statistical Computing Packages		More application to the real world and business applications
Structural Equation Modeling		Project management issues and managing research teams
Advanced Research Design		
Qualitative Methods (2)		
Generalizability Theory (2)		
Hierarchical Linear Modeling (2)		
Categorical Data Analysis		

Uses of Assessment Results: These results, together with past assessment results and other sources of student input, suggest some specific curriculum issues to be addressed within the REMS program. There is clearly a need to continue to incorporate more practical hands-on computer-based work with real data. Alumni have learned computer applications but suggest that these were not emphasized sufficiently in the REMS program. Mentoring regarding the development of a personal research agenda is something that would benefit students according to these results. These issues can be addressed through coursework and through ensuring that all REMS students experience student-faculty research collaboration. Specific content that alumni have identified as needing greater emphasis, are factor analysis and methods for evaluating instrument quality. The need for additional work in factor analysis has been recognized and a factor analysis course is being offered this summer. Though skill in qualitative methods and generalizability theory were rated as low relevance skills, two alumni included them in their wish list. Qualitative methods are required in the new REMS degree options. Though REMS no longer has undergraduate courses to specifically provide teaching opportunities for students, many of our doctoral students are faculty at regional universities and develop teaching skills without it being emphasized in the REMS program. Opportunities for developing consulting skills should be expanded within our program. The REMS faculty are currently discussing the development of a research consultation center within the College of Education that would provide REMS students with opportunities to develop many of the skills addressed in this survey.

Next Steps: A Blackboard website has been created for communication among REMS students, faculty, and alumni. This was initially developed to facilitate constituent input into the SWOT analysis and was to be included with these assessment results. Due to a technologically induced miscommunication, the student input into the SWOT analysis is not yet available for this report. Nevertheless, we envision the Blackboard site as a permanent source of continued communication among current and former students and faculty and should be a valuable mechanism for on-going program monitoring.