

Research Competencies for the Counseling Profession
ADOPTED BY THE ACES EXECUTIVE COUNCIL
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In the Summer of 2009 the Association of Counselor Education and Supervision formed the provisional Committee for Research Competencies. This committee grew out of the development and adoption of the Research Mentorship Guidelines in Counseling/Counselor Education. This committee was developed due to a perceived need to determine what aspects of research need to be trained within counselor education to develop competent researchers who can produce quality research. The counseling profession has competencies for many other aspects of counseling (e.g., multicultural competencies; supervision competencies) but currently lacking are research competencies.

To be competent, in any area, entails having the knowledge within a specific area and having the ability or skill to complete a task or activity. This knowledge and skill may be acquired through training, or work or life experience.

In order to determine the competencies needed of counseling researchers, the Research Competencies Committee developed a Delphi Methodology study. The Delphi method is a systematic process that seeks the consensus of a panel of experts. This method is typically used when a paucity of research exists in a particular area, such as the lack of research competencies in the field of counseling. Using the Delphi method in this instance also ensured that the research competencies developed for the field of counseling were empirically supported rather than created through informal conversations of a committee.

Before discussing the competencies conceded upon by the expert panel, a brief description of the panel will be provided. Panel members were deemed to be experts in the area of research as was evident based on their degree of competency or knowledge in the area of research (e.g., author of recent quality empirical articles, experience as editor of a journal), and had a doctoral degree in counselor education. The panelists were also a heterogonous sample in terms of emphasis areas in the counseling profession (e.g., clinical mental health, school, student development), ACES region, and types of research methodologies utilized, as well as gender and race/ethnicity. Keeping these criteria in mind, some panelists were selected by the committee, while others were nominated by those originally selected. A total sample of 15 participated in the Delphi study.

The panelists conceded that 160 competencies were necessary. Three main points related to the competencies created from the panelists are:

- (1) Research competency spans the research process, from idea inception and the review of the literature to dissemination of the research findings.
- (2) Breadth and depth of knowledge is needed. Specifically, counseling researchers need to understand and have knowledge of the breadth of literature, and possible research designs and analyses available, while also have specific knowledge in the particular topic they are researching, as well as the design, procedures, and analyses selected.
- (3) Competency is more than just knowledge and skill but also includes attributes. More specifically, competent researchers should be curious and perseverant, and in addition, should engage in life-long learning and continuing education related to research development.

The 160 competencies developed and agreed upon by the expert panelists are listed below. It should be noted that competencies change with time, as new information and knowledge are created, new research designs are developed, and new methods of analyzing data are formed. Thus, this committee encourages the Association of Counselor Education and Supervision to revisit and update the below research competencies as necessary.

Informed and Critical Thinking	
<i>Have knowledge of the field</i>	
Knowledge	Understands the value of research to the field Understands and can apply trends in the field, and across disciplines, to the creation or envision of the next steps in a research domain Understands where to find relevant literature and resources
Skills	Master extant literature relevant to the domain of study Demonstrate cultural competence throughout the research process
<i>Think theoretically and critically</i>	
Knowledge	Understands the importance of grounding a research idea in a theoretical basis and/or conceptual model Has knowledge of various theories and/or conceptual models that can provide a framework for a research idea
Skills	Ground ideas in the existing literature Critique literature beyond author-acknowledged statements Critically integrate existing relevant literature to determine an important and meaningful gap in the research Use existing research as a foundation for the study Deconstruct and critique theories and/or conceptual frameworks for possible alternative explanations or missing factors Build a conceptual framework when a relevant one does not exist

	<p>Integrate results from multiple sources (e.g., literature, articles, presentations, data) in creating a rationale for a study</p> <p>Condense large amounts of literature into a succinct cohesive argument</p> <p>Determine which literature is relevant to include for the present study</p> <p>Recognize limitations and implications of existing studies</p>
Attitudes/ Attributes	<p>Can think inductively</p> <p>Can think deductively</p> <p>Critical thinker</p>
<i>Frame Significant Questions</i>	
Knowledge	<p>Understands the key pieces in developing an argument to study a particular idea</p> <p>Understands that the research questions arise from gaps in existing literature</p> <p>Understands the differences between quantitative and qualitative questions</p>
Skills	<p>Connect the existing literature to the research question</p> <p>Write a clear and concise research question</p> <p>Able to conceptualize an idea that is socially valid and meaningful to the profession</p> <p>Able to evaluate the quality of a research idea (e.g., the relevance to the field)</p> <p>Develop a research question that is meaningful to the profession</p>
Attitudes/ Attributes	<p>Able to minimize own bias in writing the research question</p>

Steps of the Research Process	
<i>Identify appropriate methods of inquiry</i>	
Knowledge	<p>Understands that the methodology section is grounded in the research question</p> <p>Has knowledge of the extent to which a particular methodology can generalize to a larger population</p> <p>Understands research theoretical paradigms</p> <p>Knowledge of the strengths and limitations of qualitative research designs</p> <p>Understands how to apply various research designs</p> <p>Knowledge of instrument development</p> <p>Knowledge of how to conduct a program evaluation</p> <p>Has in-depth knowledge of the selected methodology for a particular study one is conducting</p> <p>Understands the philosophical differences among qualitative designs</p> <p>Understands the different purposes of qualitative and quantitative</p>

methodology and designs
 Has general knowledge of the breadth of quantitative designs available (e.g., descriptive, clinical trials, experimental, process)
 Has general knowledge of the breadth of qualitative designs available (e.g., phenomenology, grounded theory, narrative analysis, ethnography)
 Has breadth of knowledge related to the different designs and procedures (e.g., longitudinal designs) to incorporate into one's study when needed
 Has knowledge of multiple types of probability sampling procedures (e.g., random sampling, systematic sampling, stratified sampling)
 Has knowledge of multiple types of non-probability sampling (e.g., convenience sampling, quota sampling, snowball sampling)
 Understands sampling procedures that lead to or increase generalizability
 Has an in-depth understanding of how to execute the sampling method for a selected study
 Understands the affect that sampling has on the ability to find significant results in a quantitative design
 Has knowledge of a wide variety of data collection methods (e.g., observational, online, survey, field-based data collection)
 Understands psychometrics of instrumentation
 Understands the connection between data collection techniques and research methodology

Skills

Identify a method that best matches the research question
 Implement and execute a selected methodology
 Appropriately execute various quantitative research designs
 Appropriately engage in a variety of qualitative research designs/traditions
 Identify the threats to internal validity in a quantitative design
 Identify the threats to external validity (or generalizability) in a quantitative research design
 Identify the threats to trustworthiness and confirmability in qualitative designs
 Alter a study to minimize threats to trustworthiness and confirmability (e.g., triangulation, bracketing, auditor) in qualitative research
 Employ appropriate sampling procedures
 Select a sample that is representative for the research questions being asked
 Increase sample representativeness
 Identify needed characteristics of a sample
 Determine the population attempting to generalize to or gain data from
 Determine a sampling frame from the population
 Seek out a sample that provides adequate power in a quantitative design

	<p>Implement random selection</p> <p>Implement purposeful sampling</p> <p>Determine if probability or non-probability sampling is needed</p> <p>Implement criterion sampling</p> <p>Able to use sampling methods other than convenience sampling</p> <p>Identify the appropriate procedures for participant selection in various qualitative designs</p> <p>Recognize when saturation [in sampling] has been reached (when saturation is appropriate to the research design)</p> <p>Implement controls for extraneous variables where appropriate</p>
Attitudes/ Attributes	<p>Follows the appropriate methodology based on the research question, rather than picking a methodology solely due to the simplicity of it</p> <p>Has r-Respect for both quantitative and qualitative methodologies</p> <p>Is willing to step outside of one's comfort zone (e.g., use different methods, procedures or analytical processes)</p>
<i>Collect and analyze data</i>	
Knowledge	<p>Understands methods and procedures involved in various methods of naturalistic inquiry or field-based research</p> <p>Understands when it is necessary to define themes and/or develop a codebook</p> <p>Has knowledge of how to gain access to and use personal documents for data collection (e.g., participant journals, photographs, artwork, portfolios)</p> <p>Understands data analysis is tied to the research question</p> <p>Understands data analysis is grounded in the data collection</p> <p>Knowledge of basic statistical analyses (e.g., correlations, regressions, t-tests)</p> <p>Knowledge of advanced statistical analyses (e.g., HLM, SEM, Rasch modeling)</p> <p>Understands the limitations and/or assumptions of analysis procedures</p> <p>Understands how to work with covariates in data analysis</p> <p>Understands the importance of inter-rater reliability</p> <p>Understands data analysis is connected to the research methods one has used in the study</p> <p>Understands the importance of bracketing in qualitative designs</p> <p>Understands how to interpret a statistical output</p> <p>Understands the difference between statistical and practical significance</p>
Skills	<p>Evaluate psychometrics of instrumentation</p> <p>Discern limitations of an instrument</p> <p>Conduct individual interviews and focus groups effectively</p> <p>Collect data utilizing observational procedures</p> <p>Operationalize selected variables in quantitative designs</p> <p>Incorporate and appropriately utilize field notes</p>

	<p>Determine the best method to triangulate data in qualitative designs</p> <p>Appropriately implement data analysis procedures given the data that one has</p> <p>Calculate effect sizes</p> <p>Use software to analyze data</p> <p>Demonstrate internal validity in outcome and/or efficacy research</p> <p>Implement basic statistical analysis (e.g., correlations, descriptive, t-tests, ANOVA)</p> <p>Code qualitative data appropriate to the methodology selected</p> <p>Analyze documents and/or historical data</p> <p>Engage in and utilize inductive and deductive analysis appropriately</p> <p>Demonstrate trustworthiness (e.g., auditor, triangulation, providing participant quotes) in qualitative research</p> <p>Apply the appropriate measure of inter-rater reliability</p> <p>Remove research bias from data collection procedures</p> <p>Identify own bias prior to and during data collection</p>
<i>Communicate Research Findings</i>	
Knowledge	Knows APA style (or appropriate professional guidelines in writing)
Skills	<p>Make a logical argument through writing</p> <p>Write a clear statement of the problem</p> <p>Focus on the larger picture, as well as the technical details</p> <p>Start broad and then narrow one's focus when writing</p> <p>Create a logical flow between the literature review and the research question</p> <p>Synthesize results within existing literature</p> <p>Write the results in a way that is understandable to others</p> <p>Keep the results within the limitations of the sample and the methodology selected (i.e., does not overgeneralize)</p> <p>Draw logical conclusions from results</p> <p>Apply results appropriately given the limitations of the study</p> <p>Identify the limitations of the study</p> <p>Develop implications specific to the counseling community</p> <p>Report results accurately (e.g., APA style for statistics)</p> <p>Provide a rich description of qualitative results</p> <p>Support results of a qualitative study with raw data</p> <p>Provide a specific statement, combined with an explanation supported by the data, of whether the hypothesis was supported</p> <p>Present qualitative results using graphs, metaphors, models, or other relevant depictions</p> <p>Relate results and findings back to the original problem stated in the introduction</p> <p>Contextualize one's findings (e.g., relate the findings to the field, community, individuals outside of the study)</p> <p>In qualitative methodology, is able to relate findings to the wider world or community (although not attempt to generalize)</p>

Ethics and Professional Competence	
Knowledge	Has knowledge of professional ethical codes regarding research Understands the ethical principles related to human research participants (e.g., beneficence, justice, autonomy)
Skills	Identify ethical dilemmas Make appropriate decisions when ethical dilemmas in research process arise Find solutions to ethical situations
Attitudes/ Attributes	Knows one's own limitations as a researcher Is ethical

Breadth and Acceptance	
Knowledge	Understands the research process from conception to dissemination Understands logistics required to conduct the study (e.g., research question development, sample selection)
Skills	Demonstrates ability to consider all aspects of research design and procedures (e.g., question development, survey design, number of times participants are contacted, implementation of treatment) Project management and/or organizational skills
Attitudes/ Attributes	Has appreciation of research Is perseverant

Relational Aspects	
Skills	Build relationships with individuals in the community (e.g., at large community under study) Work in a research team (e.g., contribute to, organize tasks, manage dynamics of group members) Has general competent counseling skills
Attitudes/ Attributes	Is collaborative

Continual Education	
Skills	Accept feedback about research
Attitudes/ Attributes	Is motivated to continue learning

Attributes	Is engaged in continuing professional development in research Is willing to seek out consultation when needed
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