

“Action Research” Measures for Program Improvement

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A large number of the “measures” proposed in support of the draft CAEP Standards consist of qualitative exhibits such as case studies, documentation of particular program features, or processes that demonstrate good practice. Four of the measures identified as “priority” measures for purposes of the Data Task Force (3.4, 2.i, 4.b and 5.e) and four additional measures (3.b, 3.c, 3.l, and 5.c) fall into this category. Evidence of this kind is generally most useful in generating hypotheses or ideas, and is less useful or applicable in confirmatory analysis. In such cases, moreover, the standards of evidence used in published research cannot be applied rigidly or in all cases. The use of evidence in such cases more resembles its use in action research, where the objective is less to establish “truth” than to discern an appropriate course of action directed at program improvement.

Virtually all of the attributes identified in the accompanying paper “Principles for Measures Used in the CAEP Accreditation Process” can and should be applied to these measures. Before gathering evidence of this kind and using it to improve, programs should ask and answer questions such as the following:¹

- What significant question is being investigated? Specifying a worthwhile question is the point of entry into any empirical investigation. Questions, and the case study designs developed to investigate them, should reflect a solid understanding of relevant prior theoretical, methodological, and empirical work.
- Why is the evidence important? The intent of the evidence presented should be clear and the evidence should directly suggest program improvements. For example, the potential results of a given case study should be important or significant enough to trigger actions to modify the program.
- Is the evidence direct and compelling? Evidence submitted should be directly related to the underlying condition or phenomenon under investigation. For example, if the effectiveness of candidate preparation is the object, student testimony through surveys indicating that they feel that they have received effective preparation should not be the only form of evidence submitted.
- Is the evidence theoretically grounded? Every body of evidence is situated within a larger theoretical or conceptual framework on that guides the entire investigation. Every new piece of evidence generated or applied builds upon this framework to create new understanding. For example, case descriptions of candidate teaching in a clinical setting are located within and made sense of through frameworks that describe sound teaching practice.

¹ These questions are derived in part from the six “scientific principles” presented in the National Research Council’s monograph *Scientific Research and Education* (2002).

- Can the evidence be corroborated? Because all evidence is of variable or unknown quality and coverage, it should always be backed up or “triangulated” by evidence from other sources that provide results that are consistent with those originally shown. These sources should be as different from one another as feasible, and the more of them that are presented, the better.
- Is the evidence part of a coherent and explicit chain of reasoning? Sound evidence requires the development of a logical chain of reasoning from questions to empirical observations that is coherent, transparent, and persuasive to a skeptical outsider. Detailed descriptions of procedures and analyses are crucial to permit others to critique or attempt to replicate a study.
- Is the evidence representative? All evidence should be drawn from situations that are typical. A given case study advanced as evidence should therefore be closely examined to determine if a similar case study in another situation or setting might show something else.
- Can the evidence be replicated? Additional confirmation of what any evidence shows can be provided by clear documentation that might enable the study to be repeated to determine the extent to which the same result is obtained.

The application of standards of evidence based on action research instead of published empirical research does not mean that case study measures lack rigor. But it does require consideration of wider questions of consequential validity and appropriate precision given practicability and context.