

## Quality of Evidence for Type 4: Formal Research Study *Experimental or quasi-experimental design*

**Example:** a study of a specific computer delivered curriculum in the area of primary level reading in comparison with a textbook delivered curriculum with variables such as curriculum content and student characteristics are held constant. The design allows for a statistical test of the specific differences found between the two groups on a validated measure that is relevant to the skills and knowledge intended to be developed. Federal Evaluating State Educational Technology Programs (ESETP) Evaluation Grants represent this type of methodology.

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<p><b>Level C:</b></p> <ul style="list-style-type: none"> <li>described as research but upon closer inspection relies on surveys and measures that are not triangulated</li> <li>lacks a clear relationship between the intervention studied and the outcomes attained due to inadequate research design</li> </ul>		<p><b>Level B:</b></p> <ul style="list-style-type: none"> <li>formal research design to test a hypothesis with validated quantitative measures</li> <li>backed with qualitative measures to provide more descriptive information in describing the findings</li> </ul>		<p><b>Level A:</b></p> <ul style="list-style-type: none"> <li>experimental or quasi-experimental design</li> <li>data collected through control and experimental groups</li> <li>source includes multiple individuals or groups</li> <li>triangulated data</li> <li>formal research design to test a hypothesis with validated quantitative measures</li> <li>clearly documents that the results have a high probability of being replicated in other settings, locations, or contexts.</li> </ul>

## Quality of Evidence for Type 3: Formal Evaluation Study *Correlation Design*

**Examples:** Evaluations of Technology Innovation Challenge Grants (TICG), Star Schools, Preparing Tomorrows Teachers for Technology (PT3), National Science Foundation (NSF) projects and programs, as well as a variety of state and privately supported programs, initiatives, and/or products.

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<p><b>Level C:</b></p> <ul style="list-style-type: none"> <li>not thoroughly described in terms of theory base, design, methods, findings, and summary/ recommendations</li> <li>one or more of these components is emphasized in sufficient detail for replication or decision making</li> </ul>		<p><b>Level B:</b></p> <ul style="list-style-type: none"> <li>clearly describes design, measures used and how they were developed or selected and analyzed</li> <li>designed to answer to specific evaluation questions that are directly related to the goals and objectives of the project</li> </ul>		<p><b>Level A:</b></p> <ul style="list-style-type: none"> <li>correlation design</li> <li>data collected from multiple sources to explore relationship between or among variables</li> <li>source includes multiple individuals or groups and often triangulated data</li> <li>includes and justifies valid and relevant measures</li> <li>clearly describes the specific project interventions that contribute to the program or project outcomes</li> <li>provides sufficient contextual information for someone to generalize and possibly replicate the results by adopting the program in another location.</li> </ul>

## Quality of Evidence for Type 2: Descriptive and Survey Studies

### *Descriptive with quantitative and qualitative*

**Examples:** Range from single project case studies to national studies such as the CEO Forum report, NCES Surveys on technology access in schools, meta-analysis reports of studies such as the recent SIIA report on technology effectiveness, state-wide or large scale needs assessments, Quality Educational Data (QED) and Market Data Retrieval (MDR) surveys, and many others.

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<p><b>Level C:</b></p> <ul style="list-style-type: none"> <li>• data collection is focused on a limited sample of the population (e.g., single project case study)</li> <li>• study has minimal application in terms of generalizing the findings</li> </ul>		<p><b>Level B:</b></p> <ul style="list-style-type: none"> <li>• data collection methods are credible</li> <li>• validated surveys and/or other methods are clearly described, such as observational strategies, case study methodologies</li> <li>• data or information is current</li> </ul>		<p><b>Level A:</b></p> <ul style="list-style-type: none"> <li>• descriptive study</li> <li>• data collected includes quantitative and qualitative</li> <li>• although trends may be apparent, methodology does not support identifying correlations</li> <li>• source includes individuals or groups and source and may be collected from survey or observations</li> <li>• data collection methods are clearly explained, credible with multiple measures, and current</li> <li>• data collection could include strong mixed methods research, with adequate sampling</li> <li>• data collected can easily justify the conclusions drawn from the study</li> </ul>

## Quality of Evidence for Type 1: General Articles and Expert Positions Case Study or Narrative

**Examples:** ISTE standards, National or State technology plans, technology use planning guidelines and templates, testimony to commissions and legislative bodies, professional association platforms, etc.

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<p><b>Level C:</b></p> <ul style="list-style-type: none"> <li>• no formal methodology, narrative approach</li> <li>• data collected is anecdotal</li> <li>• source is usually one person</li> <li>• report is basically one person's/one group's opinion / experience (e.g., outlining a theory or describing a methodology or analysis technique)</li> <li>• may or may not be supported by documentation or research</li> <li>• primarily of use in program implementation decisions</li> </ul>		<p><b>Level B:</b></p> <ul style="list-style-type: none"> <li>• report is based on some type of consensus, discusses examples and shows awareness of available methods, research or evaluation studies on the topic, and would help inform educational decisions.</li> </ul>		<p><b>Level A:</b></p> <ul style="list-style-type: none"> <li>• case study approach</li> <li>• data collected through studying small context or individual case through interviews, observations, or other information</li> <li>• source is usually one or more person or small group</li> <li>• report is clearly documented by research or credible evaluations</li> <li>• provides clearly stated recommendations that can be easily applied in a wide variety of educational settings and would help inform planning and/or policy decisions to a wide audience</li> </ul>