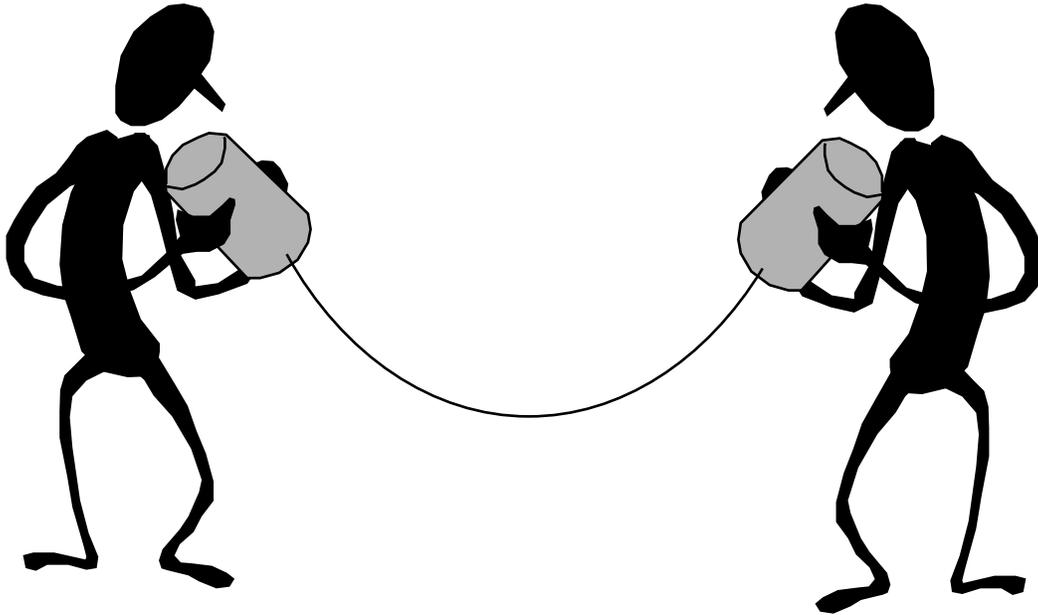


Linking Research

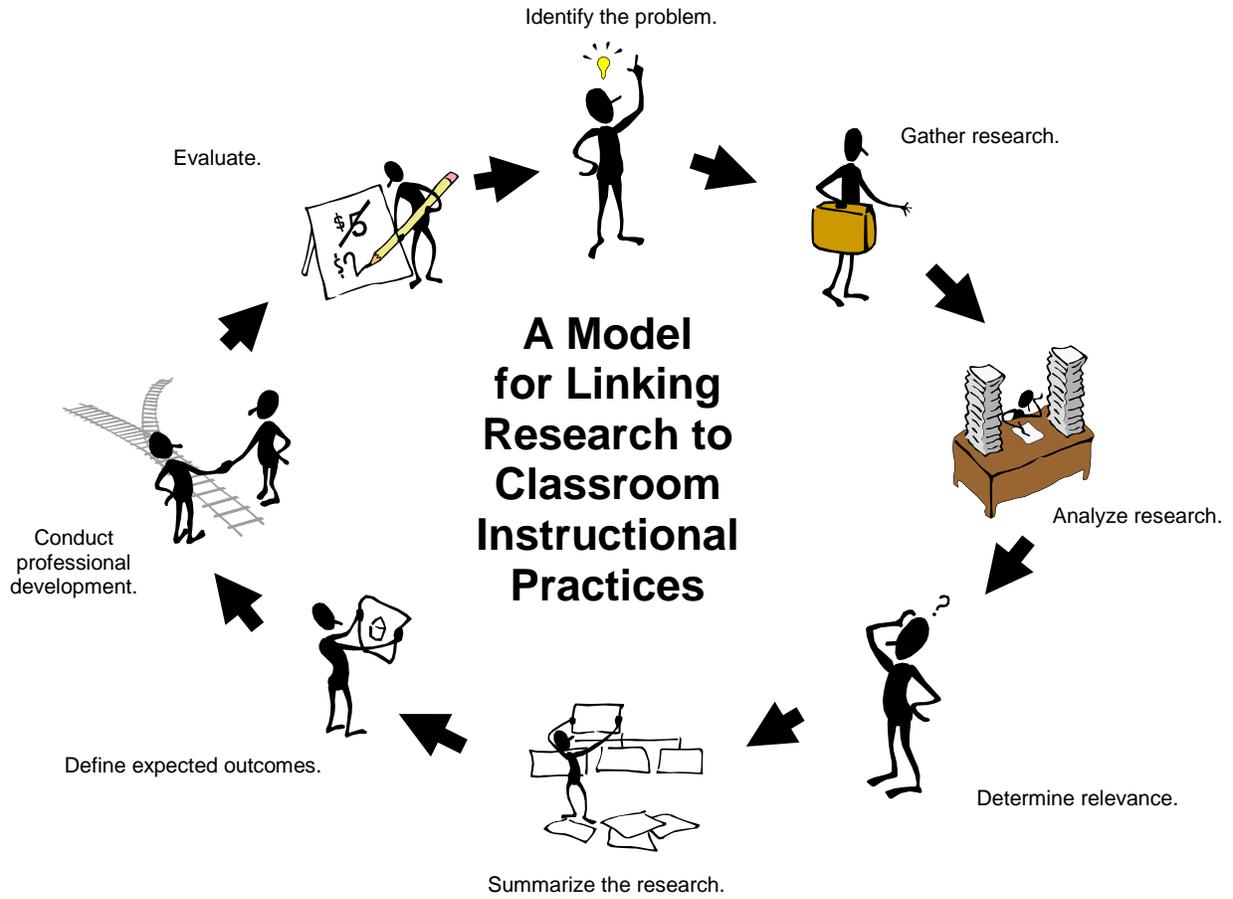


to Classroom Instructional Practices

Jennifer L. Bell, NBCT, Ed.S.
c/o EFLT
4036 Haley Center
Auburn University, AL 36849-5221
Phone (334) 844-3020 Fax (334)844-3072
belljen@auburn.edu

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Initial Analyzing Questions

WHO conducted the research?

- Does the organization or individual process credible background to address the research topic with an authoritative voice?
- Is the research cited in reputable (preferably peer-reviewed) sources?
- Is there reason to believe that the organization would have any bias regarding the topic therefore make the results questionable?
- Who funded the organization's syntheses or research?

WHAT is being researched?

- Is the research topic focused sufficiently so that the collected data feasibly supports the results?
- Is the collected data collected and analyzed without bias?
- Does the research have well-defined anticipated outcomes with positive student results?
- Does it meet your needs and align with your curriculum goals?
- Are the effect sizes between the subgroups involved in the study fair to excellent?
- Are the long-term implementation plans written and included with the research?

WHEN was the research conducted?

- If the research is brand-new, does it pay attention to the studies and findings that came before it?
- What is the timing of the initial launch?
- What is frequency and mechanism for updating materials?

WHERE was the research done?

- Is the number of individuals involved in the study enough for a credible measure (given the topic studied)?
- Does the practice have an appropriate target population (school age 3 through 21)?
- If descriptors of target population are not current, are cross-referenced to current descriptors or clearly defined?
- Are the subjects randomly assigned to the groups?
- Was data collected for all subjects? Was it included in the results?
- Can be used in classroom setting?
- Is the research applicable to your target population?
- Can the results be generalized to other settings or populations?
- Can the practice be revised to meet your needs and maintain quality implementation and data collection?

WHY was the research conducted?

- Does the research have a clear purpose?
- If the research was conducted to prove effectiveness of a program, or sponsored by persons who could benefit from positive results?
- Is there any other research that is relevant to this study?
- If so, are the researchers speaking with the same voice?
- If not, why do the researchers disagree?
- Does the practice based on educational theory (established, emerging, or proposed)?
- Does it have prior research to support the purpose and anticipated outcomes?
- Does the stated purpose aligned with educating all students in the least restrictive environment?

HOW was the data gathered and analyzed?

- Is the methodology sound?
 - Is the practice replicable (participants, instruments, procedures, and activities)?
 - Does the practice have face validity? Does it seem like a good idea?
 - Does the practice have social validity? Could the practice be implemented in a community setting without concern?
 - Does the practice have internal validity? Is the change the result of treatment rather than outside variables?
 - Does the practice have statistical significance? Is the change a real one as opposed to a random occurrence?
 - Does the practice have practical significance? Is the change an important one rather than a trivial one?
- Is there a control group for comparing?
- What procedures were used to develop appropriate questions, to determine how to organize data, and to analyze the data?
- Does the practice connect to the previous findings in research?

Capacity Considerations

Intellectual capacity: the knowledge and skills needed to implement the practice.

- Is there external support to help implement the practice (i.e., technical assistance centers, program developers, district or regional staff)?

Physical capacity: the physical space, materials, and technology needed for implementation.

- Are the materials for the practice replicable, available, or cost prohibitive?

Fiscal capacity: the financial resources needed to acquire or develop the practice

- Do you have the organizational resources for effective implementation (budget line items such as materials, staff time, professional development, incentives, substitute pay, travel expenses, consultants, and evaluation costs)?
- What are the implications for our staff in terms of time, resources, or professional development?

Social capacity: the quality of interpersonal relations and trust needed among the stakeholders to support implementation.

- Does the practice considered the involvement of educators, parents, business, and/or community representatives, as appropriate.

Cultural capacity: the degree to which your organization has shared goals and values for student learning.

- Is there agreement on the knowledge, skills, and attributes all students should attain?
- Do these attributes aligned with the practice being considered?
- Does the practice support your school improvement plan?
- Does the practice support the other standards (area/grade level, benchmarks)?

(Carnahan & Fitzpatrick, 2003; Coalition for Evidence-based Policy, 2003; Haines & Donald, 1998; Haynes & Haines, 1998; Little & Houston, 2003; Meline & Paradiso, 2003; The Access Center, 2004)

General Characteristics of Adult Learners as Compared to Children

CHILDHOOD	ADULTHOOD
Children depend upon adults for material support, psychological support, and life management. They are other-directed.	Adults depend upon themselves for material support and life management. Although they must still meet many psychological needs through others, they are largely self-directed.
Children perceive one of their major roles in life to be that of learner.	Adults perceive themselves to be doers; using previous learning to achieve success as workers, parents, etc.
Children, to a large degree, learn what they are told to learn.	Adults learn best when they perceive the outcomes of the learning process as valuable--contributing to their own development, work success, etc.
Children view the established learning content as important because adults tell them it is important.	Adults often have very different ideas about what is important to learn.
Children, as a group within educational settings, are much alike. They're approximately the same age, come from similar socioeconomic backgrounds, etc.	Adults are very different from each other. Adult learning groups are likely to be composed of persons of many different ages, backgrounds, education levels, etc.
Children actually perceive time differently than older people do. Our perception of time changes as we age--time seems to pass more quickly as we get older.	Adults, in addition to perceiving time itself differently than children do, also are more concerned about the effective use of time.
Children have a limited experience base.	Adults have a broad, rich experience base to which to relate new learning.
Children generally learn quickly.	Adults, for the most part, learn more slowly than children do, but they learn just as well.
Children are open to new information and will readily adjust their views.	Adults are much more likely to reject or explain away new information that contradicts their beliefs.
Children's readiness to learn is linked to both academic development and biological development.	Adults' readiness to learn is more directly linked to need--needs related to fulfilling their roles as workers, spouses, parents, etc. and coping with life changes (divorce, death of a loved one, retirement, etc.).
Children learn (at least in part) because learning will be of use in the future.	Adults are more concerned about the immediate applicability of learning.
Children are often externally motivated (by the promise of good grades, praise from teachers and parents, etc.)	Adults are more often internally motivated (by the potential for feelings of worth, self-esteem, achievement, etc.)
Children have less well-formed sets of expectations in terms of formal learning experiences. Their "filter" of past experience is smaller than that of adults.	Adults have well-formed expectations, which, unfortunately, are sometimes negative because they are based upon unpleasant past formal learning experiences.

The above list comes from "Plan instruction for adults, Module N-4," The National Center for Research in Vocational Education. (1987) Ohio State University, Columbus, OH. Retrieved from http://ed.fnal.gov/lincon/staff_adult.shtml.

Identifying and Overcoming Obstacles

Once they find obstacles, what strategies did they use to overcome them?

Environmental Obstacles

- Administration
 - Gain the approval and support of the administration
 - Demonstrate the feasibility of the intervention in the classroom
- Lack of Adequate Resources
 - Resource sharing with other providers
 - Cross-site training and technical assistance
 - Community-wide collaboration
 - Select practices that replace existing interventions
 - Give reasonable time frames

Personal Obstacles

- Beliefs and attitudes, and self-efficacy
 - Articulate existing beliefs and attitudes
 - Hold frequent meetings to discuss change
 - Utilize motivational strategies to move staff ambivalence toward positive change
 - Ensure a clear understanding of practice
 - Enlist a neutral facilitator
 - Articulate existing beliefs and attitudes
 - Hold frequent meetings to discuss change
 - Utilize motivational strategies to move staff ambivalence toward positive change
 - Ensure a clear understanding of practice
 - Enlist a neutral facilitator
 - Affect beliefs through information
 - Provide opportunities to speak with people who have succeed
 - Provide incentives and recognition
 - Demonstrate the feasibility of the intervention in the classroom
 - Provide appropriate materials and resources for classroom use
 - Allow adjustment to meet the needs of the classroom

Personal Obstacles (continued)

- Lack of knowledge or skill
 - Identify resources
 - Designate strong school site facilitator
 - Institute quality professional development
 - Provide scaffold instruction
 - Develop personal staff development plans
 - Supervise and mentor
 - Offer continued supports and follow-ups
 - Collaborative training and technical assistance
 - Develop shared vision and commitment
- Lack of collaboration
 - Implement a collaborative planning model
 - Use stakeholder teams to make decision
 - Address issues with scheduling and supporting personnel
 - Partner with other agencies implementing the same intervention
 - Develop a community-wide system where the evidence-based practice is essential to producing desired outcome
 - Have the staff to buy into the idea and develop an ownership of the practice
 - Create a venue to handle bumps during the initial stages of implementation
 - Keep the lines of communication open
 - Ensure appropriate materials and resources

(Denton et al., 2003; Dixon, n. d.; Fuchs & Fuchs, 2001; Guskey, 1991; Haynes & Haines, 1998; Klingner et al., 2003; Little & Houston, 2003; The Access Center, 2004; Vaughn et al., 2004)

Evaluation

Phases of Development	Appropriate Processes and Action Steps during Phase of Development
Planning Phase	Use participatory (collaborative) and empowerment evaluation processes to: <ul style="list-style-type: none">▪ Determine target population.▪ Assess needs.▪ Clarify outcomes.▪ Assess processes.▪ Assess stakeholders' reaction to the intended program.
Conducting Phase (Formative Evaluations)	Use participatory (collaborative) and empowerment evaluation processes to: <ul style="list-style-type: none">▪ Assess through input whether the program is working as designed.▪ Give feedback.▪ Collect credible data.▪ Study data in relationship to identified benchmarks to inform revisions, improvements, or minor adjustments to program design.
Reporting Phase (Summative Evaluations)	Use participatory (collaborative) and empowerment evaluation processes to: <ul style="list-style-type: none">▪ Collect credible data upon which to base judgments about the program's merit and worth.▪ Provide a summary judgment about the program's performance and impact.

Focus of Questions

Process:

- How well is the program working?
- How is its implementation aligned with the intended plan?
- Does it meet standards of operation?
- Are the components in place as planned?

Results:

- Does the program produce results?
- Does it have impact?
- What unintended effects, if any, are occurring?

(Killion, J., 2002)

Factors for Sustainability Checklist

Infrastructure capacity building

- Structures and formal linkages to sustain the program
 - Assess structure and formal linkages to sustain the program.
 - Plan strategically for building and/or maintain structures and formal linkages to support the program.
 - Implement, evaluate, reassess, and modify, if necessary, the plan for strengthening structure and formal linkages to support the program.
 - Create and/or maintain structures and formal linkages to support the program.
- Champion roles and leadership actions to sustain the program
 - Assess existing champion (those who have power and act as advocates for the functional area related to the program) roles and leadership actions that can sustain the program.
 - Plan strategically to strength and/or maintain leadership actions and champion roles to support the program.
 - Implement, evaluate, reassess, and modify, if necessary, a plan to sustain the champion roles and leadership actions.
 - Cultivate champions and leaders.
 - Establish linkages between leader(s) and champions and program stakeholders.
- Resources to sustain the program
 - Assess resources to sustain the program.
 - Develop a resource acquisition plan to sustain the program to include:
 - Funding from continuous streams
 - Staffing
 - Computer technology (including software)
 - Workspace
 - Information access
 - Implement, evaluate, reassess, and modify, if necessary, resource acquisition plan.
- Administrative policies and procedures to sustain the innovation
 - Assess policies and procedures to sustain the program.
 - Develop plan to strengthen and/or maintain policies and procedures and/or revise existing policies and procedures.
 - Implement, evaluate, reassess, and modify, if necessary, such policies and procedures.
- Expertise to sustain the innovation
 - Assess necessary expertise to sustain the program.
 - Develop a plan to acquire and/or maintain adequate expertise specific to the program.
 - Implement, evaluate, reassess, and modify, if necessary, expertise development plan.

Sustainable innovation

- Alignment between the program and the needs of program stakeholders
 - Assess program stakeholders and their needs and the program's integrity including:
 - Complexity
 - Effectiveness
 - Compatibility
 - Perceived benefit
 - Develop a plan to adopt, adapt, and/or maintain a program with integrity.
 - Implement, evaluate, reassess, and modify, if necessary, plan.
- Relationship among the program's key stakeholders
 - Assess and enhance, when necessary, the network among key stakeholders' (i.e. developers, implementers, evaluators, and decision makers):
 - Ability to collaborate
 - Level of trust
 - Level of communication
 - Level of creditability
 - Level of enthusiasm
 - Ability to create excitement
 - Develop a plan to establish and/or maintain relationships among key stakeholders.
 - Implement, evaluate, reassess, and modify, if necessary, plan.
- Implementation quality and integrity of the program
 - Assess adequacy of process evaluation strategy.
 - Develop a plan to conduct process evaluation and utilize results to ensure quality (e.g. fidelity, strength, and reach) and integrity of the program during implementation of the innovation.
 - Implement, evaluate, reassess, and modify, if necessary, plan.
- Effectiveness of the program
 - Assess adequacy of outcome evaluation strategy.
 - Develop a plan to conduct outcome evaluation and utilize results to ensure effectiveness of the innovation during implementation of the program.
 - Implement, evaluate, reassess, and modify, if necessary, plan.
- Ownership among the program stakeholders
 - Assess ownership among program stakeholders.
 - Develop a plan to establish and/or maintain ownership among key stakeholders.
 - Implement, evaluate, reassess, and modify, if necessary, plan.

(Johnson, K. et al., 2004)

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