

## 10 Things You Can Do To Improve Your Technology Program

Elizabeth Byrom, Ed.D.  
Director, Technology in Learning  
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### 10. Help teachers see what the effective use of technology looks like.

- If some teachers are using technology well, provide opportunities for other teachers to observe their classes or to co-teach with them.
- Watch and discuss videos of technology being used for teaching.



### 10. Help teachers see what the effective use of technology looks like.

- Lead a team from your school to conferences where teachers share best practices.
- Lead a team to visit schools where technology is integral to teaching and learning.



### Resources

- George Lucas Educational Foundation videos: [www.edutopic.org](http://www.edutopic.org)
- [www.videoclassroom.org](http://www.videoclassroom.org)
- NECC conference
- Florida Educational Technology Conference (FETC)



### 9. Help teachers discover ways technology can improve student learning.

- Most teachers are willing to try new strategies, including technology, if they believe the strategies will help students learn better.
- Form study groups to review research literature on teaching and learning with technology.



### 9. Help teachers discover ways technology can improve student learning.

- Use technology to differentiate instruction.
- Think beyond scores on standardized tests:
  - Quality of student work
  - Attendance
  - Discipline referrals
  - Drop out rate



## Resources

- SEIR\*TEC Professional Literature Links:
  - <http://www.seirtec.org/Literature.html>
  - <http://www.seirtec.org/Literature2.html>



## 8. Provide on-going, high quality professional development.

- Understand the linkages between professional development and student achievement.
  - Amount and quality of staff development
  - Content of professional development
  - Educators' acquisition of new knowledge and skills
  - Educators' use of new knowledge and skills
  - Student learning



## 8. Provide on-going, high quality professional development.

- The school needs a professional development plan that
  - Addresses the priorities of the school or district
  - Meets the identified needs and interests of educators.



## 8. Provide on-going, high quality professional development.

- Adopt an effective, on-site model for professional development:
  - Mentoring
  - Coaching
  - Action research
  - Study teams
  - Authentic tasks



## Resources

- National Staff Development Council Web Site ([www.nsd.org](http://www.nsd.org))
  - Standards for professional development
  - Publications
  - NSDC Conference
  - Guskey, T. – Professional Development and Student Achievement
  - Killion, J. – Evaluating Staff Development



## 7. Provide each school with a technology facilitator, media coordinator, and technician.

- Technology facilitators should be experienced teachers who know technology.
- The facilitator's job is to help teachers teach with technology, e.g., help teachers plan instruction, go into classrooms and demonstrate the use of technology, etc.



**7. Provide each school with a technology facilitator, media coordinator, and technician.**

- The technology facilitator and the media coordinator can't be the same person. You need both.
- The technology facilitator and the media coordinator working together with teachers will probably have a strong impact on teachers' use of technology.



**7. Provide each school with a technology facilitator, media coordinator, and technician.**

- You need a readily accessible technician, too.
- Fixing computers, networks, paper jams, etc. is the job of the technician, not the technology facilitator.



**Resources**

- NC Technology Facilitator Job Description
  - <http://tps.dpi.state.nc.us/scd/techpositions/TechnologyFacilitatorJob.html>



**6. Provide opportunities for teachers and staff to work collaboratively.**

- Collaborate for instructional planning, teaching, classroom management, assessment, professional growth...
- Models of collaboration:
  - Teachers, media specialist, technology facilitator
  - Teams from same grade level or subject area
  - Multi-disciplinary teams
  - Multi-grade level teams



**Resources**

- Information Power: Building Partnerships for Learning
  - <http://www.ala.org/aas/Template.cfm?Section=informationpowerbook>
- Leading edge: 'Collaboration lite' puts student achievement on a starvation diet
  - <http://www.nsdcc.org/library/publications/isd/dufour244.cfm>



**5. Start with the curriculum, not the technology.**

- The government has spent billions of dollars on instructional technology, yet according to the NCES, only about half of the nation's teachers use technology frequently for instruction



#### 5. Start with the curriculum, not the technology.

- It's not enough to have workshops on PowerPoint and then tell teachers to integrate what they've learned into their lessons. It seldom happens.
- Teachers need lessons that incorporate technology as a way of helping students meet state standards.



#### Resources

- Marco Polo
  - [www.marcopolo.org](http://www.marcopolo.org)
- Great Resources for Integrating Technology into Schools
  - [www.gritsonline.org](http://www.gritsonline.org)
- Kaleidoscope
  - [www.ncwiseowl.org/kscope/](http://www.ncwiseowl.org/kscope/)



#### 4. Provide a supportive environment for change.

- Understand the change process.
- Remember that it takes an average of 3 to 5 years for teachers to reach the point where they use technology fluently.
- Ensure that everyone in your school understands what "technology integration" means.



#### 4. Provide a supportive environment for change.

- Support teachers and staff as they try new teaching strategies and technologies.
- Provide incentives
  - for teachers to participate in professional development.
  - for teachers to use technology fluidly and frequently.



#### Resources

- Fullan, M., (2001). *Leading in a Culture of Change*.
- Hord, S. and Hall, G., *Schools of Change (Concerns Based Adoption Model)*.



#### 3. Plan and conduct formative evaluation of technology programs.

- Develop and implement a plan for formative evaluation.
- Work with an external evaluator to review the formative evaluation and to conduct an external or summative evaluation.



## Resources

- SEIR\*TEC Formative Evaluation Framework
  - <http://www.seirtec.org/evaluation/inst/worksheets.html>

### Planning For Evaluation

SEIR\*TEC has developed a Formative Evaluation Framework, specifically intended to help local education agencies and individual schools increase their internal capacity to evaluate projects that integrate technology into teaching and learning. Although tailored particularly to projects funded by grants under the Educating Tomorrow Through Technology (ETT) program, the strategies described in this framework may be easily adapted to the evaluation of other self-improvement projects or work.

The framework provides a step-by-step approach to help you establish a plan and implement it effectively. Each framework is intended to be used as a guide to help you develop a complete process for your project.

**Planning the evaluation:**

- Explaining how the project works
- Establishing project goals, objectives, and strategies
- Developing the basic components of an evaluation
- Identifying data sources for the evaluation
- Implementing the evaluation activities
- Communicating the evaluation results

### The SEIR\*TEC Formative Evaluation Framework Website

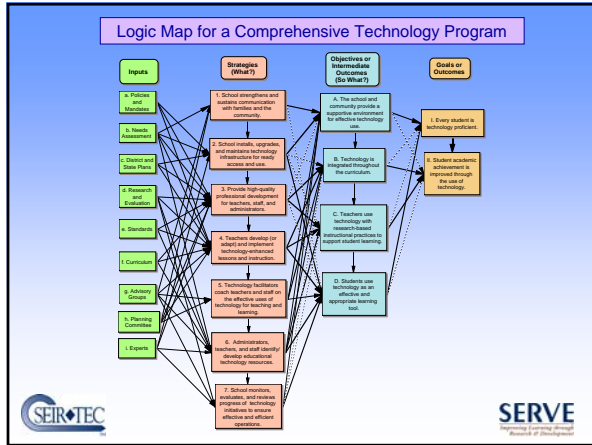
The resources provided on the Formative Evaluation Framework website can be used in two ways:

- You can start at the beginning of the list of resources and descriptions and follow the link at the bottom of the page to each successive section to work through the steps required of a quality project evaluation, or
- If you have a specific need, or interest in, information about a particular section, you can enter your search for an individual section of the SEIR\*TEC resources evaluation framework, or use the index provided in the Resource Index.

The website also provides linked resources, data-collection instruments related to technology implementation, and a capacity to guide the above steps.

## Components of the SEIR\*TEC Model for Evaluation Plans

- Logic maps
- Evaluation model and worksheets
  - Questions
  - Indicators
  - Data sources, methods and measures
  - Benchmarks
  - Use of findings
- Evaluation management plan



### Evaluation Planning Example – Objective B (SEIR\*TEC)

**Objective: B. Technology is integrated throughout the curriculum.**

**Supporting Strategies:**

- Teachers, staff, and administrators participate in high quality professional development.
- Teachers develop (or adapt) and implement technology-enhanced lessons and instruction.
- Technology facilitators coach teachers and staff on the effective uses of technology for teaching and learning.
- Administrators, teachers, and staff identify/develop educational technology resources.

| Impact Questions (So What?)<br>What difference does it make?   | Indicators<br>What does success look like?                              | Methods/Measures/<br>Data Sources<br>How will you find out? | Benchmarks<br>What are your intermediate targets?   | Use of Evaluation Findings<br>What do you do with the results?         |
|--|---|---|---|--|
| What impact does the integration of technology throughout the curriculum have on students' use of technology for learning? | Teachers select and use technology appropriate for each curriculum area | Review of lesson plans in view of the curriculum            | By mid year, 75% of teachers' lesson plans incorporate the appropriate use of technology, by the end of year 100% of teachers' lesson plans incorporate the appropriate use of technology | Determine barriers to technology integration throughout the curriculum |
| What difference does the integration of technology throughout the curriculum have on student learning?                     | Students use technology to learn curriculum and to meet state standards | Review of student products using a standard form            | Recommend changes in instructional practices  | Examine alignment of lesson plans to                                   |
| What impact does the integration of technology   | The quality of student products is improved                             | Nine-week grades  | 100% of students score satisfactory or  |  |

### Evaluation Planning Example – Strategy 4 (SEIR\*TEC)

**Strategy: 4. Teachers develop (or adapt) and implement technology-enhanced lessons and instruction.**

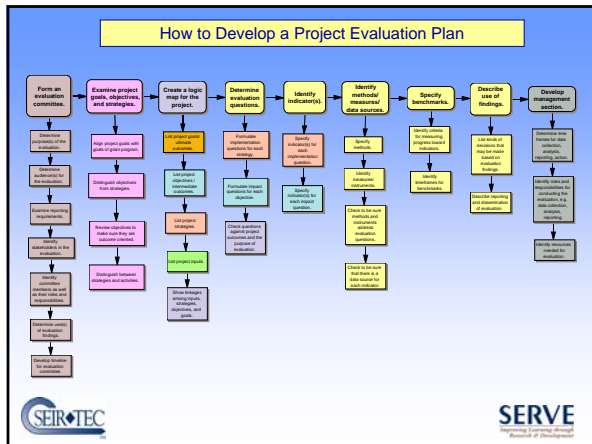
**Activities:**

- Teachers participate in staff development on locating, creating and using lesson plans that integrate technology with the curriculum.
- Teachers review curriculum lesson plans to ensure that technology is integrated into core content areas, e.g., math, science, language arts, and social studies.
- School develops a compendium of technology-integrated lessons teachers have found/created that work.

| Implementation Questions (What?)<br>What do you need to find out?  | Indicators<br>What does success look like?  | Methods/Measures/<br>Data Sources<br>How will you find out?    | Benchmarks<br>What are your intermediate targets?  | Use of Evaluation Findings<br>What do you do with the results?                                  |
|--|---|--|--|---|
| How extensive is the integration of technology into the curriculum? Into each grade level? Into each subject area? | Teachers are adopting or adding online peer reviewed lesson plans that integrate technology | Lesson plan reviews using a standard rubric                    | By mid-school year, all teachers implement at least 2 technology-infused lesson plans per month, by the end of the year, all teachers implement at least one technology-infused lesson plan per week | Use results to identify which aspects of staff development are working and which need attention |
| What is the quality of technology-enhanced lesson plans?   | Reviews of teacher developed lesson plans indicate the plans are                            | Classroom observations by principal and technology facilitator |  | Use data to make recommendations regarding next steps for staff development                     |
| To what extent are teachers implementing technology?   |   | Review of lesson plans in view of curriculum                   |  | Re-examine lesson   |

### Evaluation Planning Example – Management Plan (SEIR\*TEC)

| Evaluation Activities<br>What evaluation activities will occur? | Timeframe<br>When will the evaluation activity occur? | Person Responsible<br>Who will be responsible for ensuring the activity occurs? | Resource(s)<br>What resources do you need to do the evaluation?   |
|---|---|---|---|
| Evaluation Team Meetings  | Monthly   | Project Coordinator   |   |
| Collect baseline data   | July  | Project Coordinator   |   |
| Develop rubrics   | July  | Curriculum Specialist   | <ul style="list-style-type: none"> <li>Meeting space and resources for monthly committee meeting</li> <li>Web-based document sharing tool, e.g., WebEx</li> <li>State and local curriculum</li> <li>System to collect electronic lesson plans</li> <li>Database software, e.g., Microsoft Access, FileMakerPro</li> </ul> |
| Identify or develop instruments for data collection             | July  | Project Coordinator   | <ul style="list-style-type: none"> <li>Rubric for assessing lessons and student projects</li> <li>Classroom observation instrument</li> <li>Data collection hardware, e.g., PDAs, laptops, scanner</li> <li>Web-based survey software, e.g., ReMark</li> </ul>  |
| Pilot instruments   | August  | Project Coordinator   |   |
| Provide training on classroom observation                       | August  | Technology Facilitator  |   |
| Develop focus group protocol and questions                      | August  | Project Coordinator   |   |
| Collect interim data  | September   | Project Coordinator   |   |
| Needs assessments   | September   |   |   |
| Surveys   | September   |   |   |



### What is a logic model?

- A logic model is a graphic representation of the theory or logic behind a project or program. It shows the forces that shape the project as well as the relationships among the key components.

- ### Frameworks for Logic Models
- Harvard Family Research Council
  - Kellogg Foundation
  - National Science Foundation
  - National Staff Development Council

### REACHING RESULTS

**LEARNING FROM LOGIC MODELS: AN EXAMPLE OF A FAMILY/SCHOOL PARTNERSHIP PROGRAM**

**LOGIC MODEL DEFINED**

A logic model is a graphic representation of the theory or logic behind a project or program. It shows the forces that shape the project as well as the relationships among the key components.

**HOW TO USE A LOGIC MODEL**

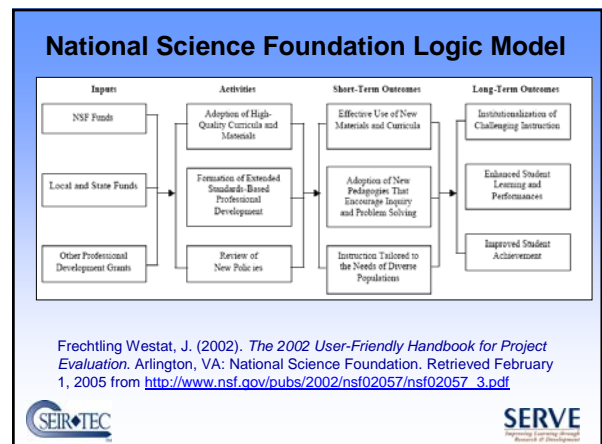
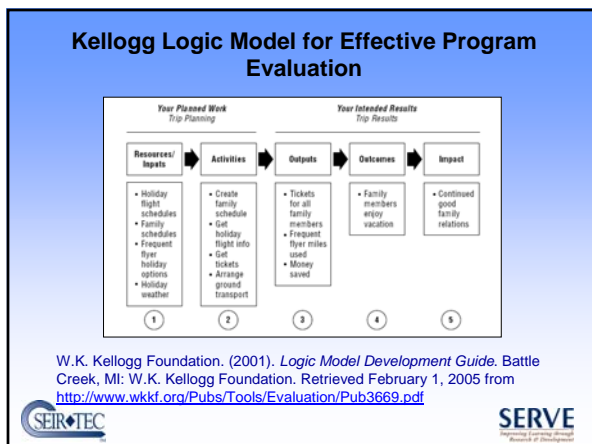
Developing a logic model should be one of the first steps in an evaluation. Once the model is developed, it can be used to guide the evaluation process. It can also be used to communicate the program's goals and objectives to stakeholders.

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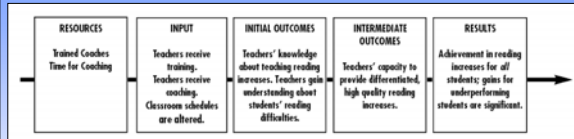
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**HARVARD FAMILY RESEARCH PROJECT**

Coffman, J. (1999). *Learning from Logic Models*. Cambridge, MA: Harvard Family Research Project. Retrieved February 1, 2005 from <http://www.gse.harvard.edu/%7Ehfrp/pubs/onlinepubs/rfb/learning.html>



## NSDC Logic Model for Evaluating Staff Development



Killion, J. (2001). *Assessing Impact: Evaluating Staff Development*. Oxford, OH: National Staff Development Council. Retrieved February 1, 2005 from <http://www.nsd.org/connect/projects/ai1-4.pdf>



## 2. Collect and use data for program planning and decision making.

- Conduct annual needs assessments of teachers and staff.
- Adopt or adapt a protocol for conducting classroom observations.
- Use the data to measure how technology is or isn't being used for teaching and learning, not for teacher performance.



## 2. Collect and use data for planning and decision making.

- Review lesson plans to see the extent to which technology is used for teaching and learning. Use a common format, e.g., rubrics, for the review.
- Review students' products to see what and how well students are learning.



## Resources

- Looking for Technology Integration (LoFTI)
  - <http://www.seirtec.org/evaluation/stna.html>
- School Technology Needs Assessment (STNA)
  - <http://www.seirtec.org/evaluation/stna.html>
- Profiler Pro
  - <http://profilerpro.com/>
- Rubistar
  - <http://rubistar.4teachers.org/index.php>



## 1. Lead the way.

- Teachers who indicate that their principals are good leaders say the principals “transform” their schools.



## 1. Lead the way.

- Leaders create a shared vision for the use of technology for teaching and learning. They see technology as a means to an end, i.e., improving learning, rather than something else the school has to do.



### 1. Lead the way.

- Principals who are good leaders build capacity for leadership within the school, e.g., by supporting teachers in developing their leadership potential.



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### 1. Lead the way.

- Good leaders are good communicators.
- Leaders model the use of technology.
- Participate in professional development.



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### Resources

- Educational Technology Leadership Toolkit  
– <http://www.nsba.org/sbot/toolkit/>
- Planning into Practice  
– [www.seirtec.org/publications](http://www.seirtec.org/publications)
- Fullan, M. (2001). *Leadership in a Culture of Change*



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### Presenter Contact Information

Elizabeth Byrom, Ed.D.

Director, Technology in Learning  
SERVE Center at UNCG

Ebyrom@serve.org



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