Impact of ICT in the Classroom: Change & Innovation

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Objective – To address complex issues of measuring impact related to ICT in education and the Intel partnership strategy at the point of intervention

To do this, we will discuss the following questions:

- How do we identify pertinent indicators of success?

- What is appropriate research approach?

- What type of evaluation? Advantages/differences of formative and summative evaluation and of quantitative and qualitative methods

And, introduce:

- Various evaluation instruments and protocols from the Intel® Education evaluation portfolio.

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Intel® Teach Program

•Our focus is to train teachers to effectively integrate technology in the classroom and prepare students with 21st century learning such as:

- Technology and digital literacy
- Effective communication
- Critical thinking
- Problem solving
- Collaboration

Intel® Teach Program

- A worldwide proven program – more than 6 million teachers trained in 45 countries
  - Research-based and independently evaluated
  - Range of course offerings
  - Developed by educators for educators

Intel® Teach Program Portfolio

Intel® Teach Program

ICT Teachers

Skills for Success Course

Training on a student curriculum that develops digital literacy, problem solving, critical thinking, and collaboration skills

Classroom Teachers

Getting Started Course

Introduction to classroom software productivity tools and student-centered approaches to learning

Essentials Course

(F2F for In-service and Pre-service)

Training on how to integrate technology into existing classroom curricula to promote student-centered learning

Essentials Online Course

(Hybrid F2F & online for In-service and Pre-service)

Training on how to integrate technology into existing classroom curricula to promote student-centered learning

Thinking with Technology Course

Training on effective technology integration skills using online thinking tools to enhance students' higher-order thinking skills

Advanced Online Course

(Hybrid F2F and online)

Training that enables teachers to build communities to advance their integration of technology and 21st century learning

School Leaders

Leadership Forum

Interactive, face-to-face forum focused on leadership in promoting, supporting, and implementing effective technology integration in schools

Enhancement Materials

Online Tools and Resources
Help Guide, Assessing Projects, Designing Effective Projects, and Thinking Tools

Identifying Indicators of Success

Evidence Centered Design

- Macro – Policy Level
  - external environment, attempts to understand initiatives from the perspective of policy makers, their constituents, resource allocation, power relationships, political costs/benefits, and so on. Most reform initiatives have been and continue to be analyzed from this perspective.

- Meso – School Level
  - internal organizational & sociocultural environment, the analysis of 'multi-stage', 'multi-actor complexities'.

- Microanalysis – Classroom Level
  - interactions of participants with structures (i.e., resources). Connecting interactions with the creation of productive learning environments.

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Identifying a Theoretical Framework

- Equity and excellence is defined in terms of the quality of actual teaching and learning processes at the classroom level and at the individual school level.

- Many of the past reform efforts to enhance equity and excellence have been tied to policy-analysis models that focus on microanalysis concerns.
    - Maintaining these large-scale initiatives are often difficult because of a lack of understanding of schools as complex organizations and sociocultural entities.
    - Failure results from the inability to understand issues related to meaningful educational change, and faulty conceptions of the meaning of excellence and equity in education.

- Effective/sustained policy-based initiatives to enhance equity and excellence must be designed and understood at the microanalysis level and secondarily at the mesoanalysis level.

Effective Teaching & Learning

"Classroom instruction is a complex enterprise that occurs at the intersection of teachers, students, and texts within the surrounding classroom, school, and community environments."

(Douglass, p. 518)

- Change comes from
  - Policy change in: standards: curriculum: assessment
  - Administration change in: vision of teaching & leadership, support, professional development
  - Teachers change in practice
  - Student change in activities

What is an appropriate evaluation strategy?

"Progress in studying the complexity of classroom instruction on a large scale relies on our ability to pose research questions at the appropriate levels of analysis and to attempt to answer the questions using rigorous methods."

- Douglas

- Understood within the complex education framework and a logic model that identifies: intervention, change, context and audience.

- Valid cause & effect relationships.
    - Desired behaviors with relevant measures

- Classroom Impact
    - Teachers Make A Difference - What aspects of teacher performance matter most?
        - Background characteristics, attitudes, instructional practices
        - * Attitudes and instructional practices combined account for more variance in student learning than teacher background qualifications.

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Developing the Logic Model and the indicators

- In order to transform general project goals and objectives into observable and measurable phenomena, it is crucial to have a clear and realistic understanding of the project design and reasonable expectations. The evaluation design must consider that schools are full of complex political and social dynamics.

For example, it is unrealistic to expect a project to transform teacher practice if the design does not include professional development nor directly engage classroom teachers.

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Intel® Teach Essentials Course as an example

- Essentials Course is a 40 hour training to prepare teachers to use ICT on a day-to-day basis to support a range of activities

- The Essentials Course both engages teachers with the "big ideas" about good instructional practice that drive this vision of technology use in schools, and addresses in detail the concrete challenges involved in making ICTs a part of everyday classroom activity.

- Throughout the course, teachers are encouraged:
  - to view students as active, curious, and engaged learners;
  - to view themselves as facilitators of their students' learning;
  - and to view ICTs as rich, flexible resources can support every kind of student, in every kind of classroom.

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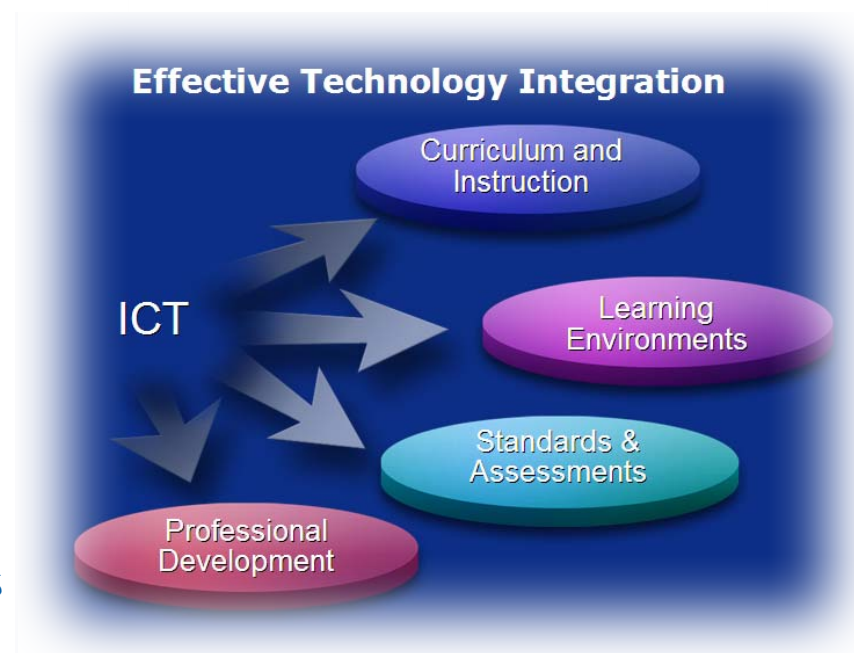# Logic Model of the Essentials Course influence on teaching and learning
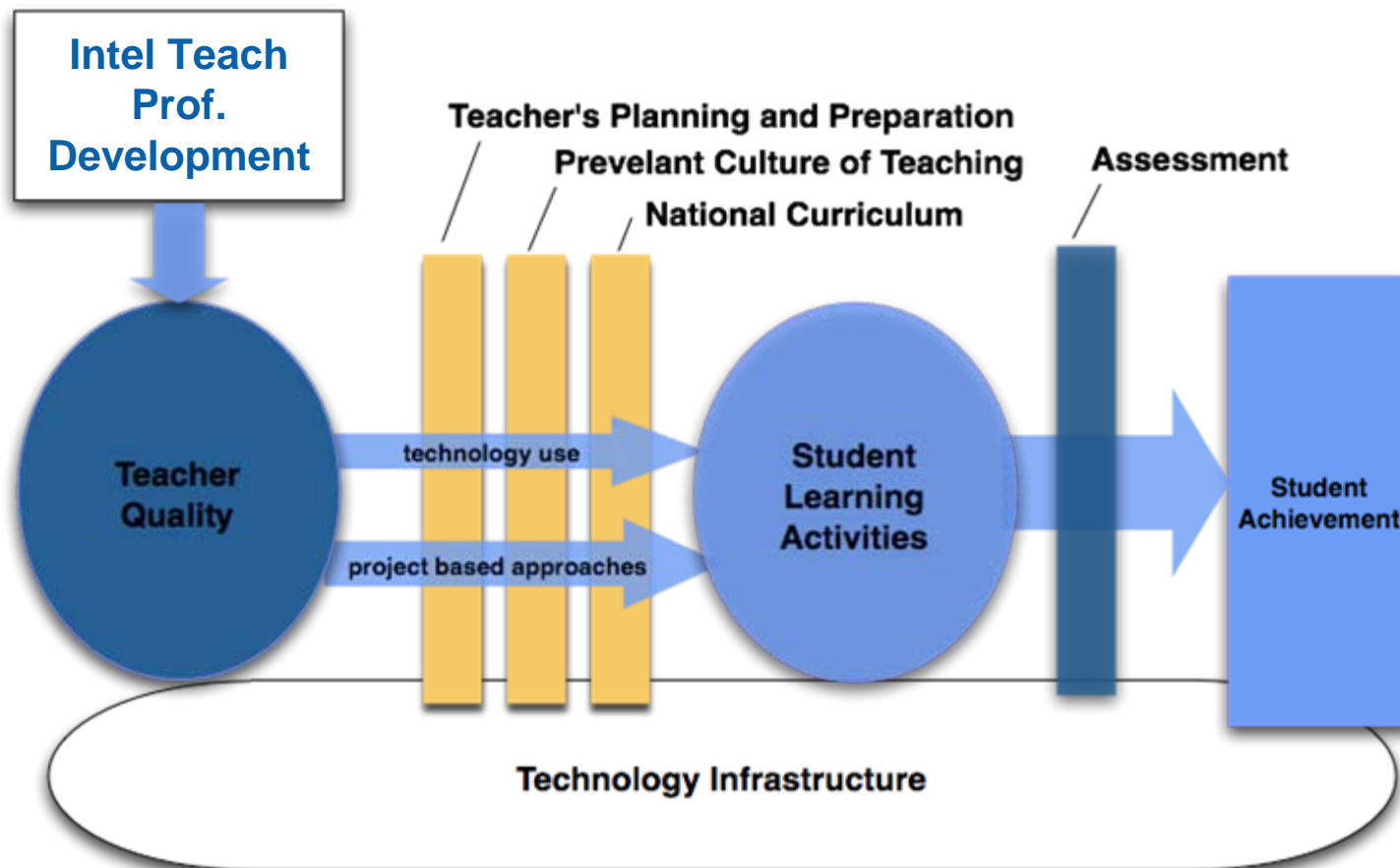
- Light, Daniel (2006)

Intel's evaluation strategy   *Intel Teach

- To collect data on, and to observe the extent and quality of *teacher implementation* of new techniques in the classroom.

- To determine the *effectiveness and impact* of K-12 programs on teachers classroom performance.

- To learn how to *improve* the effectiveness of the program.

- To *communicate effectiveness*, thus encourage participating teachers to continue learning and implementing new techniques and impacting the school culture.

- To provide evidence for an effective curriculum, pedagogy and processes of classroom interaction that directly influence student learning.

Effective Technology Integration

Curriculum and Instruction

ICT

Learning Environments

Standards & Assessments

Professional Development

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Tool Selection

To understand effective teaching and learning we must apply analytic approaches that look at patterns and profiles of skills and practices in addition to the quantitative differences.
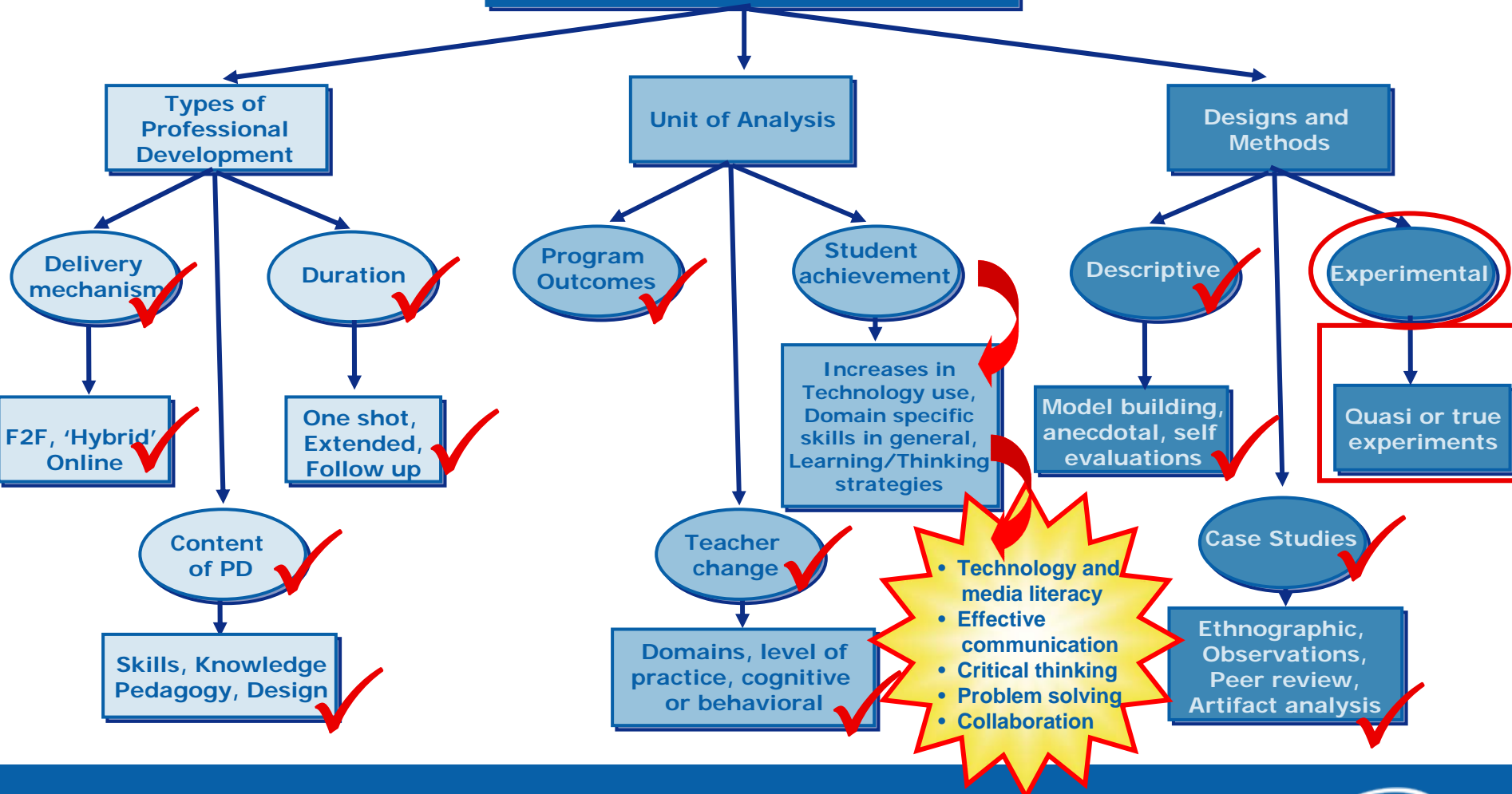
- There are two main types of evaluation, and each type has a different function:
  - Formative Evaluation: seeks to provide feedback on program implementation and design to improve the overall program;
  - Summative Evaluation: seeks to understand how and whether a program has effected an outcome.

- There are two main methods of data collection, both are necessary in order to generate a complete picture of the impact of an intervention in the complex education system:
  - Quantitative methods, like surveys, can indicate that a change in practice or performance, but they provide only a superficial understanding of these changes.
  - Qualitative methods, like observations or interviews, can provide a more complete understanding of why and how these changes have developed.

Student Impact

Evaluating Technology Professional Development for Teachers

Types of Professional Development

- Delivery mechanism ✓
  - F2F, 'Hybrid' Online ✓
- Duration ✓
  - One shot, Extended, Follow up ✓
- Content of PD ✓
  - Skills, Knowledge Pedagogy, Design ✓

Unit of Analysis

- Program Outcomes ✓
- Student achievement
  - Increases in Technology use, Domain specific skills in general, Learning/Thinking strategies
- Teacher change ✓
  - Domains, level of practice, cognitive or behavioral ✓

- Technology and media literacy
- Effective communication
- Critical thinking
- Problem solving
- Collaboration

Designs and Methods

- Descriptive ✓
  - Model building, anecdotal, self evaluations ✓
- Experimental
  - Quasi or true experiments
- Case Studies ✓
  - Ethnographic, Observations, Peer review, Artifact analysis ✓

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Partnerships at the point of impact

- Support capacity building activities by involving an evaluator from the very beginning, maintaining accurate records & making reports accessible.

- Establish that all projects offer meaningful roles for partners that allow them to co-develop and create the resources instead of relegating to pure execution and implementation.

- Participate in collaborative discussion to clearly understand the "logic model" or "theory of action" of the specific intervention(s) and specifically articulate:

- Identify key personnel with interest & desire for student centered learning through technology: teachers, teacher leaders, tech staff, and/or administrators.

- Build a culture of whole school reform through support and development of teacher & leader knowledge, attitudes, and behaviors.

Previous Findings

End of Training Benchmarks

1. 89% of teacher respondents indicate the training focused on integration of technology into their curriculum.

2. 81% of teacher respondents indicate the training provided teaching strategies to apply with their students.

3. 86% of teacher respondents indicate the training illustrated effective uses of technology with students.

4. 80% of teacher respondents indicate they are prepared to implement teachings that emphasize independent work by students.

5. 85% of teacher respondents indicate they are prepared to Integrate educational technology into the grade or subject they teach.

6. 82% of teacher respondents indicate they are prepared to support their students in using technology in their schoolwork.

Impact Benchmarks

1. 75% of teacher respondents indicate increased use of technology activities with their students

2. 80% of teachers increase use of technology for lesson planning and prep

3. 60% of teachers increase use of project-based approaches in their teaching

4. 75% of teachers use the unit/lesson they developed in training back in their schools

Local story : Philippines

"I must confess that I have fallen in love with the Intel Teach curriculum. As the days passed, I gained more skills and discovered more possibilities that the curriculum can offer to me. In turn, my students benefited much as I implemented what I have learned in Intel Teach."

- Candelario Garo, Philippines Professor

- Intel Teach is recognized as a main training component of the govt's major ICT projects; >74,000 teachers trained

- Promotes the development of learning communities that foster reforms in micro to mid-level to macro levels

school → division → national

- Strong private sector and government collaboration resulting in
  – Classroom innovations: 97% MT unit plan implementation rate in SY05-06
  – Institutional innovations: 41 top teacher education institutes integrating Intel Teach in curriculum

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Local story : Pakistan

"Yes it has made my teaching simpler and effective. Students' responses are better and they want to learn the new technology – it attracts everybody".

- Teacher, Pakistan

- Intel Teach Program was launched in 2002 with the Ministry of Education

- Trained 80,000 teachers to date across the Country

- First year evaluation activities included surveys, interviews & focus groups. Time, insfrustructure & access were key challenges.

- However, 55% of the teachers identified the difficulty in Scheduling Time at the Computer Lab as a primary barrier.

- Punjab : Passed out a Policy for all CPP (Community Private Party Labs Owners – 102 of them) to allow access to all teachers and students in support of the Intel Teach to the Future Program.

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Recent Findings - The Intel® Teach Essentials Course and changing teacher practice in India, Turkey, and Chile

- **Supporting change at the school-level.** What are the factors that facilitate teachers' ability to follow up on the training with their students?

  1. Pedagogical Objectives and Goals
     - The schools were able to translate a broad abstract vision, such as "student-centered learning," into a set of practical goals and objectives that were relevant to actual classroom practices and meaningful to teachers in their schools. And technology was seen as a learn tool that would support this vision.

  2. Leadership
     - Leadership at various levels of the system is important if an innovative project is to take root and grow. (Meso & Macro)

  3. Professional Development and Ongoing Support
     - For many, the tools and teaching strategies are new to many of the teachers in these schools. Therefore, both the quality of the professional development course and the presence of ongoing support for teachers in their classrooms are important.

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Recent Findings - (Cont'd) The Intel® Teach Essentials Course and changing teacher practice in India, Turkey, and Chile

- **Supporting change at the school-level.**

  4. Experimentation, Adaptation, and Critical Reflection
     - The case studies reveal the role a culture of experimentation plays in school wide change and its relationship to leadership, pedagogical goals, and professional development.

  5. Time
     - Time needs to be viewed in two dimensions: (1) teachers' professional development and planning time and (2) students' time in the classroom or learning activity.

  6. ICT Infrastructure
     - The case studies suggest that no single strategy will work for all schools with resource limits. Instead each school developed unique strategies

  7. Financing and Sustainability
     - These schools attempt to do two things to manage sustainability of their ICT activities: first, they try to obtain resources from as many sources as possible, and second, they try to control the costs related to ICT activities.

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Recent Findings – (Cont'd) The Intel® Teach Essentials Course and changing teacher practice in India, Turkey, and Chile

- **Changes in the learning environment.** Within each context, how are teachers able to follow

    1. Changes in Teachers' Knowledge, Beliefs, and Attitudes
        a. *Teachers' beliefs shifted to a constructivist paradigm of teaching and learning.*
        b. *Teachers deepened their understanding of student-centered practices.*
        c. *Teachers improved their ICT knowledge and skills.*

    2. Changes in How Students Engage with Content
        a. *Project-based work gave students a chance to collaborate, use multiple resources, and direct their own learning.*
        b. *Independent Internet research gave students autonomy and a chance to develop and share their own perspectives.*
        c. *Connecting school content to students' lives made learning more meaningful to students.*

    3. Changes in Relationships among Teachers, Students, and Parents
        a. *Projects and ICT activities fostered collaborative relationships among students.*
        b. *New teaching strategies allowed teachers to develop more collaborative and interactive relationships with their students.*
        c. *Innovating with projects and ICT strengthened the relationships between the school, parents, and the community.*

    4. Changes in the Use of ICT Tools to Promote Students' Learning

Summary

- Classroom instruction is a complex enterprise that occurs at the intersection of teachers, students, and texts within the surrounding classroom, school, and community environments.

- Effective education reform and sustained policy-based initiatives to enhance equity and excellence must be designed and understood at the classroom (microanalysis) level and secondarily at the school (mesoanalysis) level.

- Progress in studying the complexity of classroom instruction on a large scale relies on our ability to pose a research approach with questions at the appropriate levels of analysis and to attempt to answer the questions using rigorous methods.

- Partnerships beyond policy making bodies affect change by establishing that all projects offer meaningful roles for partners that allow them to co-develop and create the resources instead of relegating to pure execution and implementation.

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Recommendation

- Current research and our own evaluation findings suggest that student centered education reform using ICT requires much more than just the introduction of a new tool or one new practice.

- Instead, change begins by deeply reshaping life in the classrooms.
    - starting with educators' beliefs about learning,
    - to the relationships that make up the school community.
    - In each context, the teachers must find relevance & points of engagement between the model of ICT use and teaching and the possibilities and limits of their context.

- A holistic ICT in Education master plan requires consideration of both the technology infrastructure & access component and consideration of the use model, learning environment and professional development.

- Resources provided will enable a mesoanalysis environment scan and microanalysis monitoring of attitudes, skills and behaviors.

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Intel® Education Evaluation Resources

- To navigate the CD distributed with this presentation, see the Table of contents to review the list of files available and then locate the desired file in the corresponding folder.

- The Evaluation Resources Folder contains instruments, protocols and reports aligned to each of the Intel education initiatives.

  - Intel Teach
  - Intel Teach
  - Intel Learn
  - Intel ISEF
  - 1:1 Computing

- Category headers and icons are provided on the cover pages to help identify the type of information contained in each document. For example:

(intel) Evaluation Resources

Intel Teach® Essentials Course

Guide to Using the End of Training Survey
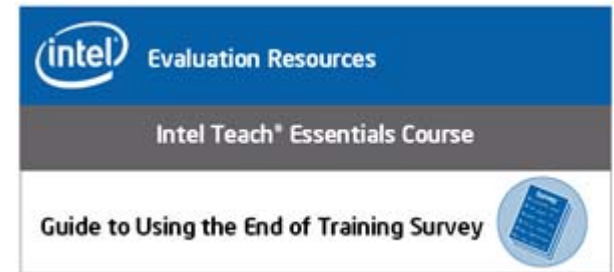
Global documentation	Survey	Case Study	Checklist	Interview	Group Interview	Observation

Specific questions for the Training

Essentials Course	Survey	Observation	Interview	Group Interview
TRAINING ITEMS				
Using the Key Resources				
PR — Did the teachers use the Intel Teach manual and CD-ROM during the training?	✔			
SL — What are teachers' reactions to the Sample Lesson Plans?	✔	✔	✔	✔
UP — What are teachers' reactions to the Unit Plan Template?			✔	
Communicating Key Teaching Messages				
EQ — How are teachers integrating Essential Questions into their unit plans?	✔	✔	✔	
RU — How are teachers integrating rubric assessment strategies into their unit plans?			✔	

Specific questions about the classroom

	Survey	Observation	Interview	Group Interview
Essentials Course				
FOLLOW UP ITEMS				
Technology to support teaching practice				
TP — Are teachers using technology in new ways to support their teaching practice?	✔		✔	
UT — How are teachers using their Intel unit to integrate technology into their teaching of curricular content?		✔	✔	
Teacher use of project based approaches				
PB — Are teachers using project-based teaching strategies in their teaching after the training?	✔	✔	✔	✔
Teachers' perceptions on the role of technology to prepare students for the future				
PS — What do teachers think their student need to know and be able to do to be successful?			✔	✔

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Surveying on Project-based approaches

(PB) **Using Project Based Approaches in the Classroom**

PB-1. About how often do you have students take part in the following types of activities? Please check the appropriate response for each row.

		Never	1-2 times per year	Monthly	Weekly	Daily
a)	Work in small groups to come up with a joint solution or approach to a problem or task	❏	❏	❏	❏	❏
b)	Work on projects that take a week or more	❏	❏	❏	❏	❏
c)	Decide on their own procedures for solving a complex problem, and discuss the implications amongst themselves with your assistance	❏	❏	❏	❏	❏
d)	Work on problems for which there is no obvious method of solution	❏	❏	❏	❏	❏
e)	Suggest or help plan classroom activities or topics or come up with their own problems to solve	❏	❏	❏	❏	❏

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Interviewing about Project Based Approaches

(PB) **Using Project Based Approaches in the Classroom**

READ TO TEACHER BEING INTERVIEWED: This section is about the project you designed during the training and the teaching strategies presented in the training.

PB-1. Can you please briefly describe the project you developed as part of the Intel® Teach to the Future training?

OPEN ENDED RESPONSE

READ TO TEACHER BEING INTERVIEWED: I am now going to ask you about teaching strategies you use in your classroom. Teachers differ in their use of teaching strategies in the classroom, and these strategies can be grouped into three broad categories:

1) Lecture followed by student activities to reinforce content;

2) Combination lecture and classroom discussion; and

3) Student inquiry to explore material.

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Rubric for Intel Learn Student Project

Description	
Exceeding Expectations	Overall, the learners' work goes beyond the requirements of the task and stands out as an excellent example of this kind of product (stamp, survey, advertisement, etc.). Skills were used to make a *highly original* product that reflects the learners' unique and creative ideas. All the "Review It' elements were completed, and one or more of the challenges was also attempted. There is evidence that the learners are very good at using the technology skills needed to make the product, and the choices for colors, sizes, words, and other details clearly communicate the learners' message.
Meeting Expectations	Overall, the learners' work meets the requirements of the task and is a good example of this kind of product (stamp, survey, advertisement, etc.). Skills were used to make an *original* product that reflects the learners' own ideas, and all the "Review It" elements were completed. There is evidence that the learners are able to use the technology skills needed to make the product, and the choices for colors, sizes, words, and other details communicate the learners' message.
Approaching Expectations	Overall, the learners' work approaches the requirements of the task and includes some but not all elements of a good example of this kind of product (stamp, survey, advertisement, etc.). Skills were used to make a *partially original* product that reflects some of the learners' own ideas, and most of the "Review It' elements were completed. There is evidence that the learners could improve their use of the technology skills needed to make the product, and the choices for colors, sizes, words, and other details only partly communicate the learners' message.
Needing Improvement	Overall, the learners' work is below expectations and needs improvement to be a satisfactory example of this type of product. The work was mostly copied from an example or someone else's work, and few, if any, of the "Review It' elements were completed. The work also shows that the learners need help with the technology skills needed to make the product, and the choices for colors, sizes, words, and other details distract from the learners' message.

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Evaluation Overview - Outcome Indicator

Teacher Outcome Indicator 1. Pedagogy and practice:
Lesson planning
1. Teachers develop and use curriculum framing questions to guide learning.
2. Projects develop over time and learning activities build toward a common learning goal. (they are interconnected)
Assessment
1. Teachers use multiple modes of assessment, including online
2. Teachers assess knowledge beyond information retrieval (i.e. ability to apply knowledge to problems, draw conclusions, analyze relationships)
3. Assessment criteria are shared with students
Instructional strategies
1. Teachers use curriculum framing questions to guide student work and student thinking
2. Teachers use multiple resources (not only text books)
3. Teachers support students in creating unique work products that represent their knowledge (about some aspect of the curriculum framing questions)
Teacher Outcome Indicator 2. Classroom environment:
Implementation of program curriculum
Scope/depth of use of resources available
1. Teachers organize the classroom to enable students to interact directly and frequently with appropriate available resources
2. Teachers create opportunities for students to save, refer to and revisit resources over time
Teacher Outcome Indicator 3. Technology use:
Technical skills
1. Teachers are able to use the basic features of wordprocessing and presentation software as well as Web 2.0 tools (wikis, blogs, online chat and discussion forums) to support instructional design
Supporting teachers' work
1. Teachers create support materials such as resources lists, class rosters, worksheets using these software tools or similar ones
2. Teachers use the Internet and Web 2.0 tools (e.g., wikis) to support curriculum development
Supporting student work
1. Teachers are able to guide their students' use of productivity tools and Web 2.0 tools.
2. Teacher can manage both whole class and rotating use of technology for instructional purposes during class time (dependent on available resources). Teachers can use online discussion forums for instructional purposes.
3. Teacher assigns technology use to support specific components of a learning activity (research, writing and revision, communication)
Student Outcome Indicator 1. Higher order thinking skills
Access, manage infor

Student Outcome Indicator 2. Activities

Student Outcome Indicator 3. Technology use

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"While technology has changed what is possible and how students can be supported and resourced in their learning, the principles of effective instruction never really change. The technology is not what drives learning but simply what mediates and supports the process; therefore, it is vital that professors, instructors and teachers remain focused on the overall process of learning and their own teaching strategies and methods throughout. What has significantly changed is the way in which these effective teaching strategies can be achieved at a higher level using new technology."

Means, B., et. al. (2009). Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies. U.S. Department of Education. Washington, D.C. http://www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

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Back Up

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Country Evaluation Strategy

- Involve an evaluator from the very beginning.
- Evaluate the very first training sessions to ID localization/translation issues.
- Pilot reports should be submitted often – even if they are only a 2-3 page memo.
- Reports should inform what the challenges and successes are that will help improve the program.
- End of Training Evaluations should continue long enough to see sustained training validity & reliability – at least six months.
- An Impact Evaluation and Report should be completed at least for the first year the program is implemented.
- Deep value of Training efforts and Impact is best understood through observations and interviews.

	Required	Recommended	Optional
Pilot (First Training sessions)	End of Training Surveys & Report	Pilot Training Observations & Interviews	
Ramp (First Six Months)	End of Training & Impact Surveys & Report	Training Observations & Interviews	School visit observations & interviews
Mature (First Year)	Impact Survey & Report	Purposive sample End of Training Surveys	Ongoing observations & Interviews
Sustaining (Ongoing)		Purposive sample Impact Surveys	Purposive sample End of Training Surveys, Interviews, & observations

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Multiple Dimensions of the Classroom Environment

- Management of Activities
- Classroom Context
- Time on Task
- Content

Instructional Practices & Processes

- Teacher Knowledge
- Classroom Management
- Emotional Climate
- Understanding of Student Needs

Characteristics of the Classroom Environment

- Social
- Language
- Self-Regulation
- Home Support

Student Characteristics

Connor, C.M., Morrison, F.J., Fishman, B.J., Ponitz, C.C., Glasney, s., Underwood, P.S., et al. (2009). The ISI Classroom Observation System: Examining the literacy instruction provided to individual students. *Educational Researcher*, Vol. 38, No. 2, pp. 85-99

Key Evaluation Designs

Eval Design	Pre-Test	Intervention	Observations	Post-Test	Impact Eval
1. Longitudinal	Participants & Control	Program	Participants & Control	Participants & Control	Participants & Control
2. Comparison	Participants & Control			Participants & Control	
3. Truncated Longitudinal		Program	Participants & Control	Participants & Control	
4. Truncated Comparison	Participants	Program		Participants & Control	
5. Pre-Test / Post-Test	Participants	Program		Participants	
6. Post-Test Comparison		Program		Participants & Control	
7. Post-Test Analysis		Program		Participants	

Cost

Time

Addressing Budget & Time Constraints

- Simplify the evaluation design.

- Clarify program evaluation needs.
  - The basic Q: "Can the program be implemented as planned". ~ Pilot

- Reducing the sample size.

- Reducing the costs of data collection.

- Mixed method approaches.

- Use secondary data sources & key informants.

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Where Are We?

Eval Design	Pre-Test	Intervention	Observations	Post-Test	Impact Eval
1. Longitudinal	Participants & Control	Program	Participants & Control	Participants & Control	Participants & Control
2. Comparison	Participants & Control			Participants & Control	
3. Truncated Longitudinal		Program	Participants & Control	Participants & Control	
4. Truncated Comparison	Participants	Program		Participants & Control	
5. Pre-Test / Post-Test	Participants	Program		Participants	
6. Post-Test Comparison		Program		Participants & Control	
7. Post-Test Analysis		Program		Participants	
* Intel Teach Eval Model	*Participants	Program	Participants	Participants	Participants

+ *localization

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Measuring Impact

Research: Studies to advance knowledge within a particular area of life or an academic discipline.

Assessment: A detailed study of the impact/outcome of an intervention on the student

Evaluation: A detailed study of the implementation or impact of a specific program/intervention for the purpose of program review, continuous improvement and indicators of success.

Our approach to evaluation

- –Evaluation can not only show whether a program is successful, but inform program process in an iterative, formative way
- –Qualitative research is not about measurement but about meaning & interpretation.
- –Qualitative field studies are designed to provide supplemental data and 'in depth' analysis of 'outliers' or variable comparison.

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What Is Evaluation?

- Evaluation is the systemic study of a program or set of events over a period of time to assess effectiveness in terms of its aims.

- Evaluation implies some form of systematic examination of events in order to be able to make more informed decisions about a particular program.

- Evaluation has a range of features:
    - Evaluation is *systematic*.
    - Evaluation is about both *products and processes*.
    - Evaluation is concerned about *policy and practice*.
    - Evaluation defines and explores *effectiveness*.
    - Evaluation is part of the *quality assurance* process.
    - Educational evaluation is a process of *systematic description of educational objects*.
    - Evaluation and improvements are linked.

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What Is Evaluation? cont'd

- Evaluation is *not neutral*. (It can highlight good practices & weaknesses or problems)
- The nature of an evaluation inquiry will be linked to the purposes of the evaluation.
- Evaluators *make judgments*.
- The evaluation process will include
  1) the *focus on a problem*,
  2) *collecting and analyzing relevant data*, and
  3) *communicating findings and making recommendations*.
- Evaluation can be:
  1) *autocratic* – evaluator as external validator,
  2) *bureaucratic* – consultant/client relationship and
  3) *democratic* – confidential, negotiated, accessible.
- Evaluation can be *open* or *closed*.
- Evaluation can be *formative* or *summative*

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