"How to Provide Effective Professional Development in Technology"

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- School District Technology Support
- Teacher!

Research and Trends

- Survey of Technology in Schools (Milken, 1999)
    - Teacher attitude high (67%)
    - Classroom use low (13%)
    - Transference to classroom low unless integrated

- The majority of teachers do not practice or model effective technology in their classrooms (Lemke, 2005; Wenglinsky, 1999).

Technology Ownership by Household (Married with children)

- 58% own 2+ computers (63% are networked)
- 84% children aged 7-17 use the internet
- 65% both children & parents use the internet
- 89% own multiple cell phones
  - Children less likely to use cell phone than use the internet

Professional Development Needs
## (2003-2004 School & Staffing Survey)

- Content Knowledge (23%)
- Classroom Management (18%)
- Teaching Students with

  Special Needs (15%)
- Using Technology in the Classroom (14%)
- Student Assessment (4%)
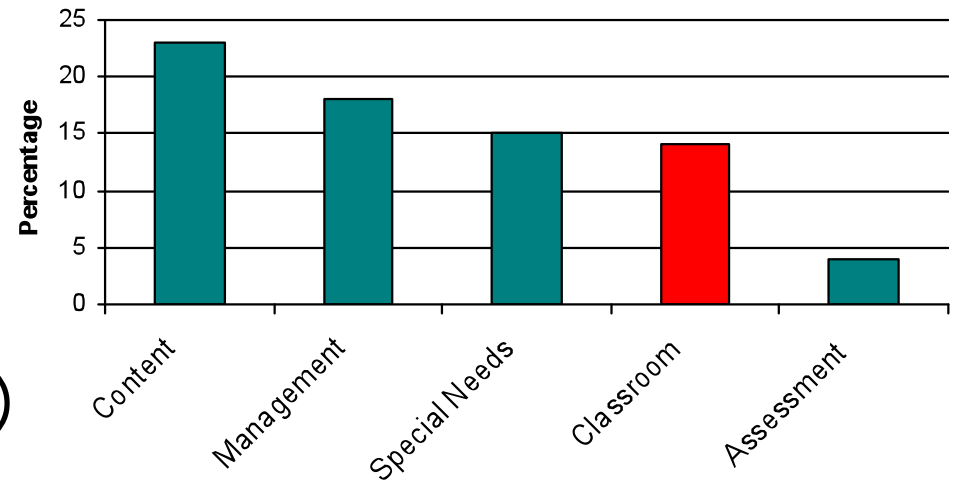
Classroom Teacher Computer Use
(National Staff Development Council, 2009)

- Administrative Processes (76%)
- Monitor Student Progress (41%)
- Research & Information (37%)
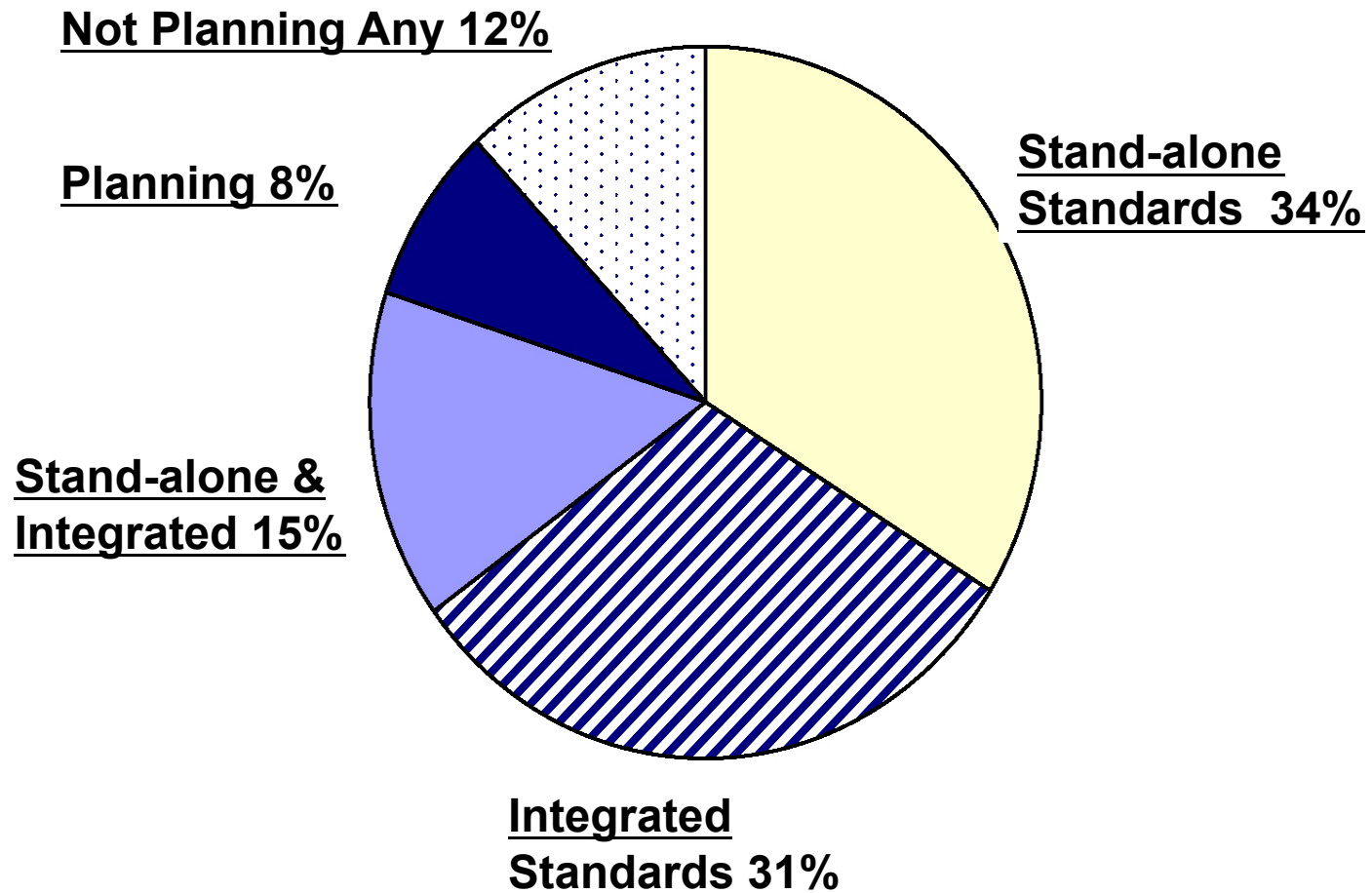- Instruct Students (32%)
- Plan and Prepare Instruction (29%)
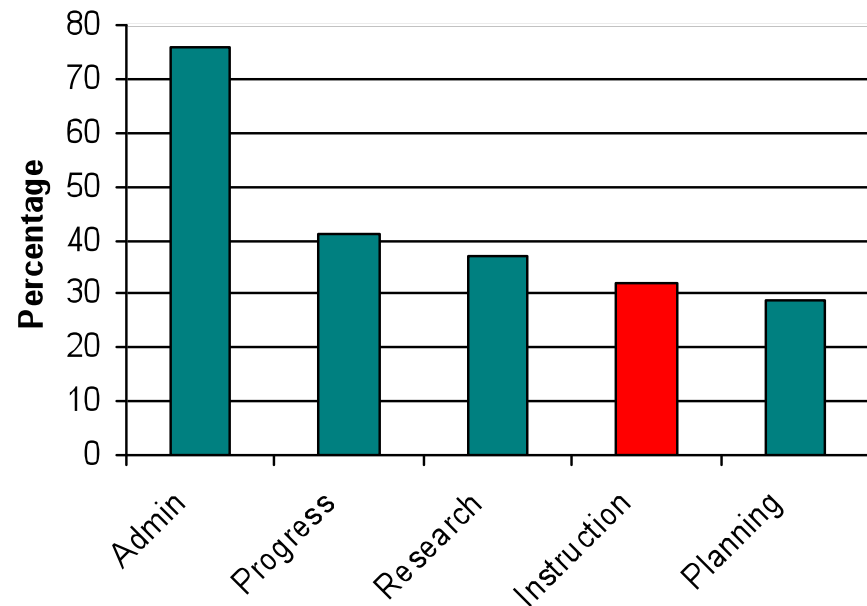
More…

- Schools **without consistent teacher training** in **integration strategies** tended to demonstrate limited integration of technology in the classroom (Johnson, 2002; Howery, 2001; Catchings, 2000).

- Organizations with **technology plans** score higher academically than those without plans (Bielefeldt, 2001).

- Students of teachers completing professional development **outperform** students of teachers who do not participate (Wenglinsky, 1999).

States with Technology Standards for Students FY2003 (NETTS SURVEY)

Not Planning Any 12%

Planning 8%

Stand-alone Standards 34%

Stand-alone & Integrated 15%

Integrated Standards 31%

States with Assessment of Teacher Technology Skills FY2003 (NETTS State Survey)

State Assessment Developed 9.5%

Not Decided or Planned 27%

Planning to Develop 9.5%

District Assessment Developed 30%

No Assessment Developed 29%
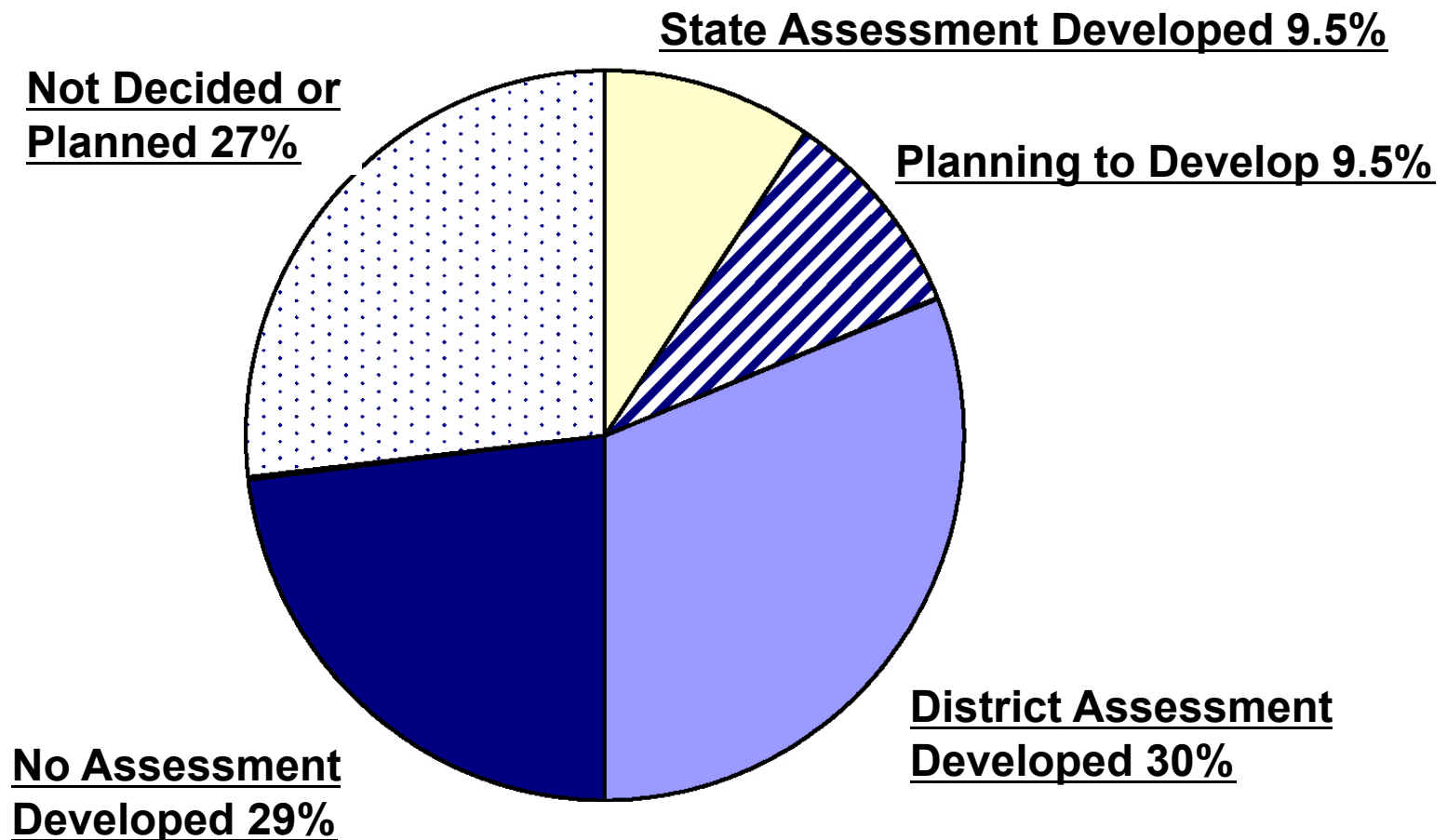
Guidelines and Standards

- National/Governmental Initiatives
  - U.S. Dept. of Education (National Technology Plan)
  - Congressional Office of Technology
  - "No Child Left Behind"
- Professional Organizations
  - International Society for Technology (ISTE)
  - International Technology Education Association (ITEA)
  - Milken Family Foundation
  - Southern Technology Council

Research Study Questions:

- How do <u>actual practices</u> of professional development in technology as described by providers and receivers of professional development in elementary school compare with <u>recommended practices</u>? (Survey Instrument)

- How do <u>providers' perceptions</u> of professional development in technology compare with <u>receivers' perceptions</u> of professional development? (Analysis – ANOVA)

Research & study revealed:

- Common recommended practices & strategies
- Significant difference in perception of providers and receivers of professional development regarding effectiveness of planning and support

What is "Effective" Professional Development?

"We can define 'high quality' or 'effective' professional development as that which results in improvements in teachers' knowledge and instructional practice, as well as improved student learning outcomes."

(National Staff Development Council, 2009)

Development of Model

3 Step Process of Professional Development in Technology:

- Planning
- Implementation
- Follow up/Support

Planning

Evaluate needs

Collaborate

Planning….

- Consider focus/goal
  - Top Down?
  - Bottom Up?
- Involvement (Who?) – beginning to end (all stakeholders)
  - Administration
  - Faculty
  - Staff

Collaboration

Keep planning

- Collaboration
  - Goal/focus
    - Instructional
    - Skill building
- Needs assessment
  - Collaborative input
  - Be specific
    - Define goals
    - Confirm shared goals

Evaluate needs

More planning....

- Develop a concrete plan
  - Short term plan – specific focus
  - Long term plan – sustainable, clear focus (measurable)
  - Share, share....*collaborate!*
- Include:
  - Flexible schedule
  - Options based on shared goals
  - Support & support options

Implementation

Modeling

Implementation:

- Location
  - At school site or convenient location
  - Easy access to equipment
  - One-on-one computer/equipment
- Materials
  - Available for all participants
  - Access available following training

More implementation:

- Focus
  - Based on teacher needs
  - Individual differences/interests
  - Varying abilities
  - Goals/objectives
- Environment
  - Collaborative
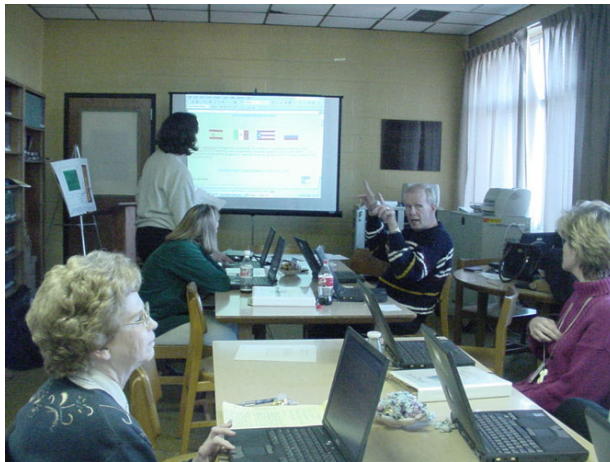 - Adequate time

Collaboration

Implementation..

- Reinforce skill/objective
  - Time to apply knowledge gained
  - Connect learning to teacher need
  - Share
- Model – how, when, where

Modeling

Follow Up/Support

Reflect

Share

Follow up/Support

- Evaluation
  - Assess goals/objectives of plan
  - Assess needs and next steps
  - Encourage self-assessment
- Feedback
  - Sharing of successes
  - Needs

Reflect

More follow up/support

- Resources
  - Support person
  - One-on-one training option
  - Incentives
    - $
    - Time
    - Equipment
    - Recognition

Follow up/support…

- Needs assessment
- Review long term plan
- Schedule additional training
- Capitalize on resources
  - Availability
  - Wikki
  - Newsletters
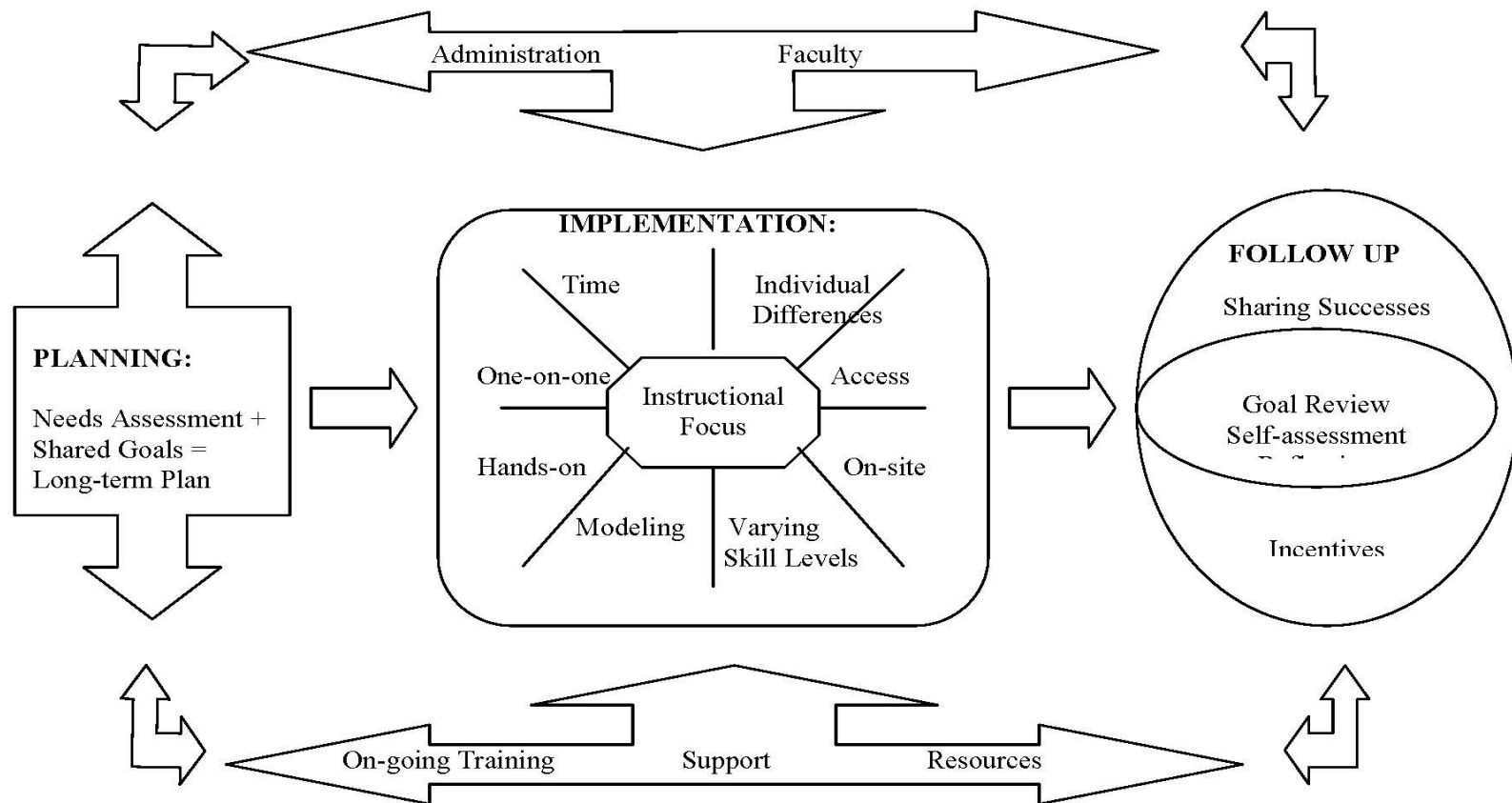 - Bulletin Boards
  - Model and share

Share

Sustainable Effective Professional Development in Technology

- ○ **Planning**
  - ● Needs Assessment, Shared Goals, Long-term Planning
- ○ **Implementation**
  - ● Instructional Focus, Time, Appropriate Environment
- ○ **Follow Up/Support**
  - ● Sharing, Resources, Incentives, Goal Review, Collaboration

"Model of Effective Professional Development in Technology"

Administration Faculty

IMPLEMENTATION:

Time Individual Differences

One-on-one Access

Instructional Focus

Hands-on On-site

Modeling Varying Skill Levels

PLANNING:

Needs Assessment + Shared Goals = Long-term Plan

FOLLOW UP

Sharing Successes

Goal Review
Self-assessment

Incentives

On-going Training Support Resources

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