Charting a Path for Professional Development with Digital Tools

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Florida Department of Education
“interest, attitude, and ability of individuals to appropriately use digital technology and communication tools to access, manage, integrate, and evaluate information, construct new knowledge, and communicate with others in order to participate effectively in society.”

Programme for International Student Assessment (PISA), 2005
Effective use of technology can impact learning environments by:

- Creating more **dynamic, real-time and multifaceted interaction** among students, teachers, and outside content experts
- Increasing collaboration and team work in problem-solving activities
- Stimulating creativity in both students and teachers
- Helping students to guide and monitor their own learning and
- Extend learning beyond the classroom.

“…a successful use of ICT in schools can help students to develop skills, ....that will be useful for them in their future academic and professional lives.”

*Are students ready for a technology-rich world? - OECD 2006*
Sources of Research to Build Florida’s Technology Plan

- Industry Technology Leaders
- National Experts and Researchers
- International Technology Plans
## Industry Technology Leaders
### Critical Recommendations

| Classrooms | ✓ Mobile devices  
|            | ✓ Tool-based software  
|            | ✓ Collaborative workspaces |
| Digital Content | ✓ Podcasts  
|                | ✓ E-textbooks  
|                | ✓ Classroom generated content |
| Emerging   | ✓ Open education resources  
|            | ✓ Viral distribution of content  
|            | ✓ Hybrid/blended learning |
National Technology Plan

Learning:
- Enabling unprecedented access to high quality learning experiences.

Teaching:
- Implementing new ways to support those who support learning.

Assessment:
- Measuring what matters and providing the information that enables continuous improvement processes at all levels of the education system.

Productivity:
- Redesigning systems and processes to free up education system resources to support learning.
Schools of the Future

- Hybrids and high tech
- Customized to students
- Provide more effective instruction
- More beneficial to teachers
- Better job of serving needy constituencies
- Better job of promoting social equity
- Competitive and offer more choice

Liberating Learning Chubb & Moe
Singapore

- Teachers to acquire basic proficiency in ICT integration
- All schools to be equipped with the ICT infrastructure
- Every school to have one technology assistant

Master Plan 2 (2003–2007)
- Emphasis is on engaged learning
- Intended outcomes:
  - Pupils use ICT effectively for active learning
  - Teachers use ICT for professional & personal growth
  - Schools to use ICT for school improvement (e.g. administrative work)
Master Plan 3

- Strengthen competencies for self-directed learning.
- Tailor learning experiences according to the way that each student learns best.
- Encourage students to go deeper and advance their learning.
- Learn anywhere
Themes

- Information and Communication Technology (ICT)
- Literacy
- Digital Content
- Teacher Training
- Personal Learning Systems
- Technology Based Assessments
- Student Data
# International Plans & Florida

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<th>Country</th>
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<th>Digital Content</th>
<th>Teacher Training</th>
<th>Personal Learning Systems</th>
<th>Technology Based Assessments</th>
<th>Student Data</th>
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<td><strong>Florida Framework</strong></td>
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Student Data

- Programme for International Student Assessment (PISA) survey
  - Data was collected in 2006
  - Involved 400,000 students in 57 countries
  - Major focus on scientific literacy and Information and Communication Technology (ICT) Familiarity (OECD 2007).

- Florida Student Technology Survey
Why develop a plan?

- **Learning environment:** Every child is unique and to succeed, students and educators must be able to creatively choose digital content that is tailored to meet individual student needs, spark student interest, and allow every student to excel in his or her own way.

- **Access to tools, content, infrastructure, and data:** Students need ubiquitous access to those tools which they will be using in the global economy, including mobile computers, digital content, and tool-based software.

- **Training and support for educators, staff & leadership:** Professional development and support is needed to enable educators and their students to utilize digital tools effectively.
http://floridatechplan.org
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<th>Framework Section</th>
<th>Goal</th>
<th>Definition</th>
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<tr>
<td>Learning Environment</td>
<td>1. Strengthen student ICT skills</td>
<td>Student’s develop skills to utilize technology as tool in all areas of the curriculum.</td>
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<td>Learning Environment</td>
<td>2. Enhance the integration of technology in curricula</td>
<td>Educators apply technology appropriately in their content area to enhance instruction.</td>
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<td>Learning Environment</td>
<td>3. Enable opportunities to personalize and extend student learning</td>
<td>Educators utilize technology to differentiate instruction to meet students’ needs.</td>
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<tr>
<td>Learning Environment</td>
<td>4. Ensure utilization of technology based assessments</td>
<td>The use of formative and summative assessments is enhanced through technology.</td>
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<tr>
<td>Access</td>
<td>5. Increase access to digital tools</td>
<td>Students and educators have access to mobile computers, digital devices and tool-based software that makes instruction relevant and powerful.</td>
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<tr>
<td>Access</td>
<td>6. Provide access to reliable infrastructure</td>
<td>Internet access and bandwidth are sufficient to meet instructional technology needs.</td>
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<tr>
<td>Access</td>
<td>7. Improve opportunities to access digital content</td>
<td>Students and educators have access to content that enhances instruction from around the world.</td>
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<tr>
<td>Access</td>
<td>8. Enhance access to student data</td>
<td>The results of student assessments and other student data are available just in time and in a useful format.</td>
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<tr>
<td>Support</td>
<td>9. Ensure trained instructional technology staff</td>
<td>Expert technology support is available just in time at the school and district level.</td>
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<td>Support</td>
<td>10. Improve community involvement</td>
<td>Technology enhances the ability of schools and teachers to communicate and increase parental involvement.</td>
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<td>Support</td>
<td>11. Enable technology leadership</td>
<td>Technology standards for teachers and school leaders are integrated into preparation programs and professional development to ensure technology is purchased and used in meaningful instructional ways.</td>
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<tr>
<td>Support</td>
<td>12. Support ICT training for educators to enhance instruction</td>
<td>Professional Development for educators includes the use of appropriate technology integration to enhance instruction.</td>
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Florida Digital Educator

- Teaching & Learning Institutes
- ETC Lesson Planner
- Action Research for Technology Integration
- Student Technology Artifact Review Tool
- Technology Integration Matrix
- Educational Technology Clearinghouse
- Florida Digital Depot
Master Digital Educators

- Face to Face Trainers
- Online Trainers
- Mentors
- Content Creators

Florida Digital Educators at http://etc.usf.edu/fde
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<tr>
<th>Characteristic of the Learning Environment</th>
<th>Technology Integration Matrix</th>
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<tr>
<td><strong>Active:</strong> Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.</td>
<td>Technology is used to deliver information to students.</td>
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<td>Students use technology for drill and practice and computer-based training.</td>
<td>Students begin to utilize technology tools to create products, for example using a word processor to create a report.</td>
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<tr>
<td>Students have opportunities to select and modify technology tools to accomplish specific purposes, for example using colored cells on a spreadsheet to plan a garden.</td>
<td>Throughout the school day, students are empowered to select appropriate technology tools and actively apply them to the tasks at hand.</td>
</tr>
<tr>
<td><strong>Collaborative:</strong> Students use technology tools to collaborate with others rather than working individually at all times.</td>
<td>Technology enables students to collaborate with peers and experts irrespective of time zone or physical distances.</td>
</tr>
<tr>
<td>Students primarily work alone when using technology.</td>
<td>Students have opportunities to utilize collaborative tools, such as email, in conventional ways.</td>
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<tr>
<td>Students have opportunities to select and modify technology tools to facilitate collaborative work.</td>
<td>Throughout the day and across subject areas, students utilize technology tools to facilitate collaborative learning.</td>
</tr>
<tr>
<td><strong>Constructive:</strong> Students use technology tools to build understanding rather than simply receive information.</td>
<td>Technology is used to deliver information to students.</td>
</tr>
<tr>
<td>Students begin to utilize constructive tools such as graphic organizers to build upon prior knowledge and construct meaning.</td>
<td>Students have opportunities to select and modify technology tools to assist them in the construction of understanding.</td>
</tr>
<tr>
<td>Students utilize technology to make connections and construct understanding across disciplines and throughout the day.</td>
<td>Students use technology to construct, share, and publish knowledge to a worldwide audience.</td>
</tr>
<tr>
<td><strong>Authentic:</strong> Students use technology tools to solve real-world problems meaningful to them rather than working on artificial assignments.</td>
<td>Students use technology to complete assigned activities that are generally unrelated to real-world problems.</td>
</tr>
<tr>
<td>Students have opportunities to apply technology tools to some content-specific activities that are based on real-world issues.</td>
<td>Students select appropriate technology tools to complete authentic tasks across disciplines.</td>
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<td>By means of technology tools, students participate in outside-of-school projects and problem-solving activities that have meaning for the students and the community.</td>
<td></td>
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<tr>
<td><strong>Goal Directed:</strong> Students use technology tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.</td>
<td>Students receive directions, guidance, and feedback from technology, rather than using technology tools to set goals, plan activities, monitor progress, or self-evaluate.</td>
</tr>
<tr>
<td>From time to time, students have the opportunity to use technology to either plan, monitor, or evaluate an activity.</td>
<td>Students have opportunities to select and modify the use of technology tools to facilitate goal-setting, planning, monitoring, and evaluating specific activities.</td>
</tr>
<tr>
<td>Students engage in ongoing metacognitive activities at a level that would be unattainable without the support of technology tools.</td>
<td>Students use technology tools to set goals, plan activities, monitor progress, and evaluate results throughout the curriculum.</td>
</tr>
</tbody>
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TIM Assessment

Instructions: Click the radio button below the image with which you are most comfortable. One you select an image, the next set of images will automatically appear.
EETT Action Research

Introduction

Proposal Title:
ICT Skills

Author: Kate Kemker
Year Study Began: 2008

Thank you for participating in the Action Research (AR) component of the EETT initiative. Your AR effort will provide legislators, the Florida Department of Education and your local district with important information about how this grant is influencing student achievement.

The links on the left hand side provide information on each step of the Action Research process. In some cases you will be asked to select appropriate checkboxes, radio buttons, drop-down menus and in some cases you will be asked to provide brief textual information. You will be provided an opportunity to edit your choices within each step if you wish.

We will aggregate the AR data you provide with data from AR teachers across EETT districts as part of our statewide report to the Florida Department of Education. Your name will not be mentioned in the report unless you specifically request that we include it.

Overview of the Action Research process provides a complete description of the entire action research process.

If you have any technical questions regarding the site, please contact Chet at clyskawa@gmail.com. If you have questions about the AR process please, contact Kara Dawson at dawson@coe.ufl.edu.

Please begin by telling us about your teaching experience. Use the Save buttons to save your work as you proceed through the AR steps. An automatic save feature has been added to protect your work should you forget to save.

Number of years of Teaching Experience. 1

Please select the number of Years of Teaching Experience with Technology. 1

Please include anything else you would like us to know about your experience:
A Walk Through the Action Research Process

1. Teacher sets a professional goal based on IPDP.

2. Teacher uses a computer to upload a sample lesson plan and student artifact into the ARTI database. These items document both the teacher’s beginning level of technology integration and the student’s level of achievement.

3. Teacher identifies a question, problem, concern, or area of interest to address.

4. Teacher attends professional development opportunity provided by the Florida Digital Educator program to learn methods of improving teaching effectiveness and student achievement through technology integration.

5. Teacher logs onto ARTI to:
   - identify context (grade level, subject, etc)
   - specify the strategies to be employed
   - identify data points


7. Teacher logs onto ARTI to:
   - input findings and the implications of their findings
   - upload a sample lesson plan and student artifact

8. Trained evaluator downloads the “before” and “after” lesson plans and student artifacts for review. Artifact ratings are uploaded into the ARTI database.

9. University researchers download and aggregate findings from many classrooms to produce reports for schools, districts, the FLDOE, and the academic community.

Central ARTI Database
Artifacts

Lesson Planner
My Lesson Planner - Kate Kemker

My Lesson Planner is your personal space within the AR Lesson Planner. The space lists your course(s) and the lesson plans associated with each course. Choose a lesson plan to work on by clicking on its title. A My Lesson Planner link will be always be available in the left menu bar as you are building your lesson plan.

* If this is your first visit, enter the Passcode given to you by the instructor and click Go. The course will be added to your home page. Once the course is added to your list, you can click on the link to Create New Lesson Plan. You will be taken immediately to lesson plan area where you can begin work. The next time you visit your home page, the course and associated lesson plans will be listed below.

My Courses & Lesson Plans
You are not registered for any courses.

Course Registration
To register for a course, enter the Passcode supplied by the instructor and click Go:

EOTT Laptops for Learning
Student Artifact Information

Artifact Meta Data Information

Title: Untitled

Subject Area: Select Subject Area

Keywords:

Grade Level(s):
- K
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Sample Type
- Chart / Graphic Organizer
- B/W Photo or Illustration
- Stereoview
- Audio (no video)
- Map
- Color Photo or Illustration
- Text
- Video
- VR

Link to online content (enter URL):
http://floridaitunesu.com
Resources

Florida Digital Educators
http://etc.usf.edu/fde/

Florida Digital Depot
http://etc.usf.edu/fdd/

Starting Points
http://fcit.usf.edu/

Florida Moodle User Group
http://moodle.fcit.usf.edu/moodle/login/index.php
Accountability Tools

School Technology Resources Survey

The results of this survey are reported online to schools and districts providing valuable data to be used for school and district technology planning and for federal reporting required of EETT grant recipients.

▸ More information

Inventory of Teacher Technology Skills (ITTS)

This tool offers educators the ability to identify the technology skills that their Professional Development plan should focus on.

▸ More information

Student Tool for Technology Literacy (ST2L)

This inventory helps teachers to evaluate students' technology literacy within subject area applications.

▸ More information
Software Type on Student Computers

Data from the 2009-10 Florida Innovates Technology Resource Survey at http://flinnovates.org
Frequency of Student Software Use

Data from the 2009-10 Florida Innovates Technology Resource Survey at http://flinnovates.org

N=3,001 out of 3,268 schools/92 percent response rate
Professional Development

Methods

"Just-in-time" tutorial 9%
Online courses 11%
Lecture/demonstration 15%
Coaching/mentoring 22%
Hands-on 42%

Data from the 2009-10 Florida Innovates Technology Resource Survey at http://flinnovates.org

N=3,001 out of 3,268 schools/92 percent response rate
Inventory of Teacher Technology Skills

Data from the 2009 Inventory of Teacher Technology Skills at http://flinnovates.org

- 70,233 teachers and other personnel from
- 80% of districts & colleges of education
Student Tool for Technology Literacy

Data from the 2009 Student Tool for Technology Literacy at http://flinnovates.org

- 43 Districts
- 117 Schools
- 15,130 8th Grade Students
Student Tool for Technology Literacy

Data from the 2009 Student Tool for Technology Literacy at http://flinnovates.org
Next Steps

‣ Set targets for principal training in the facilitation of appropriate integration of technology into the classroom.

‣ Protocols for technology training in core curriculum areas are published.
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