



Expectations of Office of Insular Affairs (OIA) & JEMCO & Why Technology in the Classroom?

FSM Technology Plan for Grades K – 12

National Workshop

March 22 – 24, 2010

FSM China Friendship Sports Center (Pohnpei)

Consequences of not completing and implementing a tech plan are potentially high.

THE TECHNOLOGY PLAN IS A JEMCO REQUIREMENT



Minimum Expectations

- The plan will consist of **standards** and a **realistic implementation schedule**

Technology Standards

- Interpret International Society for Technology in Education (ISTE) standards for students, teachers, and administrators, **restating them in a manner meaningful to FSM Educators**, and guide stakeholders to adopt and adapt standards that are **realistic in the FSM context**
- Summarize the standards into a **mission statement** that articulates their overall **vision** for technology in education.
- Set **goals and objectives for the standards** for the three constituent groups (students, teachers & administrators)
- Integrate **evaluation activities** to track the effectiveness of the plan in reaching standards

Implementation planning

- Describe the **electrical and technology infrastructure** that must be put in place to realize the standards
- Develop **inventory policies and procedures**, starting with current equipment and including an assessment of the capacity of that equipment to support standards
- Determine the **hardware and software** that the system needs to purchase to support its goals and objectives
- Determine **IT needs to maintain** the new resources at the administrative, teacher and student levels
- Review current staff capacity and determine what **IT and user training** will be necessary to implement the standards
- Determine the **costs of training, equipment purchases and replacement, maintenance and develop a long range budget strategy** to sustain the vision for technology in education



Use of technology in the classroom for enhanced student learning and achievement, preparation of the workforce for economic growth & 21st Century Skills



**INSTRUCTION, ECONOMIC
GROWTH & EMPLOYABILITY
REASONS FOR TECHNOLOGY
IN THE CLASSROOM**

Why Technology in the Classroom? What does Research say?

Applied effectively
technology implementation
not only increases student
learning, understanding, and achievement,
but also augments motivation to learn,
encourages collaborative learning, and
supports the development of critical
thinking and problem solving skills.
(Schacter & Fagnano, 1999)



Why Technology in the Classroom?

What does Research say?

- Russell and Sorge (1999) point to how technology can give students “more control over their own learning,” facilitating the analytical and critical thinking and the collaboration championed in the constructivist approach to education. Their conclusion – that integrating technology into instruction tends to move classrooms from teacher dominated environments to ones that are more student centered – is support repeatedly in the literature.

Education is the key and driving force for economic development.



EDUCATION & ECONOMIC GROWTH

**THE HIGH COST OF LOW EDUCATIONAL
PERFORMANCE – PISA (OECD)**

PROGRAMME FOR INTERNATIONAL STUDENT

ASSESSMENT

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Commitment to Outcomes

- PISA represents a commitment by governments to monitor the outcomes of education systems in terms of student achievement on a regular basis and within an internationally agreed common framework. It aims to provide a new basis for policy dialogue and for collaboration in defining and implementing educational goals, in innovative ways that reflect judgements about the skills that are relevant to adult life.

Role of Education

- The relationship between cognitive skills on the one hand and innovations and technology on the other seems to be a natural view of the role of education.

Relative small improvements can have an impact

- This report uses recent economic modelling to relate cognitive skills – as measured by PISA and other international instruments – to economic growth. The relationship indicates that relatively small improvements in the skills of a nation's labour force can have very large impacts on future well-being.

An AAS degree would have a significant impact on the wages received for students seeking employment in Guam for the military buildup.



Primary schooling influences GDP

- To give an idea of the robustness of this association, an extensive empirical analysis by Sala-i-Martin, Doppelhofer, and Miller (2004) of 67 explanatory variables in growth regressions on a sample of 88 countries found that primary schooling was the most robust influence factor on growth in GDP per capita in 1960-96

Cognitive skills and economic development

- Over the past ten years, empirical growth research demonstrates that consideration of cognitive skills dramatically alters the assessment of the role of education and knowledge in the process of economic development.

Not your traditional FSM schooling



EMPLOYABILITY SKILLS
2000+
&
21ST CENTURY SKILLS

Why Technology in the Classroom?

Employability Skills – Fundamental Skills

Communicate

- read and understand information presented in a variety of forms (e.g., words, graphs, charts, diagrams)
- write and speak so others pay attention and understand
- listen and ask questions to understand and appreciate the points of view of others
- share information using a range of information and communications technologies (e.g., voice, e-mail, computers)
- create a document
- use relevant scientific, technological, and mathematical knowledge and skills to explain or clarify ideas

Manage Information

- locate, gather, and organize information using appropriate technology and information systems
- access, analyze, and apply knowledge and skills from various disciplines (e.g., the arts, languages, science, technology, mathematics, social sciences, and the humanities)

Why Technology in the Classroom?

Employability Skills – Fundamental Skills

Use Numbers

- decide what needs to be measured or calculated
- observe and record data using appropriate methods, tools, and technology
- make estimates and verify calculations

Think and Solve Problems

- assess situations and identify problems
- seek different points of view and evaluate them based on facts
- recognize the human, interpersonal, technical, scientific, and mathematical dimensions of a problem
- identify the root cause of a problem
- be creative and innovative in exploring possible solutions
- readily use science, technology, and mathematics as ways to think, gain, and share knowledge, solve problems, and make decisions
- evaluate solutions to make recommendations or decisions
- implement solutions
- check to see if a solution works, and act on opportunities for improvement

Why Technology in the Classroom? Employability Skills – Personal Management Skills

Demonstrate Positive Attitudes and Behaviours

- feel good about yourself and be confident
- deal with people, problems, and situations with honesty, integrity, and personal ethics
- recognize your own and other people's good efforts
- take care of your personal health
- show interest, initiative, and effort

Be Responsible

- set goals and priorities balancing work and personal life
- plan and manage time, money, and other resources to achieve goals
- assess, weigh, and manage risk
- be accountable for your actions and the actions of your group
- be socially responsible and contribute to your community

Why Technology in the Classroom? Employability Skills – Personal Management Skills

Be Adaptable

- work independently or as part of a team
- carry out multiple tasks or projects
- be innovative and resourceful: identify and suggest alternative ways to achieve goals and get the job done
- be open and respond constructively to change
- learn from your mistakes and accept feedback
- cope with uncertainty

Learn Continuously

- be willing to continuously learn and grow
- assess personal strengths and areas for development
- set your own learning goals
- identify and access learning sources and opportunities
- plan for and achieve your learning goals

Work Safely

- be aware of personal and group health and safety practices and procedures, and act in accordance with them

Why Technology in the Classroom? Employability Skills – Teamwork Skills

Work with Others

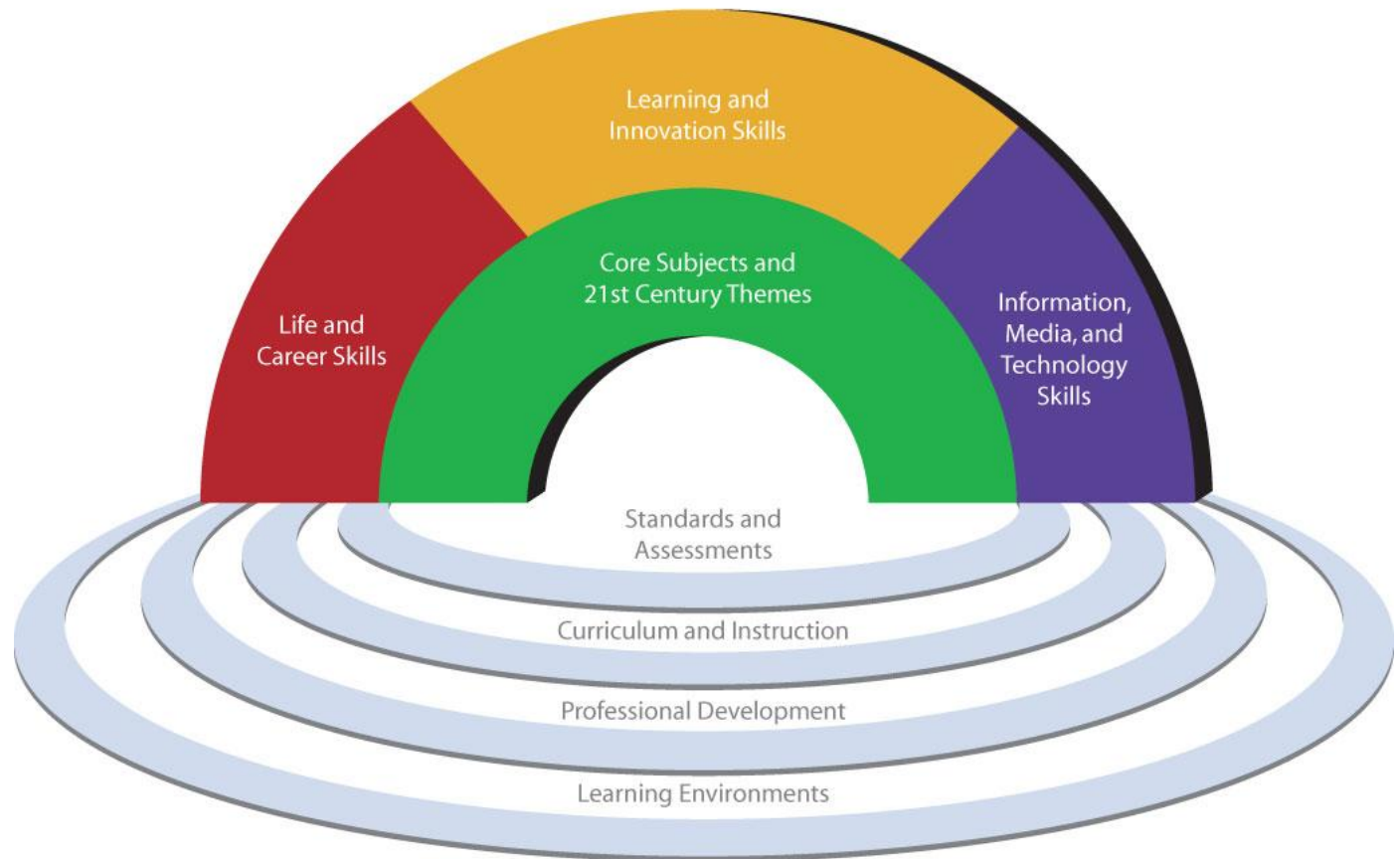
- understand and work within the dynamics of a group
- ensure that a team's purpose and objectives are clear
- be flexible: respect, and be open to and supportive of the thoughts, opinions, and contributions of others in a group
- recognize and respect people's diversity, individual differences, and perspectives
- accept and provide feedback in a constructive and considerate manner
- contribute to a team by sharing information and expertise
- lead or support when appropriate, motivating a group for high performance
- understand the role of conflict in a group to reach solutions
- manage and resolve conflict when appropriate

Participate in Projects and Tasks

- plan, design, or carry out a project or task from start to finish with well-defined objectives and outcomes
- develop a plan, seek feedback, test, revise, and implement
- work to agreed-upon quality standards and specifications
- select and use appropriate tools and technology for a task or project
- adapt to changing requirements and information
- continuously monitor the success of a project or task and identify ways to improve

21st Century Skills

21st Century Student Outcomes and Support Systems



21st Century Skills Additional Information

- Learn more and get involved at <http://www.21stcenturyskills.org>.
- Copyright © 2009, The Partnership for 21st Century Skills. All rights reserved.
- Also see the P21 Framework Definitions document on the FSM Tech Plan K – 12 web site.