

Using Problem-based Scenarios to Integrate IT in LPSCS Programs

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NSF – ATE Project
with
Education Development Center Inc.



ITAC Project Objective

Develop and validate a common language and approach to teaching IT applications across 16 Career Program Areas:

Agriculture

Architecture/Construction

Arts/AV Technology/Communications

Business/Management/Administration

Education/Training

Finance

Government/Public Administration

Health Science

Hospitality/Tourism

Human Services

Information Technology

Law/Public Safety/
Corrections/Security

Manufacturing

Marketing/Sales/Service

STEM

Transportation/Distribution/
Logistics (TDL)



DebbieLT33 - Instant Message

File Edit View

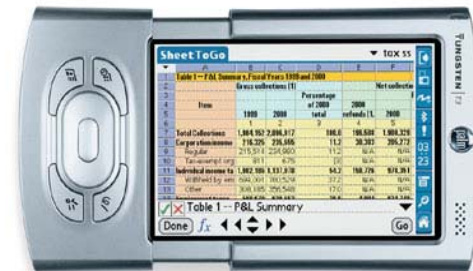
John7766: Hey! What time did you say you wanted to meet for lunch?

DebbieLT33: noon :)

John7766: Cool - thanks.

See you then.

Warn Block Add Buddy Send



IT Core Applications Used Across ALL Career/Program Areas

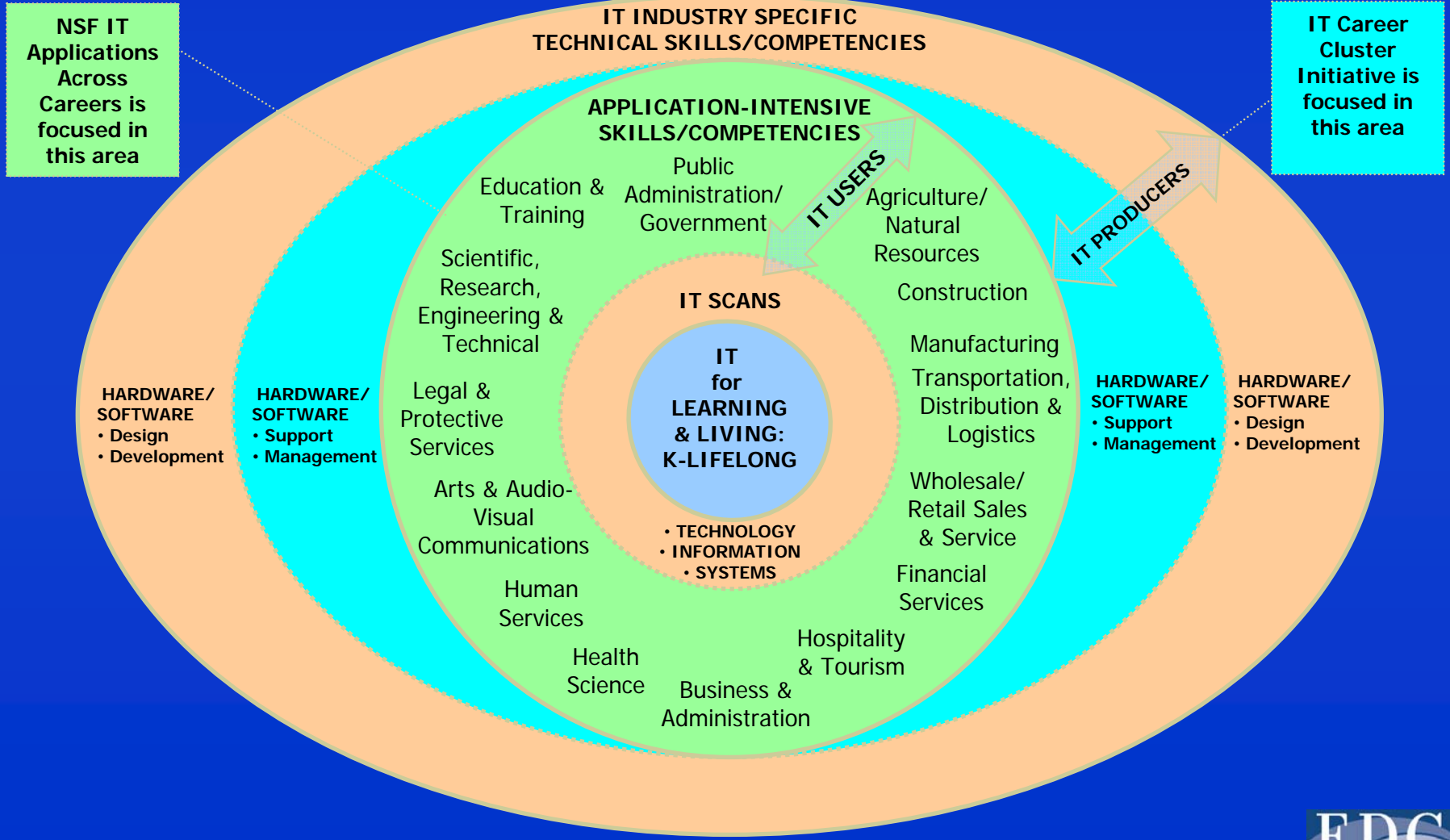
1. Personal Information Management (PIM) Productivity
2. Electronic Mail
3. Internet
4. Writing/Publishing
5. Presentation
6. Spreadsheet
7. Database
8. Collaborative/Groupware
9. Computer Operations
10. Computer-Based Equipment
11. Global Positioning/Geographic Information Systems (GIS/GPS)

****Web Development****
****Multi-Media****



Coming
soon!

Making Sense of IT for Learning, Living, & Working



ITAC Project Resources

- ❖ *Rubrics to Assess Basic IT User Skills*
- ❖ Customizable Lesson Templates for IT Core Applications
- ❖ Learning Resource Guides
- ❖ Problem-based Scenarios
- ❖ IT in Action Statements
- ❖ Recommended Resources & Readings

Why we got involved with ITAC Project

- **Scenarios: value for LPSCS programs of study**
- **Problem-based scenarios = effective teaching tool to infuse technology into instruction**

Lessons/Scenarios Offered for Piloting

Core lesson templates:

- ❖ **Internet**
- ❖ **Writing/Publishing**
- ❖ **Presentation**
- ❖ **Spreadsheet**
- ❖ **Database**
- ❖ **Computer Operations**



-
- **Course: Criminology**
 - **IT Application: Writing/Publishing**
 - **Scenarios:**
Police Department Personnel Recruitment, Procedures, & Guidelines
 - **This scenario was selected as a manner of incorporating the use of skills associated with word processing with the need of police to focus on methods and guidelines of recruiting that will entice the best suited candidates.**

Police Department Personnel Recruitment, Procedures, & Guidelines

You are a member of your police department's Personnel Recruiting Committee. Your supervisor would like to improve and standardize the agency's recruitment, selection and hiring procedures of new officers and civilian staff. She has directed you to research what types of strategies are being employed by other agencies to attract and select qualified job candidates, and then develop a written set of guidelines that your department can use to recruit diverse candidates for the position of police officer.

The guidelines you develop must consist of at least 20 specific ideas, suggestions and/or instructions for advertising policing career positions, contacting and corresponding with prospective job candidates, and how to select the best qualified applicants.

Your finished guidelines will be reviewed by your supervisor and also by a member of the City's Human Resources Department to ensure that the guidelines will promote fair, reasonable, and consistent hiring practices by your agency.



Husson College Student Example 1

The student in this example used a memorandum format to describe the top twenty characteristics and qualities that are essential for recruiting police officers.

The student then proceeded to describe why each characteristic and quality were chosen, citing authority regarding the management of police officers.

Linda's comments on IT part

- **Overall professional appearance**
- **Graphics: Watermark, emoticon**
- **Footnotes**
- **Inserted table**
- **Page borders**
- **Page numbers**
- **Fonts: 3**

Husson College Student Example Cont'd

In particular, the Criminology class focuses on the behaviors of criminals and the necessary behavioral attributes needed in police officers.

Students focused on the areas of selection and diversity as they related to pre-employment standards and tests.

This student focused on education as a key component to being a police officer in addition to other physical/mental attributes.

Additionally, this memo highlighted ways to attract candidates to the police positions.



SKAGIT'S APPROACH

- **Courses: Multiple**
- **IT Application: Presentation**
- **Scenarios:**
 - *Parade Route Planning*
 - *Elementary School Fire Prevention Program*
- **How scenarios were chosen**



Parade Route Planning

You are a lieutenant in a local police department. The Operations Bureau commander has asked you to prepare a briefing for supervising Patrol Division and Traffic Unit sergeants pertaining to traffic control needed for the city's upcoming annual celebration parade.

The briefing should cover the following topic areas:

1. List of departmental objectives that need to be accomplished before, during and after the event
2. Map depicting the city, parade route, and traffic/crowd control points
3. Table, chart, or graph that contains information about required staffing levels
4. List of communications and other special equipment needed
5. List of key personnel and their contact information.

You may wish to consider additional information that you think the Patrol Division or Traffic Unit sergeants may need in order to plan shift assignments for the upcoming celebration.

You will have approximately twenty minutes to give your presentation, which should consist of approximately 12-15 slides beginning with a slide that includes the title of your briefing, your name and the date.

Remember that the presentation is like an outline and does not need to have detailed information regarding the topic. That will be given in the oral part of your presentation and in your handouts. As the Commissioner may want to use this briefing with other groups, write out and save talking points for each slide in the "notes" section. Identify handouts that will support your briefing.

Skagit Valley Student Example 1

Parade Route Planning

In this element, the student took the general details of the assignment and modified it to reflect a parade route within his own community. This enabled him to physically examine the route, obtain information from local planning and police/EMS sources, and dialogue with students in a way that made this exercise “contemporary and real” for all of them.

Linda's comments on IT part

Used slide template

Effective graphics:

- **Photos, clip art, detailed aerial map, bar graph**

Comprehensive details & notes



Elementary School Fire Prevention Program

You are a firefighter at a rural emergency response agency and have been assigned to organize a fire prevention program for a local elementary school. Part of the program must include an annual presentation on fire safety to each grade level (K-6). In order to engage your audience and be consistent with the knowledge and skill level of each grade, your presentations for the lower grades (K-3) should use less text, more animation, and graphic elements. The presentations for the upper grades (4-6) should include more text and digital photography.

Each presentation should emphasize the basic concepts and include hazards recognition and control, basic fire awareness/life safety information, with an emphasis on a minimum of 3-5 prevention concepts. Your presentation should fill a 30-minute time interval and include approximately 12-15 slides and include time for questions and answers. The Internet has numerous informational resources for specific grade levels. The presentation should also include instructional information on accessing basic fire awareness/life safety resource Web sites. To illustrate content details, add scanned photos or drawings. To enliven the presentation, add at least 3 animations or action buttons. Select your transitions for emphasis. The presentation should be prepared as an automated slide show. In anticipation of reuse, write out talking points in the “notes” sections of the slides. Develop a presentation handout that includes copies of all slides in either notes or handout format.

Skagit Valley Student Example 2

Students in Fire Science collaborated to create traveling presentation kit to use at local elementary schools.

Used knowledge learned from their classes & applied it to their presentation.

Linda's comments on IT part

Very visual presentation:

- **Photos, clip art, animation, slide transitions, drawing**

Fonts: varied fonts & position to tell the story

Slide notes: Talking cues

CVSA Information/Research

You are a Police Officer/Investigator in the department's Criminal Investigation Unit. In addition to your regular duties as an investigator, you have been charged with exploring the possible procurement of new investigative tools. Your supervisor has heard about investigative technology that uses computer voice stress analysis (CVSA) rather than the more commonly known polygraph technology. She is unsure what computer voice stress equipment is available. However, she has heard that the National Institute for Truth Verification and the Diogenes Company are the industry leaders and would like information about their products.

Based on this discussion with your supervisor, review the product information on each company's Web site and determine the primary differences between the products offered by the two companies, for example: equipment requirements, cost, ease of use, cost and length of training, if recertification is required, etc. Download product brochures if available and save them in a file on your computer. Note if additional information is available by e-mail or phone.

Report your findings to your supervisor.

Lessons Learned from ITAC Pilot Experience

- ❑ **Select scenario assignment based on class time**
- ❑ **Allow time to prep for assignment**
 - ❑ **a. Content and scope of assignment**
 - ❑ **b. Using the technology**
- ❑ **Have some good examples to show them what you want**
- ❑ **Make tie-in to real world of work :
OJT training**

Student Reaction to Assignment

- **Wanted more time and resources**
- **Challenge: concepts & how to be creative**

OUR ENDORSEMENT

- **Excellent learning opportunity & preparatory tool for their future jobs**
- **Used for student portfolios**
- **Elevates student placement with employers for internships & jobs**
- **Experiential learning**
- **Scenarios can be used in many other different ways**

CALL TO ACTION: Let's hear from YOU!

- Questions?
- Reactions?
- Comments or Suggestions?
- Are you interested in learning more?
- Would you consider becoming involved, and would you like to know how?

College Partners

- Bunker Hill Community College
- Cecil Community College
- **Central Piedmont Community College**
- Fox Valley Technical College
- Holyoke Community College
- Hudson Valley Community College
- **Husson College**
- Kirkwood Community College
- Lansing Community College
- Lorain County Community College
- Morgan Community College
- **Northampton Community College**
- Northern Essex Community College
- Pennsylvania College of Technology
- **Rochester Institute of Technology**
- Scottsdale Community College
- **Skagit Valley College**
- Springfield Technical Community College

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