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Project:Excel Training

- Using computer-based training (CBT) as part of an already existing Learning Management System (LMS), the Project:Excel instructional product is designed to teach computer literate project managers how to use Microsoft Excel as a tool to track and manage projects with improved productivity.
- These managers have found use of Microsoft Project cumbersome and difficult to share with colleagues.
- As a result, they are motivated to find easier ways to manage complex projects.
- The instructional goals are to enable learners to:
 - Plan and manage projects using Excel
 - Create project calendars and budgets
 - Understand master project plans and their functionality

Project: Excel Objectives

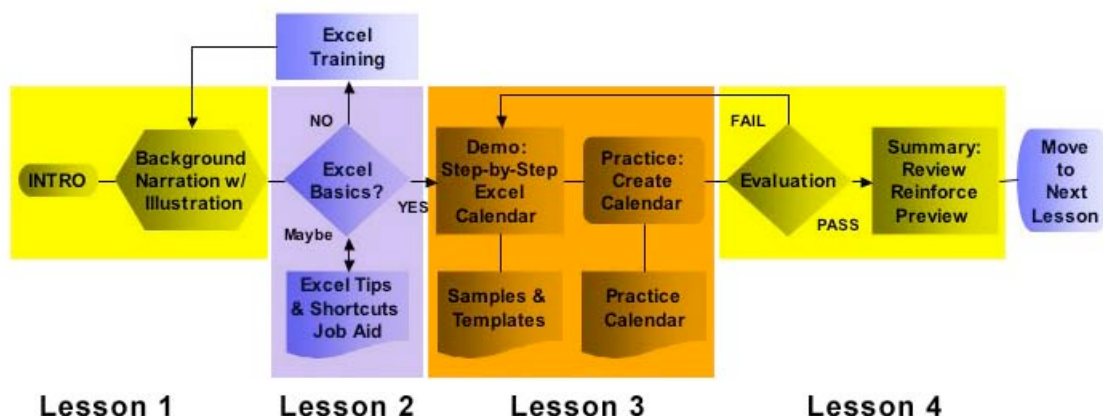
In our system Specification and Design Concept we discussed four primary content areas for this Project: Excel instructional product, each of which has a corresponding instructional objective that will be addressed by one module. This Evaluation addresses Module 2 below.

- **Module 1 - Project Tracking:** Learners demonstrate their understanding of the Track Changes Tool by tracking updates to the project plan.
- **Module 2 - Project Calendars, Timelines and Milestones:** Given a project task list & utilizing the guidelines in the instructional product, the learner will be able to create a project calendar with due dates & milestones. (Concepts & Procedures)
- **Module 3- Master Project Planning:** Learners construct one master project plan from multiple sub-project task lists.
- **Module 4 - Project-Related Budgeting:** Learners create a budget to accomplish identified tasks.

Project:Excel Module 2 Design Concept Review

Because the learners will be participating in this course voluntarily to simplify their jobs and improve productivity in their day-to-day tasks, the design concept is based on principles of guided discovery, functional context, situated learning and androgogy. The prototype evaluation will center on a representative section of Lesson 2 that incorporates basic instruction and simple evaluation as well as navigational aspects typical of the module as a whole.

- **Lesson 1. Overview & Introduction** — Excel, Calendars, Timelines & Objectives of the Module
- **Lesson 2. Excel Basics Review**
 - **Concept Review:** Basic capabilities of spreadsheets and how that structure can be an ideal tool for more than just performing calculations.
 - **Fact Displays:** Printable job aid containing Excel shortcuts and commands related to calendar and time functions.
 - **Process Displays:** A flow chart showing an overview of typical project management functions and where the calendar/timeline component fits in.
- **Lesson 3. Demonstration and Practice** — Using Excel to Create Calendars and Timelines
- **Lesson 4. Evaluation and Summary** — Review Completed Spreadsheets, Reinforce Lessons and Preview Next Lesson



Flow Chart of Module 2 Excel Calendar/Timeline Lessons Prototype Evaluation to Address Lesson 2

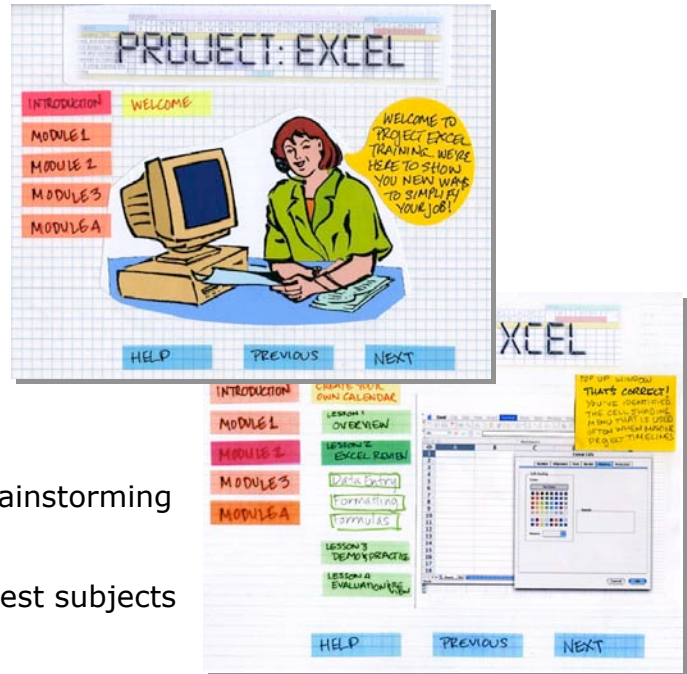
Formative Evaluation Questions

1. Is the screen navigation straightforward and easy to use?
2. Are similarities between examples and the learners' real work obvious to the learners?
3. Does this format involve sufficient evaluation/feedback to ensure that the learners know enough to proceed to the more complex aspects of the lesson?

Prototype Development

First prototype

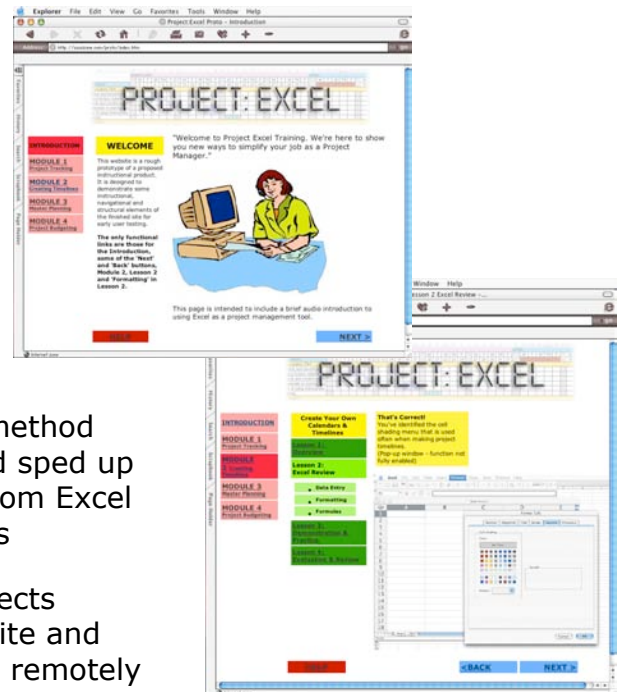
- Pencil, markers, highlighters, graph paper, a variety of sticky notes and some clip art and screen capture graphic printouts affixed with glue; color copier to quickly duplicate iterative versions of screens
- Advantages during the initial brainstorming phase to move components
- Limiting when interacting with test subjects who had difficulty visualizing



Second Prototype

(<http://soozzone.com/proto/index.htm>)

- "Rough draft" using Dreamweaver MX 2004 and Photoshop 7 [Gordon's *Systematic Training Design Program*, the "separation between prototyping and actual software development is changing... because there are now a number of software development tools... requiring little or no programming." (p. 299)]
- Once an initial template was created, this method simplified creation of subsequent pages and sped up the ability to incorporate screen captures from Excel and additional graphics, easier to edit labels
- Enabled broader base of available test subjects because I was able to upload it to my website and perform one of my second set of interviews remotely



- Made user testing easier and quicker because it was a closer approximation to the end product

I spent about three hours constructing the initial paper prototype (including brainstorming time) and two hours on the second HTML version. Besides the time investment, neither prototype had any actual cost associated with it. Theoretically, the paper version would have cost more to create if I had to outsource the color copies and buy new supplies of sticky notes, but I was fortunate to have access to a color printer/copier and a good selection of stickies in my desk drawer. I was similarly lucky with the web prototype as I already have the software that I used to create it and was able to use my existing web site to post it for Internet viewing.

Prototype Testing

- **Test subjects:** two professionals (who had all used Excel – at varying levels – and had some project management experience, but were not project managers per se) during each of the two rounds of testing
- **Methods:** Think Aloud, Question Probe and Observation (of all except the remote test subject) and post-test verbal questioning. Each test took about half an hour.

Observations

First Paper Prototype Test Notes

- Module labels not helpful because they did not include descriptions
- Too much real estate devoted to menus (this was partly due to prototyping limitations)
- Had trouble following the flow of the lessons
- No information about length of time needed to complete or progress made
- Concerns about audio narration requirements and use in the office
- Some screen details were hard to see and testers wondered if there was a better way to simulate Excel than with screen captures

Modifications

- Added descriptions to section labels
- Included more instructions about where to go next

Second HTML Prototype Notes

- Bottom navigation did not show on some screens without scrolling down
- “MODULE” designation not needed, just the descriptions
- Still not obvious where to go or how much time it would take to get there
- Would be nice to have some mechanism where an actual Excel spreadsheet opened up instead of hard-to-read screen capture
- Wondered if there would be feedback tallying correct answers
- Concern about the popup answer windows getting blocked on some systems

Recommendations

- Need a better menu structure with pull-downs or something where they don't take up so much space
- Need to include a progress bar based on either approximate time or content covered
- Need to add additional instructions about where to go next
- Need to add cumulative data about correct answers
- Seek a better way to simulate Excel interaction and still give feedback about correct usage

Lessons Learned

- Using a combination of paper and HTML prototyping actually enhanced the development as each method offered different insights and limitations from both a creation and a testing perspective.
- Guiding the user through the lessons is not necessarily as simple as 1 – 2 – 3; perhaps a better menu structure would facilitate this
- Simulating software functionality and also being able to record correct responses is challenging
- Showing detailed screen captures on screen poses readability problems for many people