



The Use of Quick Reference Guides in Teaching Adults Technology

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ABSTRACT

It is important to have adult learners experience meaningful learning, especially in an instructional technology course. To do this, instructors of such courses need to consider the needs of adult learners as well as components of best educational practices. One way of ensuring such learning takes place is to have the students engage in an activity that incorporates these things. One such activity is the development of a quick reference guide, or an overview that highlights the main actions, procedures, and commands of a software package. This activity, when preceded by helpful directions, examples, and an advanced organizer can produce many positive results.

INTRODUCTION

This article examines the use of quick reference guides in an instructional technology course on multimedia applications. It addresses the needs of adult learners and best educational practices, or "those everyday phrases used to describe solid, reputable, state-of-the-art work in a field" (Zemelman, Daniels & Hyde, 1998, p.viii). Quick Reference guides have been used to provide learners with overviews of various software products, hardware, and even procedures used in specific institutions for communication purposes. Quick reference guides have many uses, but primarily they save people time when they use them to provide information quickly and concisely, whereas lengthy reference manuals, or user guides, require much more reading time. Often, they are included with a user guide for a software package. They are also available commercially for general subjects such as Algebra, Physics, or English. Alternatively, they are provided as brief overviews to orient new employees to common procedures at a particular business. Quick reference guides can be created by anyone. In an instructional technology course, quick reference guides can be created by the students to ensure their independent learning, reflective and critical thinking, and higher levels of cognition, including synthesis and evaluation. Such an activity involves students in writing their own guides to clarify their thoughts so that they have a document to reference when needed.

Quick reference guides are used to provide a brief orientation to a subject, specific product, or an organization. In general, an effective quick reference guide is clearly written, uses the appropriate terminology required for a user's understanding, highlights important commands or procedures, and provides a thorough overview. Several examples of quick reference guides that show these attributes are mentioned in this paper. One example is the Chicago Style Guide Quick Sheet developed by the Baker Library of the Harvard Business School, which displays information in tabular format on how to cite references via a table, that type of document, format of the citation, and examples. This site is located at <http://www.library.hbs.edu/workshops/fac-assist/ChicagoQuickSheet.htm>. Another example is the [Vi Quick Reference Guide](#), which includes the commands and procedures used in how to navigate with a Vi text editor and how to edit text within the editor (Zhang, 1999). This can be obtained at this address: <http://dcfonline.sfu.ca/ying/linux/vi/vi-reference.pdf>. One example of a quick reference guide written to orient individuals to the different teaching support services available within a university is <http://www.albany.edu/cetl/resources/quickref.html>, which is set up for the University at Albany, State University of New York. Usually quick reference guides are used to orient individuals about a particular topic. However, instructors can have students create quick reference guides so that students are more

involved in their own learning by reviewing and documenting what they have learned.

The author attempted to replicate the elements of quick reference guides included in the previous sites listed, and then went a step further by showing others how they can create and use such guides on their own. She designed a quick reference guide activity for a class she taught during the spring and summer session of 2003 at Duquesne University, [Digital Imagery for Teachers](#), Course Number GITED521. This course focused on assisting teachers in furthering their knowledge and seeking application of multimedia software programs. The software programs included those that would help students to produce digital images, develop web pages, and create digital designs. Even though the course was not focused on providing specific software training, the instructor taught the fundamentals of software programs such as Adobe Photoshop, Macromedia Dreamweaver, and Macromedia Flash to introduce students to the types of software packages that would allow them to create digital images, create digital illustrations, and create web sites, respectively.

Before the students were required to do the quick reference guide assignment, they had been assigned other projects that required a lot of hands-on computer experience with the software programs, such as developing a digital poster in Adobe Photoshop, developing a digital cartoon book in Macromedia Flash, and creating a web site in Macromedia Dreamweaver that would include both of these assignments. The quick reference guide activity required students to work in one of three different groups – one group per software package. Students were able to select which software package they wanted to analyze, as long as each of the groups were filled. This was done so that everyone would have a quick reference guide to refer to after the course was completed. In each group, the students analyzed one of these software packages, made note of the most important actions to be taken in that software package, worked through and document procedures, evaluated the final quick reference guide, and distributed it in both print and electronic formats. As the students learned about the software packages they were given an overview of each of them, which served as an advanced organizer from which they could draw the most important actions for each of these software packages. For example, the overview for Adobe PhotoShop provided to the students when they began to learn and work through Adobe Photoshop is shown in Figure 1. The students were also given examples of a quick reference guide, one of which appears in Figure 2.

EDUCATIONAL CONSIDERATIONS WHEN DEVELOPING ASSIGNMENTS

Two essential considerations that were made in the development of quick reference guide activity were the factors related to help adults learn and the principles of best educational practice. Because these factors are closely related to the principles of best practice, their relationship and how they were considered in the design of the quick reference activity will be explored later in this paper.

When designing an instructional technology course for adults, the instructor should consider the needs of the adult learner. In this case, the following five factors related to helping adults learned were strongly considered:

1. Movement from dependent to independent, self-directed learning

2. A growing reservoir of experience as a resource for learning
3. A readiness to learn related to social roles
4. Immediacy of application replacing future application
5. Internal rather than external motivation (Knowles, 1984, pp. 9-12; Howell, 2001).

These five factors are closely related to what have been defined as the principles of best practice learning. The elements of best practice are included in the factors of adult learners. These 13 best practices, adapted from Steve Zemelman, Harvey Daniels and Arthur Hyde in Best Practice: New Standards for Teaching and Learning in America's Schools, are as follows:

1. Student-centered: The best starting point for schooling is people's real interests: all across the curriculum, investigating students' own questions should always take precedence over studying arbitrarily and distantly selected "content."
2. Experiential: Active, hands-on concrete experience is the most powerful and natural form of learning. Students should be immersed in the most direct possible experience of the content of every subject.
3. Holistic: Students learn best when they encounter whole ideas, events, and materials in purposeful contexts, not by studying subparts isolated from actual use.
4. Authentic: Real, rich complex ideas and materials are at the heart of the curriculum. Lessons or textbooks that water-down, control, or oversimplify content ultimately disempower students.
5. Expressive: To fully engage ideas, construct meaning, and remember information, students must regularly employ the whole range of communicative media – speech, writing, drawing, poetry, dance, drama, music, movement, and visual arts.
6. Reflective: Balancing the immersion in experience and expression must be opportunities for learners to reflect, debrief, abstract from their experience what they have felt and thought and learned.
7. Social: Learning is always socially constructed and often interactional; teachers need to create classroom interactions that "scaffold" learning.
8. Collaborative: Cooperative learning activities tap the social power of learning better than competitive and individualistic approaches.
9. Democratic: The classroom is a model community; students learn what they live as citizens of the school.
10. Cognitive: The most powerful learning comes when students develop true understanding of concepts through higher-order thinking associated with various field of inquiry and through self-monitoring of their thinking.
11. Developmental: Students grow through a series of definable but not rigid stages, and schooling should fit its activities to the developmental level of students.
12. Constructivist: Students do not just receive content; in a very real sense, they re-create and reinvent every cognitive system they encounter, including language, literacy and mathematics.
13. Challenging: Students learn best when faced with genuine challenges, choices, and responsibility in their own learning. (1998, p.8).

The next section of this paper explains how the five factors of adult learning encompass the best educational practice: independent, self-directed learning includes best practice elements of student-centered and developmental; developing a growing reservoir of experiences includes best practice elements of experiential, authentic, and holistic; relating to social roles includes elements of best practice such as social, collaboration and democracy; immediacy of application include best practice elements of cognitive and constructivist; and internal motivation, which includes best practice elements of reflective, challenged, and expressive. The next section also explains how all of these aspects were taken into account for the development of the quick reference guide activity.

Figure 1 Overview of Adobe Photoshop
The following include procedures and actions that you need to know to work through Adobe Photoshop. Please note that this is not a comprehensive guide to Adobe Photoshop, but a table that covers just

Creating a New File	
	Setting up the resolution
	Setting up the background
	Setting up the width and height
Setting up the workspace	
	Opening and closing palettes
	Viewing rulers and grids
Color Management	
	Working in RGB Mode
	Working with the color palette
	Selecting from color tab RGB options and web safe options
	Selecting from color swatch tab
	Choosing only web safe colors from the color picker
	Changing hue, saturation, and lightness of a color
	Changing brightness and contrast
	Changing the overall color of an image
	Selecting background and foreground colors
	Working with gradients
Working with History	
	Accessing the History Palette
	Deleting from the History Palette
Working with layers	
	Inserting layers
	Deleting layers
	Duplicating layers
	Renaming layers
	Inserting and modifying a type layer
	Working with blending modes and opacity
Tool box	
	Selecting tools
	Working with the options palette (under the Photoshop menu)
Working with Type	
	Inserting type
	Reshaping type
	Applying other effects
	Editing the type
Making Selections	
	Going to the right layer
	Magnetic lasso
	Marquee tool
	Magic Wand
	Quick Mask
	Moving selections
Filling Selections	
	Make a selection
	Filling in with foreground color, background color, etc
	Changing the opacity
	Changing the blending mode
Applying Filters	
	Selecting a layer
	Working with the FILTER menu to apply different filters
Compositing Images	
	Making sure two images are the same resolution
	Dragging images or selections from one file to another
	Creating new layers with the copied images
	Applying different effects to each layer
Image Information	
	Viewing and changing resolution of an image
	Resizing an image
	Viewing size of an image
Opening and Saving Images	
	Opening an image
	Saving as a PSD file
	Saving as a JPEG or GIF file
Optimizing for the Web	
	Saving the image as a JPEG file
	Selecting the image with the best quality and least number of KB
Scaling and transforming selections	
	Scaling selections
	Rotating selections
	Skewing selections
Rotating an entire image	

INDEPENDENT, SELF-DIRECTED LEARNING

This activity promotes independent, self-directed learning because the activity is student centered and it focuses on developing the learner's understanding of a specific software package. The quick reference guide

Figure 2 Example of Quick Reference Guide for Microsoft PowerPoint

Desired Action	Command/Procedure
Opening PowerPoint	In general, you will have the following options when you open up PowerPoint:
	AutoContent Wizard Choose this option to use a presentation with content already developed.
	Design Template Choose this option to select the template for the presentation.
	Blank Presentation Choose this option to "start from scratch."
	Open an Existing Presentation Choose this option to open up an existing presentation.
Obtaining Different Views	
	View/Outline Presents outline view.
	View/Slide Presents one slide at a time.
	View/Slide Sorter Presents a layout of all slides.
	View/Notes Page Presents the notes section for an individual slide. Click in the box below to add notes.
	View/Slideshow Presents the slide show.
Working in Outline View	
	Navigating You can either use the arrow keys or the scroll bar to see the outline view. You can also collapse the outline if you only want to see certain titles.
	Editing <ul style="list-style-type: none"> To create a new slide or line, press the RETURN key. Use the promote button (TAB key) to indent (for creating new lines of text) Use the demote button (SHIFT-TAB keys) to bring the text further to the left again (for creating higher levels in a list or for creating a new slide). Remember to use bullets for lists – these can be "turned on or off" Use the MOVE UP or MOVE DOWN buttons if you want to change the position of a particular slide. It might be easier to click on the slide number/title and then drag the slide to where you want it.
Working in Slideshow View	Navigating through the presentation <ul style="list-style-type: none"> To move through the presentation, either press the RETURN key or click on the mouse. To back one slide, press the BACKSPACE or DELETE key (on the main part of the keyboard). To exit at any time, press the ESC key.
	Other Navigation Options
	The following can be accessed via the Pointer Options command by clicking on the button in the lower left hand corner.
	Automatic Lets you keep the pointer as an arrow.
	Pen Use the Pen option to draw on the slide as you present it. The markings on a slide you make are not permanent.
	Pen Color Lets you change the color of the pen.
Printing	To print out any of the following, first select the File/Print command. Also check the File/Page Setup command to ensure that the orientation is correct.
	Print Handouts Print out 2,3,4,6, or 9 per page Orientation: horizontal vs vertical
	Print Slides Choose individual slides to print out
	Print Outline Print out horizontal or vertical Use Page setup to verify the margins
	Options available to all
	Number of copies
	Printing all or specific slides
	Grayscale
	Pure black and white
	Frame slides
Saving	Do the following to save the presentation:
	<ol style="list-style-type: none"> Do one of the following: <ul style="list-style-type: none"> Select the button that looks like a disk on the Toolbar. OR Select Save from the File menu. If the file has never been saved, the Save As dialog box will appear. Name the file, set the destination, and then click OK. If you want to save the file under another name or location and the file has been saved at least once before, choose Save As from the File menu. Rename the file, choose the destination, and then click OK.
Spell Checking	
	<ol style="list-style-type: none"> Click once on the Spell Checker button on the Toolbar. The Spell Checker dialog box appears. Start spell checking and use the options in the dialog box.
Quitting PowerPoint	
	<ol style="list-style-type: none"> Do one of the following: <ul style="list-style-type: none"> Double-click the Control menu in the presentation window. OR Select Quit from the File menu. Click on the appropriate button to save changes if the Close dialog box appears.

activity is definitely student centered, in that students were able to choose which software package they wanted to focus on. Students are given direction as to examples of what the quick reference guide should look like as well as a set of guidelines as to how the assignment would be assessed or graded. However, students are required to work on their own to review and figure out the best way of presenting the information. By doing this, students are required to develop their own understanding of how the software package best works. In general, this assignment can be tailored to the individual because the individual is considering his/her own experiences in developing this guide, which will be something that the student uses in the future in his/her professional setting.

DEVELOPING A GROWING RESERVOIR OF EXPERIENCE

Developing a resource of experiences to draw from is important, especially to adult learners. This activity is meaningful to adults in that it is experiential, authentic, and holistic. This activity is experiential in that it draws on the learning experiences gained from the other projects required for the course (digital imaging in Adobe Photoshop, a digital cartoon book in Macromedia Flash, and web pages in Macromedia Dreamweaver). The only way students can truly complete this project is if they work through the software and consider their other experiences in completing the other projects that students can document their hands on experiences with the software. This activity also adds to their learning experiences. In class, students are given the opportunity to analyze, program, and document the most important aspects of the software packages, and then after they complete the course they can use this experience to analyze other software packages. This helps the students in their analysis and understanding of how to create guides for themselves for other software packages. This activity is authentic in that it requires students to document their learning and understanding so that they can refer to this guide again after the course is completed. This is especially important in that it helps to set up the students to realize that whenever they do learn software packages that they need to consider how to approach other similar types of software packages. This assignment provides for holistic learning in that it ensures that students consider the entire software package, the important parts brought up in class about that software package, and how they were able to use the software package.

RELATING TO SOCIAL ROLES

It is good for adults to take on different social roles, especially in the learning process (Knowles, 1984, p.10; Howell, 2001). This assignment considered adults need for collaboration and democracy when working in groups. When there were problems in defining actions or procedures, students needed to collaborate with one another to ensure that everyone understood the information that needed to be conveyed. The activity was democratic in that everyone in the group was equally responsible for the outcome of the project, and that everyone within the group had to form a consensus as to who did what (fulfilled the different roles or jobs required for completing the quick reference guide). In each group, students needed to decide who would gather the information, who would enter the information into a word processing program, who would test the information to ensure accuracy, and who would make sure the document met the requirements specified in the project guidelines for the assessment or grading of the assignment.

IMMEDIACY OF APPLICATION

It is especially important to adults to know how their learning can be applied, and how soon such learning will have true meaning for them, whether at the work place or at home. The students needed to realize that this assignment was both cognitive (in that students would be required to achieve higher levels of thinking such as analysis and synthesis) and constructivist (in that students were drawing from past learning experiences and reapplying them) in nature. Up until this point of the course, students were shown how to use different software packages through demonstration, reading the book, and then using the software themselves. It is very easy to leave a computer class after

successfully completing a number of projects without a true understanding of how certain types of software packages work and how such learning can be applied and transferred to other software packages. By constructing knowledge from what they know already and by analyzing and monitoring their thinking, students are able to use higher order thinking skills (University of Houston, Clear Lake, Texas). Through the use of these higher order skills, deeper learning and deeper understanding can result (Wilcox & Wojnar, 2000). As a result of using higher order skills, students were able to develop a guide that made sense to them and that they could apply or use after the course was finished. The assignment was constructivist in nature in that students had to consider not only the software they learned but also how to express themselves in written form and how such knowledge could be understood by other members of the class, regardless of their background. The assignment involved students using their computer skills, writing skills, and in some cases if they chose, drawing skills. It is through the experiences of the students, specifically in learning and working with the software to create other projects, that students are able to approach this activity with confidence.

INTERNAL MOTIVATION

Adult learners learn best when they are truly internally motivated. This is difficult to measure, but projects that allow students to be reflective, challenged, and expressive often help to provide that internal motivation. Students were required to reflect on the information that they had acquired through out the course, their experiences with completing the other projects, and to determine what the best solutions were for completing certain actions in the software programs. Students were challenged to develop a quick reference guide that was set up in tabular format, that included the main actions, procedures, and other notes or details to consider, and to create this in a word processor so that information could be considered in both digital and printed formats. Students were also encouraged to be expressive, in that they not only express in words how to perform certain actions and procedures, but that they could also add diagrams, pictures, or screen captures, if they truly believed that would assist users in their understanding of the software product.

THE RESULTS OF THE ASSIGNMENT

Even though there were some individuals who said that they did not care for the assignment because they did not want to have to be responsible for writing any papers for the course, they did admit that it was important for them to complete such an assignment so that they could reflect and piece together what they had learned in each of the software packages. Many students were interested in seeing how the other groups documented the remaining software packages. Everyone looked forward to receiving a quick reference guide for each of the software packages so that they could refer to them after the course had ended.

CONCLUSION

The quick reference guide activity can be a very effective way of involving adult learners in analyzing and better understanding software packages. This activity is effective because it addresses the needs of adult learners and follows best educational practices. The need for adult learners to become independent, self-directed learners stems from making the assignments student-centered and developmental. The activity adds to the students' reservoir of experiences in that the assignment was experiential, authentic, and holistic. The assignment helps to fulfill the need for students to realize social roles by encouraging students to be collaborative and democratic in their group work. The assignment helped to fulfill the need of immediate application by requiring a cognitive and constructivist approach by the students. Finally, such an activity assists adults in their need to develop internal motivation because this assignment allows students to be reflective, challenged, and expressive. The positive feedback obtained from the students in the class where this activity was used indicates that this assignment was well received among adult learners.

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