
T/TAC

Needs Analysis

2008-09 Immersion Team

Table of Contents

Introduction.....	3
Current Environment.....	4
Situational Data.....	4
Webshop User Test.....	8
Tools.....	11
Identified Goals.....	14
Identified Performance Support Needs.....	20
Design and Prototype Development Plan.....	24
Appendix A.....	25
Appendix B.....	32

Introduction

The following Needs Analysis is an investigation by the 2008-2009 Immersion Team at George Mason University into the needs of T/TAC Online, a website designed to forward the goals of the Training/Technical Assistance Center (T/TAC) program of the Virginia Department of Education (VDOE). Specifically, the Immersion Team's focus is the Online Training section of the T/TAC Online website. This Needs Analysis builds on and expands the research done by the team in its Performance Analysis.

The T/TAC organization seeks "to improve educational opportunities and contribute to the success of children and youth with disabilities (birth - 22 years)." The organization has professional trainers who provide face to face training in various regions throughout the state year round. In 1999, T/TAC expanded its services to include T/TAC Online, which offers training, resources, and event, assessment, and standard of learning information via the Internet. The organization has recently reported 350,000 hits per year from educators and parents seeking to gain more knowledge about how to better serve individuals with disabilities. The Immersion Team has been asked to modernize and redesign the Online Training interface to provide T/TAC trainers with an easier, more efficient means of providing online training.

In the Performance Analysis, the team received a broad understanding of the T/TAC organization and the challenges that they were facing. Based on the identified drivers and barriers, the team determined that there were five priorities for support, training, and possible prototype development:

- A prioritized list of tools that can be integrated into T/TAC Online.
- A demonstration of those tools and associated performance support systems.
- A demonstration of the use of those tools in a virtually collaborative setting.
- A more visual web interface.
- A means of enticing new authors to create Webshops.

The team used these five priorities to inform its direction for deeper research.

From its investigation during the Performance Analysis, the team also identified two primary audiences: Previous Authors, (T/TAC staff who have successfully designed and uploaded Webshops into the Online Training section of the website), and Potential Authors, (staff members who have either unsuccessfully begun developing Webshops or those who had never attempted). The team also saw the need to research tools or software that could be used by T/TAC staff to create "more modern" training.

The following data was gathered using both formal methods, (e.g. surveys, interviews, investigative research), and informal methods, (e.g. website comparisons, informal conversations, and internal usability testing). The team's research indicates that, in order for

T/TAC staff to create both interactive and dynamic training, the organization would benefit significantly from instructional design efforts that:

- Identify and provide support for tools.
- Update the Webshop interface to include effective online training strategies.
- Model how to create an "ideal Webshop" using the updated T/TAC Online database.
- Develop a means of interaction between T/TAC staff and for staff communication with Online Training end users.

Current Environment of T/TAC Online

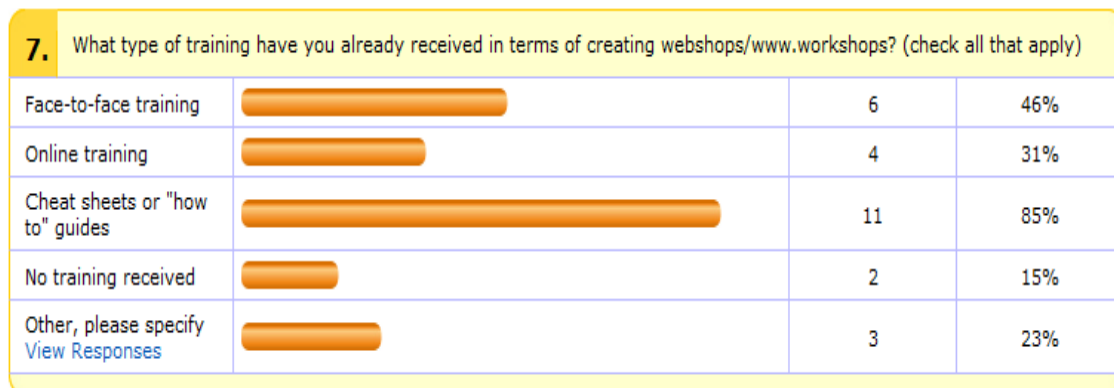
Situational Data from Subject Interviews and Surveys

In order to gain information about the current use and function of the T/TAC Online Training site, the team surveyed and interviewed persons who have created training Webshops and/or [www.Workshops](#) for T/TAC Online. These authors included both T/TAC staff members and other educators who are not T/TAC staff. All authors were professional educators who have expertise in the subject matter they teach. All authors had provided face-to-face training in their area of expertise.

Based on the data that was collected, 85% of the Webshop/[www.Workshop](#) authors surveyed found the current Webshop template system easy to use. They stated that the consistency of the template format is a strength and that the ability to cut and paste into templates is a positive feature of the current template system. Most authors designed their Webshop or [www.Workshop](#) outside of the template system using MS Word or PowerPoint and subsequently cut-and-pasted that information into templates. In addition, some authors created Webshops based on the current face-to-face training they deliver, while others created training specifically for Webshop use.

Currently, instructional options in the template system include text, graphics/images, PDF downloads, URL links, and .MOV video files. While the respondents indicated that they like these choices, they all cited that the templates should include more media options and formats. Many respondents indicated that the Webshops/[www.Workshops](#) are text heavy and do not allow for user interaction.

Most Webshop authors had received some sort of training on how to create Webshops including face to face training, online training, and training in the form of a cheat sheet or “how to” guide. At this time, directions are limited within the Webshop template system itself. Thus, 85% of the respondents indicated that they use cheat sheets or “how to” guides only to support them when creating a Webshop.



All respondents agreed that creating Webshops and [www.Workshops](#) is a very time consuming process. When asked how much time it took to create a Webshop, responses ranged from “three hours” to “months”. Respondents indicated that the editing process, in particular, utilizes a significant amount of time. Several respondents stated that editing is so time consuming because there is “no way to view what you’re creating while you’re working on it.” Authors have to constantly go in and out of the template system in order to view the actual appearance of what they are designing. In addition, respondents stated that organizing and reordering slides slowed down the process of creating Webshops.

Respondents also noted that the current template system requires authors to use HTML coding to format parts of their documents. In so much as creators are not HTML experts, they are required to continuously review HTML codes, a process that is labor intensive.

Respondents have also indicated that there are several technical problems that make the process more difficult. While working within the Webshop template system, users have experienced the following:

- System timing out.
- Losing templates if they don’t include placeholders.
- Problems with saving material.
- Need for screen to reload when reordering pages.
- Tables and graphics not uploading correctly.
- Some of the formatting done in Word documents does not carry over into templates.

Several respondents expressed concern that there is no way for authors to track how many people are actually viewing a Webshop. These respondents stated that this information impacts their motivation to create Webshops. One respondent made a comment that creating Webshops is “not a priority right now due to not knowing data about how information is being used.” Another stated, “...live training is a known audience...on-line training may or may not be accessed.”







Currently, Webshop authors use SmartBoards, PowerPoint presentations, videos, and LCD projectors when delivering face to face training. The chart below reflects the ability of the authors to use some technological tools:

13. How would you describe your ability to use the following technology? 5 - Expert = You can use the tool and teach others how to use it. 4 - Advanced = You can use the tool easily with no support. 3 - Proficient = You can use the tool with minimal support. 2 - Novice = You only know the basics of the tool and feel you need more training before using it regularly. 1 - I am unfamiliar with this tool

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	I am unfamiliar with this tool	Novice user	Proficient user	Advanced user	Expert user
Word documents	0 0%	0 0%	1 8%	5 38%	7 54%
PowerPoint	0 0%	0 0%	2 15%	5 38%	6 46%
Flash	5 38%	3 23%	3 23%	2 15%	0 0%
Captivate	8 62%	2 15%	1 8%	2 15%	0 0%
Camtasia	5 38%	3 23%	2 15%	2 15%	1 8%
Adobe Presenter	6 46%	5 38%	1 8%	1 8%	0 0%
Adobe Connect	4 31%	6 46%	1 8%	2 15%	0 0%
Podcasting	3 23%	6 46%	1 8%	1 8%	2 15%

85% of the authors surveyed considered themselves advanced users or experts in using MS Word and PowerPoint, but viewed themselves as less than proficient in the use of other tools.

The staff surveyed indicated that their preferred method of support when learning new technology is face to face instruction via a formal training workshop or assistance from a more experienced user.

14. When working with new technology, what method of support do you prefer? (choose just one - your most preferred method)			
A quick "How To" guide		1	8%
A complete users' guide		0	0%
An online help menu		1	8%
Pop-ups		1	8%
A short video tutorial		1	8%
A formal training workshop		4	31%
Assistance from a more experience user		5	38%
Other, please specify		0	0%
Total		13	100%

While 62% of the respondents said that they have not collaborated on creating a Webshop, 83% indicated that they would be interested in collaborating. Respondents who have collaborated on creating Webshops have done so by meeting face to face and by corresponding via email.

The Immersion Team also surveyed T/TAC staff members who have not yet created Webshops, but may be interested in doing so in the future (“Potential Authors”). Potential Authors indicated that they currently lack the knowledge/training on how to make Webshops while others stated that time restraints are a barrier to creating a Webshop.

In addition, the team surveyed classroom teachers. One of the teachers surveyed had been to T/TAC Online, but none of the teachers surveyed had used the Online Training site. Some of the sampled teachers had difficulty signing into T/TAC Online and viewing Webshops. There was confusion about the “login/register process,” as some respondents thought they had to have an existing account in order to login. One teacher received several error messages while trying to create a user name and password. All respondents stated that they had used an online learning system before.

Webshop User Test

Process

The Immersion Team conducted an internal user test to better understand the process of creating Webshops. The team felt that this step was important for empathizing with T/TAC staff who have created Webshops as well as those staff who would be interacting with the template interface for the first time. In addition, this process would prepare team members to ask intelligent and pertinent questions targeted to the goals of the organization.

Without prior knowledge on how to build a Webshop, all team members obtained a T/TAC Staff login ID and began creating their own Webshops. Some testers used existing cheat sheets that were previously provided, while others decided not to use any guidance. In addition, team members agreed not to request the assistance of any other team member or anyone who may have more experience with technology in order to better understand the skills and resources needed to create robust Webshops, and to examine if the process was intuitive.

The Immersion Team documented their experience while creating Webshops. The following list outlines the data gathering process:

- Document the procedure
- Flowchart the process
- Describe barriers during the process
- Describe what is intuitive and user-friendly
- Describe the likes and dislikes of the process

Various themes reoccurred, such as editing and formatting, the technology skill level of Webshop authors, the ease of logging in, the ability to preview, graphics, linking to external documents and websites, the online training tab, pop ups, support, the time it took to upload, videos and the template system in general.

In addition to documenting their observations, the Immersion Team provided recommendations for improvement to the existing template system.

Test Observations and Results

Before creating Webshops, the Immersion Team was exposed to T/TAC Online as well as the T/TAC Online Training tab. Therefore, the team had a vague idea of what a Webshop consists of. It was understood that www.Workshops are made up of multiple of Webshops with a common subject-matter. However, there was some confusion as to exactly what a Webshop entails.

Logging-in was fairly intuitive. Most Immersion students were under the impression that they would be able to create videos, edit pictures and text, format using colors, fonts, and shapes, all within the T/TAC Online website. However, team members soon discovered that the system is only a means of uploading and combining text, graphics and videos into a slide-by-slide format. These slides combine to form a Webshop when viewed as a whole.

The organization of each slide is predetermined by one of six templates. Webshop authors choose different templates depending on what they want to incorporate, for example, videos, graphics, or link to websites.

The team discovered that the templates are used to upload content, which is created using external tools and software. This caused a disconnect between the total time it took to create a Webshop, and the time it took to simply upload to a template. Most team members found that the process of uploading took between 5-20 minutes. The time variation exists because some members decided to write in the template text box, while others copy-and-pasted from a Word document. Some attempted to upload graphics, pictures and videos, which could only be viewed after they were uploaded into a template.

The Webshops seemed to be mainly text-based. As previously stated, some of the testers were able to copy-and-paste from a Word document. After pasting their previously formatted text into the template, (with personalized fonts, indentations, shapes, and colors,) this formatting did not translate into the template.

However, the videos, and pictures that could be added to a Webshop are what made them interesting to end-users. This highlighted the need for the time and technical skills required to create robust Webshops. Team members felt that the majority of the time spent creating a Webshop should actually be spent on utilizing these different components. This requires knowledge of how to crop a picture or produce a video. If authors are not familiar with tools used to create these types of media, they could feel frustrated and give up the task of creating one. As one team member noted:

“As long as the template system requires that the essential components of a Webshop be developed in other programs then the template system will not entice new users who are not technology savvy”.

The lack of ability to edit and format within the templates and the lack of time to create Webshops were major issues that the testers experienced. Another concern for the testers was the ability to preview their work while creating the Webshop. Several times, they were not sure if files they attempted to upload were loaded or not, or what the video or graphic looked like. A team member expressed frustration after uploading an unsupported video file-type, stating:

“I honestly thought I had done it correctly because the template system appeared to upload my video clip successfully. I didn’t get any error messages and it allowed me to go on to the next page. However, later, when I went to view that page the video did not appear.”

Finally, many testers felt the interface was difficult to use and not intuitive. For example, there were ways to see where the author was in the process, but the indicators cannot be used to navigate. Testers also felt a “Best Practice Guide” on all the processes and workflows would be helpful for users who were learning to create Webshops, including user guides and/or manuals for the tools used to produce videos, crop pictures and create PDF files. Best practices could be generated after T/TAC Online decided what tools and software they will recommend to authors

so that the Webshops have a consistent and uniformed look without constricting the authors' personal touches.

Many agreed that, from an end-user standpoint, the template system created Webshops that were rather uninteresting and required no interaction on the part of the user. One team member summed it up best by saying:

“As it stands now, simply updating the template system to include dynamic media will not meet the needs of inexperienced users.”

Note: for a detailed look at the Webshop creation process, please see Appendix A

Tools

The Immersion Team looked at different software that the T/TAC staff could use to produce robust, dynamic training. Many of these tools were taken from the 2007-08 Immersion Team's recommendations, and were then researched based on the perspective of their ease of use, the type of media they could produce, and how the staff could use them effectively to create training modules that could be uploaded into T/TAC Online.

Adobe Captivate

Adobe Captivate is an eLearning development tool that can create a wide variety of learning environments, including:

- Screen recordings
- Demos
- Simulations
- Presentations
- Scenario-based learning
- Quizzes

Like most Adobe products, Captivate only creates Flash (.swf) media. This would require those viewing the media to have a Flash plug-in installed in their browser.

Captivate provides the ability to import PowerPoint presentations, which is helpful because PowerPoint is a program that T/TAC staff are already familiar with. Captivate automatically converts the slides, which can then be edited and tweaked to provide a more dynamic learning environment. The program can create interaction through quizzes and surveys, and can create dynamic content by using screen recordings, video, and animations.

The biggest barrier with Adobe Captivate is that it is a fairly complex program. It does have a basic slide layout, somewhat like PowerPoint, but T/TAC staff would most likely need to take some time to learn the program in order to use it effectively.

Camtasia

Camtasia is a screen-recording software that includes additional capabilities like picture-in-picture, video overlay, captioning, and menus. While Captivate has the same functionality as Camtasia, as well as others, the main advantage of Camtasia is its ability to export to multiple formats, including Quicktime (.mov), Windows Media (.wmv, .avi), animated .gif, Adobe Flash, Microsoft Silverlight, and .mp3/.m4u for podcast distribution.

Camtasia also has a much different interface than Captivate. For T/TAC staff members who are used to basic video-editing software, such as Windows Movie Maker, it will seem very familiar. Those who haven't used the aforementioned software will need to take some time to become comfortable with Camtasia. Captivate uses a simple timeline, on which you drag and drop video and audio clips. It also has a built-in screen recording interface, which can capture any area of the screen as needed. In addition, it has an audio-recording and editing application, as well as an application that creates menus that can be included with the exported file.

Podcasting

Podcasting is not a program or a kind of software, rather, it is a source of media that is syndicated and distributed. A podcast is a series of digital media files that a user can subscribe to and automatically download to a personal computer or media player. The files are distributed via a Web-feed, and are downloaded to an individual's computer through appropriate feed aggregator software, such as iTunes. Typically, these files are .mp3 or .m4u files. But it is important to note that these files must still be created uniquely. Therefore, podcasting is a system that can be used in conjunction with media-creating software.

Lectora

Lectora creates digital, book-like instructional modules for production to a course management system. The program can be used to create entire series of training or interlinked modules for whole courses. Lectora also incorporates Flash technology to allow interactivity. Graphics, video, and PowerPoint can all be incorporated into the produced media.

Lectora is designed to be used in conjunction with a Learning Management System (LMS), and exports its media through XML-based protocols like AICC and SCORM. However, it will also produce executable (.exe) and HTML files. Lectora is the only program that will automatically generate rewards or certificates.

Adobe Presenter

Presenter is a PowerPoint add-on from Adobe that will publish a presentation as an automated presentation through Flash. The user can also add audio voice-over, evaluations, and interactive elements. Presenter is perhaps the simplest technology in so much as it works directly inside PowerPoint. However, research has shown that it has multiple 508 compliance and accessibility issues which may not make it appropriate for this audience.

Adobe Connect

The 2007-2008 Immersion Team did an in-depth usability test of Adobe Connect and found it to be a useful tool for collaboration. Connect allows clients to have real-time meetings over a high-speed internet connection.

Identified Goals for T/TAC Online

As part of the investigation, the Immersion Team asked both audiences about the type of environment they would like to work in. Surveys and interviews included questions about the T/TAC Online environment, performance support systems, and collaborative efforts to create training. The team found that two audiences placed value in different areas for these subjects.

Previous Authors

As seen in the chart below, an overwhelming number of Previous Authors surveyed felt formatting, support and technology are amongst the highest priority while having collaboration and marketing Webshops is the least important.

Formatting Improvements:	<ul style="list-style-type: none"> • Accurately transfer Word document formatting. • Include subtitles or automatic transcripts. • Increase the interactivity of the templates. • Enable PowerPoint capabilities within Webshops. • Include an auto save feature. • Ability to preview document while working on it. • Ability to track viewers of Webshops. • Enable user-friendly formatting to reduce the time it takes to create Webshops.
Support:	<ul style="list-style-type: none"> • Face to face training on Webshop creation. • Face to face training on new software. • Just in time support within the template system. • Hints on HTML Formatting. • FAQs. • Online Help.
Technology:	<ul style="list-style-type: none"> • Web 2.0 capabilities. • Up-to-date software available to those who need it. • More media compatible with T/TAC Online.
Collaboration:	<ul style="list-style-type: none"> • T/TAC staff would like to work together online to create.
Marketing:	<ul style="list-style-type: none"> • Expose Potential Authors to the benefit of creating Webshops.

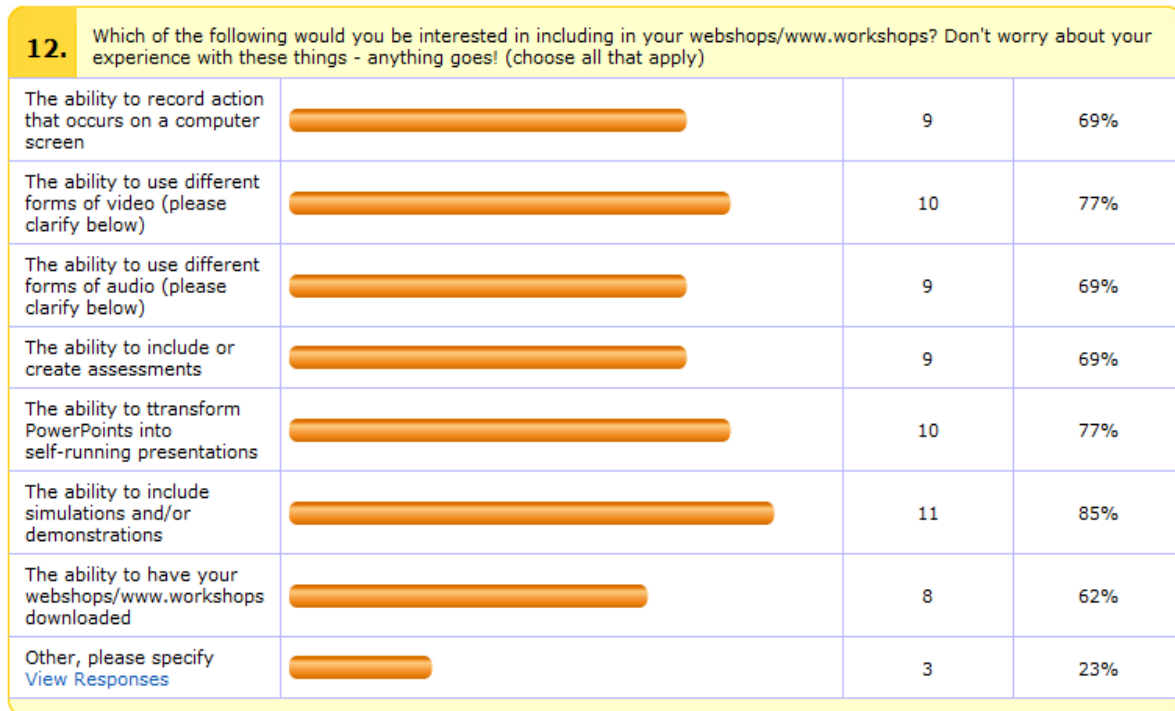
Formatting

Previous Authors overwhelmingly responded that they would like the current template system to include improved formatting capabilities. Formatting of Word documents is often lost when transferring content during copy-and-pasting. Formatting capabilities should also include features such as auto-save. This ensures that content is not lost while in the template. All of those surveyed said that they use PowerPoint slides while training face to face and would like something similar to PowerPoint while creating Webshops, especially the ability to preview and rearrange slides.

Other formatting suggestions to enable a user-friendly experience with the overall template system include:

- The ability to use video clips without having to link to the site.
- Allowing tables.
- Making it easier to add graphics.
- A reminder that people need converters and file extensions to run Flash.
- The ability to track the amount of people completing each Webshop.

Figure 1 - Previous Authors formatting preferences



HTML

Previous Authors overwhelmingly state that the use of HTML is a barrier. The survey indicates that Previous Authors “shy away from” HTML in so much as HTML is tedious and consumes a lot of time. Some HTML suggestions were:

- Not having to use HTML for simple formatting.
- Making a key or legend available on the right side of the screen to help with HTML coding.
- Being able to include website URLs without having to add HTML to do it.
- Making HTML formatting automatic.
- Having options for both HTML coding and keyboard strokes (the latter only works occasionally).
- Making it easier to achieve accessibility (tags, descriptions, etc.).

504 Compliance







The authors felt that the ability to format within a template system should meet 504 requirements and that T/TAC Online should “provide a program that would help with transcription of videos to meet 504 requirements”.

E-learning Environment

Some Previous Authors responded that they would like to see a “complete makeover” of the template system. They suggested that the template system should be more interactive and should also provide prompts so that Webshops do not become too text-heavy and static. The respondents suggested creating an e-learning environment that includes interactive e-learning tools, such as videos and narration.

Support

Previous Authors felt strongly about the support they would like to receive to create Webshops. 69% of those surveyed felt face to face training with an advanced user or a formal training session on how to create optimal Webshops would be beneficial to them. As the graph below indicates, only 16% valued online help and video tutorials.

14. When working with new technology, what method of support do you prefer? (choose just one - your most preferred method)			
A quick "How To" guide		1	8%
A complete users' guide		0	0%
An online help menu		1	8%
Pop-ups		1	8%
A short video tutorial		1	8%
A formal training workshop		4	31%
Assistance from a more experience user		5	38%
Other, please specify		0	0%
Total		13	100%

Potential Authors

Potential Authors are those people who have not created Webshops before. Therefore, many of them did not have access to the Staff section on T/TAC Online, where Webshops are uploaded to the system. Therefore, the data for this audience was gathered after sharing the Online Training section with this population.

After viewing current Webshops, this audience felt a need to modernize the current system and suggested training would be more effective with a learning management system. A major focus for Potential Authors is the ability to collaborate and enable a social aspect of online training. This group also felt a need to modernize the current online training system, and “include multiple sources of information, user-friendly interface, and up-to-date technology that would include options for audio, video and interactive learning”.

The table below shows the elements of online training that Potential Authors identified as ideal. They suggested that the outcome of having an online training system, such as the Webshops T/TAC offers, should “have all the necessary support in order to meet the learning outcomes”

and be “interesting, highly interactive with good relevant graphics and interactive exercises”. Like Previous Authors, they felt that including a PowerPoint element would allow the ability to “guide you through...an online training session. It makes you feel like you’re more in a classroom”. They suggested the training should be visually appealing:

“Using fonts that are easy to read, along with pictures, the user can take in the information more effectively. When it is all text, the user's brain tends to get ‘bored’ however, when there is not a consistency with how it is presented, it can also become too ‘busy’ and over stimulating”.

Collaboration:	<ul style="list-style-type: none"> • Interact with the presenter. • Feedback after activities. • Upload and share resources with each other. • Enable real-time chat sessions regarding the content. • Interact in discussion forums and respond to content driven prompts.
Support:	<ul style="list-style-type: none"> • Detailed syllabus & rubric that includes goals and objectives. • Content slides provide links to websites, video clips, Podcasts, articles, and simulations.
Software availability:	<ul style="list-style-type: none"> • A variety of training experiences, reading, video, Podcasts. • Podcasts to learn or hear firsthand knowledge of the topic. • Visuals to clearly express concepts: concept maps, graphs, templates, etc. • User friendly manipulation of tools.

Learning Management System

The Immersion Team asked both Potential Authors and teachers about their exposure and/or experience with a Learning Content Management System, (LMS). This was a pertinent question since T/TAC Online is an example of such a system. However, these Potential Authors identified that the current Webshops lacked elements of newer systems.

Potential Authors said they have used Blackboard and WebCT and commented that these LMS’s “work well enough for conveying static information such as keeping record of training, register participants, etc... but would like to see better collaborative tools. For instance, instead of using a chat room, having some kind of instant messaging service incorporated throughout the site and the ability to turn on notifications when students are on/offline” - indicating the importance of collaboration amongst Webshop authors and end users.

Support

Unlike Previous Authors, Potential Authors did not mention face to face training or receiving help from an expert. Instead, they felt that help desk support, user manuals, online help and cheat sheets are sufficient support tools to create robust training materials.

Identified Performance Support Needs in T/TAC Online

After reviewing the data collected from both audiences, the Immersion Team identified six areas of improvement for T/TAC Online:

1. The ability or ease of staff to translate face-to-face training to Webshops.
2. The formatting and functionality of both T/TAC Online and Webshop templates.
3. T/TAC staff's access to and knowledge of media-development tools.
4. The appeal of Online Training (Webshops) to end-users.
5. Methods of communication from staff to staff (collaborative), staff to learner (facilitative), learner to learner (collaborative).
6. The number of staff creating Webshops should increase.

The ability or ease of staff to translate face-to-face training to Webshops

Through informal discussions, the Immersion Team learned that T/TAC staff members are excellent face-to-face trainers but have many challenges when creating Webshops. First, they must reformat day-long workshops into fifteen to thirty minute Webshops.

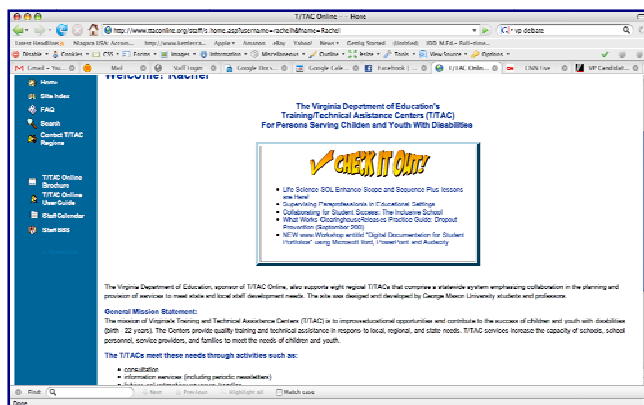
The second challenge that T/TAC staff members face is time. In a survey of existing Webshop authors, the Immersion Team learned that the amount of time it takes staff create and upload a Webshop can be three hours to several months. The time consumption is due to several factors; the availability and knowledge of software that could simplify the process of creating a Webshop, and/or the functionality and formatting of the template system.

A third challenge that T/TAC staff face is the current template system. The restrictions of the template system are that it creates training that is static and not engaging to the end user. It does not allow for the Webshop author to create quizzes or allow for discussions to facilitate learning.

The formatting and functionality of both T/TAC Online and the Template System

Functionality of T/TAC Online

During the Needs Analysis, a few areas of concern surfaced regarding the functionality of T/TAC Online. The concerns range from new staff's confusion upon logging into and navigating T/TAC Online to end-users (teachers and parents) receiving error messages when creating a user profile or attempting to view a Webshop.



When logging into T/TAC Online, the “Staff Only” section does not look any different from the rest of the site. As the image illustrates, staff members immediately view the "home page" viewable to any visitor to the website. This can be disorienting to a new Webshop author. It is suggested that the website be updated for staff-only views.

Another item of concern was the error messages that teachers and parents received. Some respondents to the end-user survey indicated that they received error messages when attempting to view a Webshop or create a user profile. When finishing a Webshop, some end-users received a message that states "Page Cannot Be Found."

Templates & Formatting

Previous Authors indicated that is fairly easy to create a Webshop; all the author needs to do is copy-and-paste information from a Word or PowerPoint document into the template structure. However, the Webshop editing process is very time consuming. The current template system does not allow for users to format text without the use of HTML coding. Another problem identified within the template system is that there is not an "auto save feature" nor does it allow the author the ability to preview their Webshop during the creation process. Users of the system suggested that a new template system should:

- Include more formatting options.
- Allow text formatting to transfer from word documents to the template system.
- Include hints about HTML coding.
- Have an auto-save feature.
- Give authors the option to preview their Webshop.

One T/TAC Staff member interviewed stated that the template system should include instructional design reminders. Hints such as “create an activity here”, “include a picture”, or “have participants take a review quiz.” The templates should provide prompts so that Webshops do not become too text heavy and static. Providing prompts will help to ensure that authors create Webshops that follow best instructional practices.

T/TAC Staff's Access to and Knowledge of Media-Development Tools

A barrier for both Previous and Potential Webshop Authors is access to and knowledge of media development tools. Resolving this problem will not only make the Webshop creation experience effective and efficient, but will also ultimately increase the number of people creating Webshops.

The majority of potential Webshop authors were new staff who are unfamiliar with the process. These individuals are new to T/TAC and are interested in receiving face-to-face training about the process for creating Webshops.

Upon reviewing the survey of Previous Webshop Authors, the Immersion Team discovered that

80 - 95% of the respondents considered themselves to be advanced users or experts with "word documents." In contrast only 8 - 30% thought they were proficient with other tools such as Flash, Captivate, Camtasia, Adobe Presenter, Adobe Connect, or Podcasting.

The Appeal of Webshops to End-Users

Webshops in their current state, appear to be very text-heavy, static, and do not involve activities for the learner. At a recent face to face workshop, T/TAC Online was introduced to approximately 40 teachers. Of those 40 teachers, only 10 indicated that they have used T/TAC Online and only 2 indicated that they have a user account. It appears that teachers may find the online resources valuable but for some reason they are not creating a user account or utilizing the Webshops.

There seems to be some confusion about how to create a profile so that end users can access Webshops. In addition, the constant error messages received while attempting to create a login name were frustrating for one of the end-users surveyed. Problems with creating a user profile may be a deterrent for completing or viewing Webshops. Once in a Webshop, the end-users have expressed confusion about how to get back to the main training webpage.

Other comments by 2nd hand users included:

"I would like for there to be information about how many points towards recertification that you get from each workshop or Webshop. Also, the website should list specific classifications of teachers that would most benefit from classes. "

"Several of my searches came up empty to the point that I just clicked the Webshops tabs to look at what WAS there as opposed to doing individual searches."

Methods of communication from staff to staff (collaborative), staff to learner (facilitative), learner to learner (collaborative)

Current Webshop authors are collaborating via the phone, email, and through face to face meetings. Through informal discussions with Dr. Michael Behrman the Immersion Team has learned that a goal for T/TAC Online is to create a virtual collaboration environment for T/TAC staff. It would be ideal to have a virtual environment to share training resources and ideas.

In addition, several T/TAC staff members have suggested that it would be beneficial for Webshop authors and end users to have a virtual communication forum. This social aspect would help to facilitate learning.

The Number of Staff Creating Webshops Should Increase

Currently only about 20% of T/TAC staff are creating Webshops. Dr. Michael Behrmann, Clare Talbert, and Mary Wilds have said during informal discussions that they would like to see the number of Webshop authors increase. By addressing the gaps identified above, the Immersion Team believes that more T/TAC staff will be motivated to create Webshops.

Design and Prototype Development Plan

Based on the needs identified, the 2008-2009 Immersion Team plans to pursue development of the following design solutions:

1. Recommend tools that will meet the T/TAC staff's need to create interactive and dynamic training. Provide support for these tools that meets the staff's needs effectively but also efficiently.

In order to be more effective, Webshops and online training on T/TAC Online need to become more interesting and interactive. The Immersion Team will identify those tools that will best accomplish this. When used, the new training will be more appealing to the website's end-users. In order to get T/TAC staff to use these new tools, support must be provided that gives staff the large amount of new information they need in a way that takes as little time to deliver as possible. Such an experience will optimally translate to more Webshops created by staff, and more staff creating Webshops.

2. Make the process of creating Webshops more efficient by updating the Webshop interface and providing support for teachers that pertains to creating learning environments online, specifically in T/TAC Online.

Updating the Webshop interface would increase the functionality of the T/TAC Online website as a whole. Ultimately, this means T/TAC staff will have an easier time creating training for the website, resulting in a better overall experience for the end-user.

3. Design an "ideal Webshop" that demonstrates a) what interactive and dynamic training looks like and b) how to develop it using the available systems provided by the T/TAC organization and the Immersion Team's recommendations and designs.

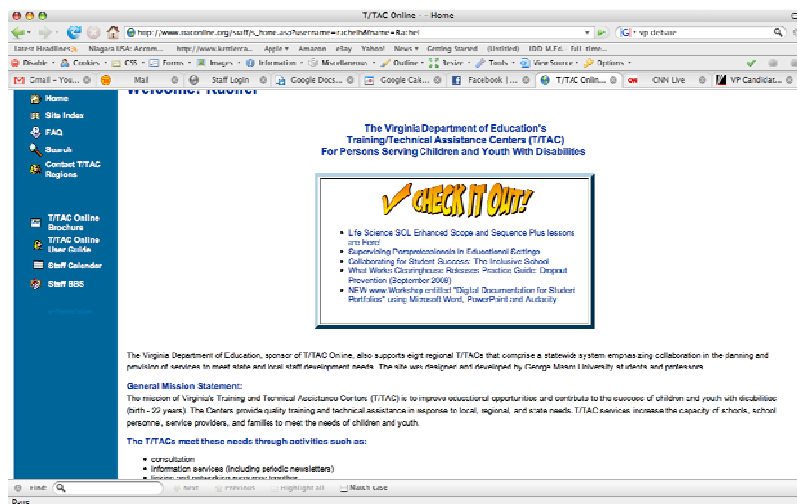
A demonstrative Webshop accomplishes two things: 1) it provides a working example of effective e-learning to T/TAC staff in a "Best Practices" fashion and 2) it provides the training needed as staff members are introduced to new technology. Again, this ultimately translates into a better experience for T/TAC Online's customer.

4. Research and develop a system of interaction between a) T/TAC staff collaborating on training, b) T/TAC staff and the learners using their Webshops, and c) learners who have used Webshops and want to share their ideas with others.

A forum of interaction cannot be easily integrated into the current design of the T/TAC Online website. Therefore rather than suggesting a redesign of the site, the Immersion Team will investigate existing systems to provide communication and collaboration between users of T/TAC Online.

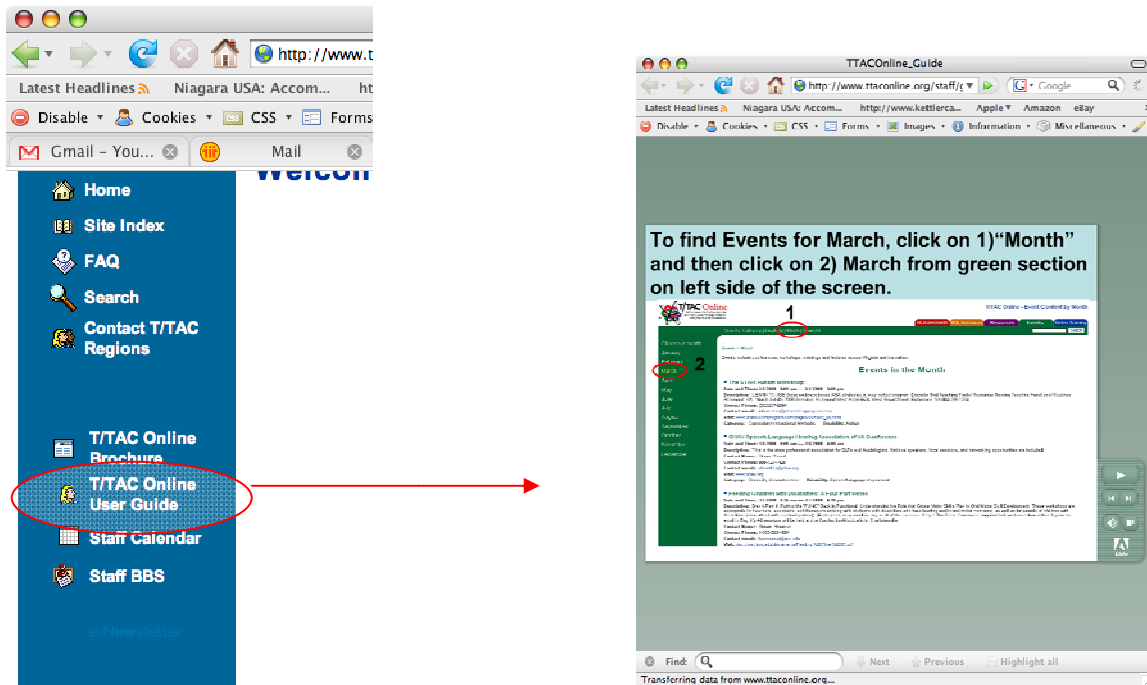
Appendix A – Internal Usability Test Example

Initial Login



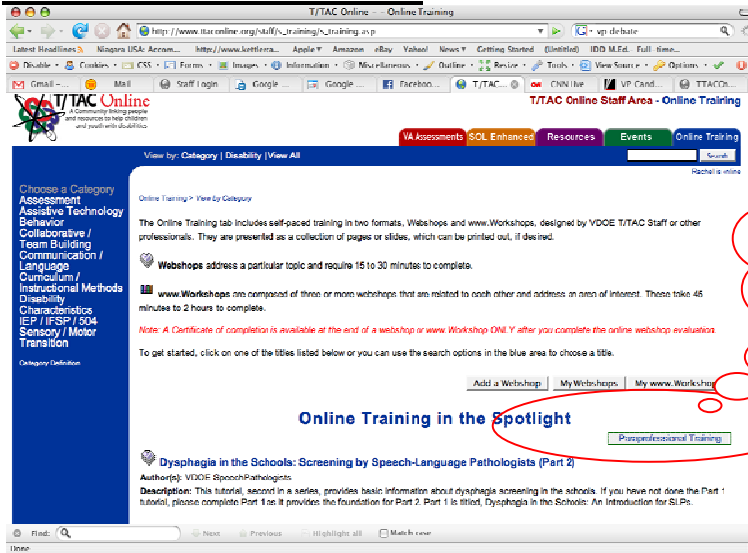
After logging in, I am wondering what this page is about. Is this the page that anyone can view when logging onto TTAC? Or is this page just for TTAC staff? It appears that it is for anyone visiting the web page. If this is the case, I think it should be changed and thumbnails for action items should be added, such as "creating a Webshop", etc.

T/TAC ONLINE USER GUIDE



In the image above you can see that on the website is the T/TAC Online User Guide. While this has some helpful information, this "user guide" appears to be more for "teachers, parents, and web-site visitors." This is not a guide for TTAC staff on how to upload info or training to the web. I think is confusing.

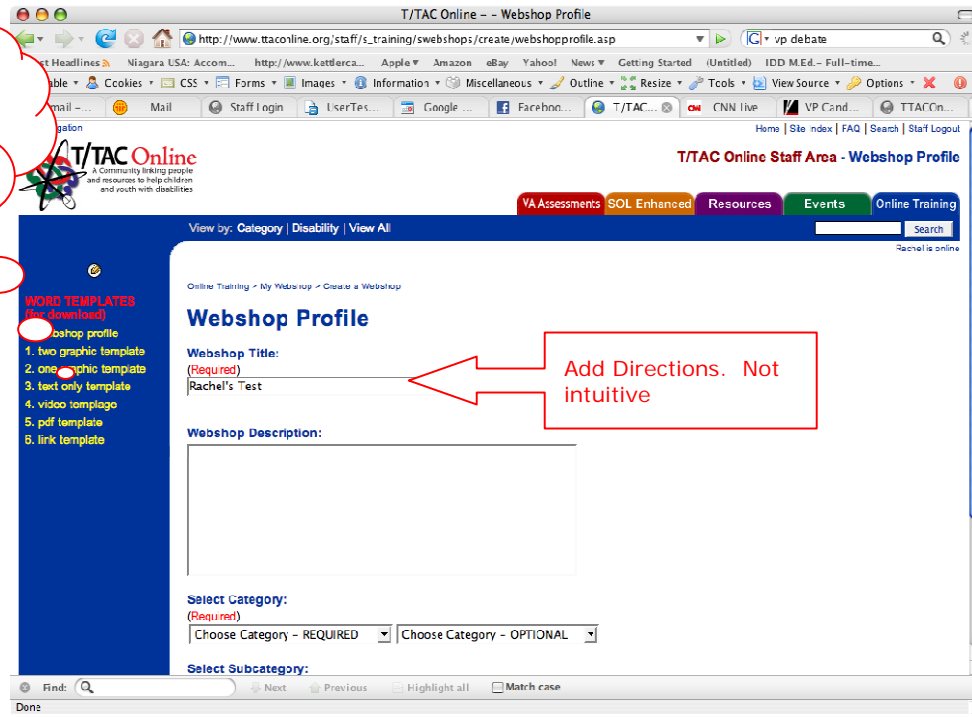
ONLINE TRAINING TAB



As you can see in the image above, the website is not intuitive. The Text includes information for web-site visitors and does not provide clear instructions to authors how to add/create a Webshop. The only indication that the author has are three *little* buttons. "Add a Webshop", "My Webshops", "My www.Workshops". What do these mean? As an unfamiliar author or trainer, I would be a little confused at this point.

ADDING A WEBSHOP

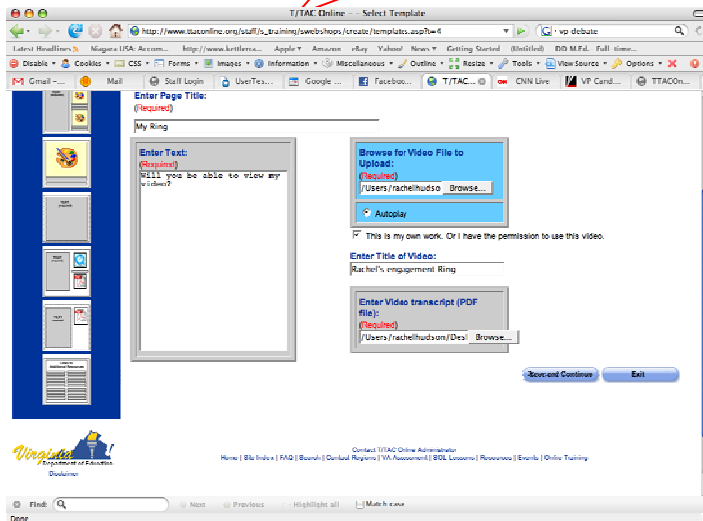
What are these for?
Not intuitive.

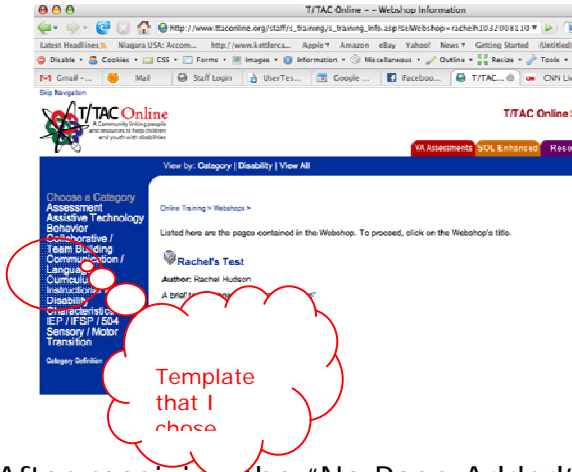


PROBLEMS....

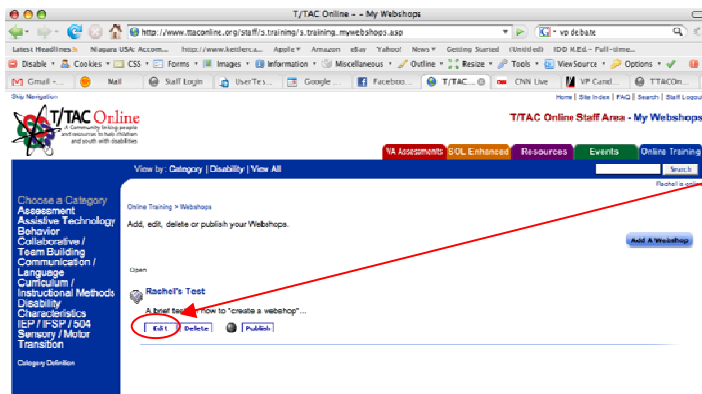
I attempted to add Page 1 to my Webshop. When finished... I clicked "Save and Continue" - nothing happened. After 5 mins, I clicked "Exit."

As you can see "No Page was added after clicking 'Save and Continue'"





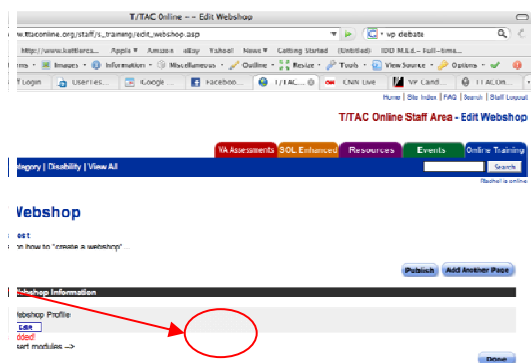
After receiving the “No Page Added” message, I wasn’t sure how to proceed. I kept clicking on “Rachel’s Test” which brought me to the page below.

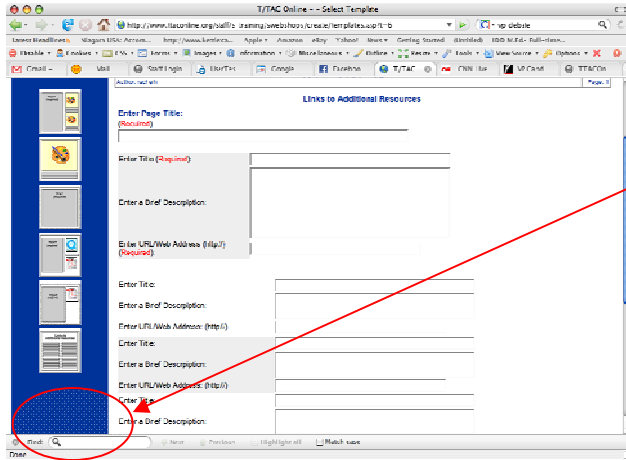


From this page I concluded that I should probably click “Edit”

After clicking “Edit”, I was brought to the page at the left. Once again I have not received any directions. I decided to click “Edit” again.

Still unsure if this is the correct thing to do at this point.



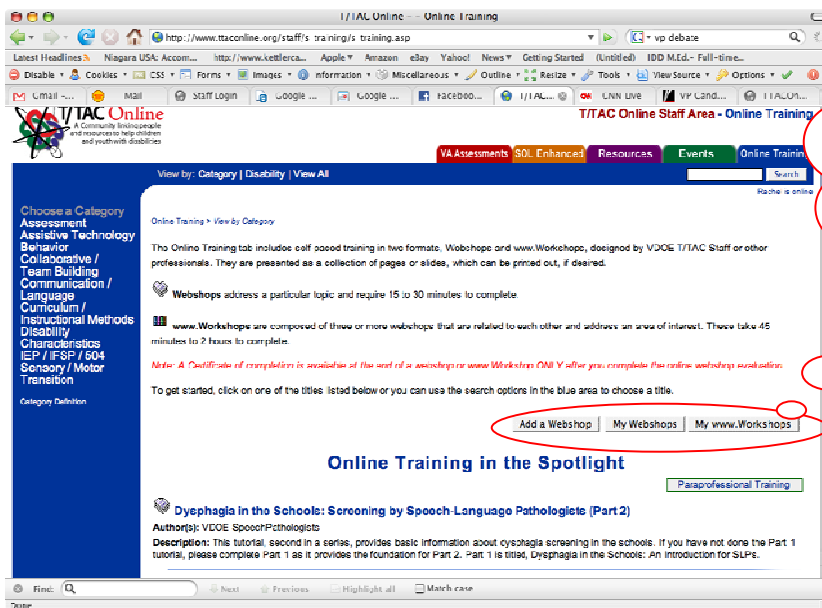


The image to the left is the template for "Links to Additional Resources".

This page is not intuitive what-so-ever. As a new author, I would be confused and a bit overwhelmed. All I want to do is add 'links'.

Where did “My Webshops” Page go?

So after I'm done trying to create a Webshop, I want to go back to the screen where I can go view “my Webshops” or “Workshops”. Do I have to go back to the Main Online Training Page?



Is this the only way I can get to “My Webshops” or “My Workshops?”

Appendix B – Internal Usability Test Data

	<u>Likes</u>	<u>Observations</u>	<u>Process</u>	<u>Recommendations</u>	<u>Comments</u>
Formatting		<p>Cannot format the templates.</p> <p>Formatting was lost after cutting and pasting a document from MS Word.</p> <p>Cannot change the look and feel of the Webshop.</p> <p>There is no standard format to produce a Webshop.</p>		Create a 'Best Practice' model which first explains that in order to create a Webshop; the author must produce all training materials such as graphics, videos, PDFs, outside of the Webshop.	Templates are simply used to upload material and content. The uploaded templates show up as Webshops.
Edits		The templates do not have editing features like adding shapes, arrows, colors, fonts, indentations, etc...	Copy and paste from a Word document.	Include editing and formatting features that will personalize the authors work, training and experiences.	This is a timely process.
Preview		<p>After trying to create a Webshop, where is the view “my Webshops” or “Workshops”?</p> <p>Once the text box, graphics, videos are uploaded, there is no 'preview' the template.</p>	The only way to preview a Webshop is to exit and then re-enter to review the work.	Provide, for example, in PowerPoint, the templates that you just worked on are on the side of the screen and you can easily access each of the slides worked on.	The templates are not dynamic because you can't view your Webshop until the very end.
Preview		Cannot view what was done on the previous page. There is no way to see or edit previous slides.	A trail is available, but cannot link back to previous step because the trail is stagnant.	Activate the trail so that authors have flexibility to move within the template system.	Webshops were easy to upload, however they are not exciting to look at afterwards

Graphic	The suggested size was 400x400, after loading a much bigger one – after viewing the Webshop, it resized it appropriately.	The size of the picture was too large and the graphic took a while to upload.	Had to exit and resize my picture in another program before I could upload it in the template	Provide a Best Practice on the size of graphics, as well as the extension that the template system supports.	The lack of instruction may cause users to think something froze while uploading a picture.
Basic Tech Skills		Potential Authors not aware of a correct methodology to transform F2F material		Create a 'Best Practice' training module on how to convert F2F training into a Webshop.	Provide support outside of that system before using it.
Links		It seemed that web addresses were accepted because there were no error messages. When I went back and ran the links later, the links that included the "http://" did not work. Not able to hyperlink to a document or website.	Entered 3 links, completed all fields. Omitted the http:// on two of them. Clicked "Save/Continue" a small window that said "Must enter required info", even after entering all required field.	Be able to link to an external site as well as to text documents from within a template.	Clicked "Save and Continue" assuming that would save the whole Webshop, got an error message. Tried "Exit" and that worked, took me to My Webshops
Login	If instructions are followed, it's relatively easy to log in as staff	The beginning was easy; however, trying to close the Webshop was more involved.	Open Online Training tab. Click 'Add a Webshop'. Chose the first template. Entered the Title	The staff page should look different from the regular user page, so people don't get confused.	What is the initial page about? Is this the page that anyone (website visitors) can view when logging onto TTAC? Or is this page just for

			required fields – text (copied from word document, graphic, caption, Alt-Text, source of work. Finished by saving.		TTAC staff? It appears that it is for anyone visiting the web page.
Online Training Tab		The Text includes information for web-site visitors and does not provide clear instructions to authors how to add/create a Webshop.	The only indication that the author has are three little buttons. “Add a Webshop”, “My Webshops” , “My www.Workshops ”.	Clearly indicate what entails a Webshop - ex: A Webshop is an uploaded template which contains training information in the form of either text or combination of text/graphics/video/audio.	The website is not intuitive.
Pop-ups	Got a pop-up asking if I was sure I want to delete.	There were times that popups said "Please insert the required information before proceeding," even though information was already entered.		This can be resolved easily by making the popup more clearly and by explaining what are the cause and a possible solution when an error message pops up. Add thumbnails for action items, such as “Creating a Webshop”.	
Support	The “user guide” has some helpful information for what to put into creating and designing a Webshop.	The weakness is the lack of technical explanation. The way Webshops are set-up is open-ended assuming that authors/designers of a new Webshop are knowledgeable		Provide robust technical support for the various issues that are being identified because users need support in working with media programs and files long before attempting to use the template system.	The user guides appear to be more for teachers, parents, and web-site visitors. This is not a guide or training for TTAC staff on how to upload info.

		of their existing tools in order to upload templates.			
Tech savvy		People who have not ever edited a picture or video on their own before are not going to find this template system helpful.		Provide a 'prerequisite' check list for staff on how to create the dynamic pieces of a Webshop outside of the template system before they can use that template system successfully.	Its assumed users are able to create videos, PDF files, edit pictures, on their own using other computer programs. An updated template system will encourage staff that has already created dynamic materials.
Templates	They do not require a significant amount of time. They are simple to use.		The current template system is only a way to upload Webshops which does not require a lot of time		This can be a reason why people want the templates to remain.
Templates	Provide various options depending on the content of the work; templates that incorporate graphics, videos, audio. Choosing a template screen seemed intuitive as good instructions	Where is the capability for authors to create or design their Webshop within the template?	Authors need to have all the pictures, caption files, videos, etc. ready to go before entering the template system	Provide guidance that in order to use the current template system the user must indeed create and design their entire presentation in other programs.	A lot of the problems envisaged relate to the template. The fact that the template lacks these basic elements that are available in word, Google Doc or Apps has to be addressed first. Users do not have time to waste at all.

	were provided.				
Templates		<ul style="list-style-type: none"> • Had Problems trying to create/add a Webshop • Template for video did not save or ever give me a message • Found the "Links to Additional Resources" Template very confusing 	When the Template comes up, not clear if the same Title should be used as the front page of this Webshop or can a different one be chosen?	<ul style="list-style-type: none"> • Automatically carry over the Title from the previous section • On the first page, the Drop Down menus not identified. • Specific what information is needed for Alt Tag, Caption, Source or Copyright. 	
Time	Most templates were ready to be uploaded within 5-20 minutes.	Cannot adequately assess the time factor since it has more to do with the planning and creating of the Webshop prior to its going online than it does with the actual process of uploading it online.	Let the Webshop sit for about 15 minutes to see if it would time out. It did not. Later I <ul style="list-style-type: none"> • Loaded pictures • Added text • Selected from drop down menus • Entered Alt-text. 	Since we did not have a preplanned workshop, the ease and quickness was <u>uploading</u> the templates and not the actual creation of the content using videos, graphics, the.	
Video	Addition to the required transcript PDF files, a .WMV file can be added	If Full Adobe isn't installed, we cannot create a PDF file in Acrobat Reader. It took time to research how to convert the video into a PDF file.	After uploading video files, it did not show the video or give any indication it was still uploading or if it was just refusing to run .WMV or the PDF file.	Provide instruction on creating a recommended video file, and what is compatible to the template system. Explain how to load a video into the template. Explain how to convert a video file to a PDF. Indicate that the video extension, other than an icon, has to be QuickTime to work.	There was no indication as to why this hadn't worked. Videos need to be edited and formatted outside of the template system before uploading them correctly.

