

TeachersHelpDesk.com: Resources and Tools Growing For, From and By Educators

You find a great web site, lesson plan, worksheet, tutorial while you are surfing online. You bookmark it. However, when you want to use it, you are at school or on someone else's computer. Wouldn't it be nice to have it where you are? Wouldn't it be nice to find a resource and along with it, find comments from another teacher who has used that resource that suggests a few changes to make the project work better? Wouldn't it be nice to be able to share a great discovery with other educators and be able to benefit from the discovery of others?

Wouldn't it be fabulous to be able to search for something and find 5 or 10 really useful resources instead of a million near misses?

Wouldn't it be the best thing since sliced bread if the place that offers these things would change – adding functions, search subjects, and resources based on your feedback?

And, in a perfect world, such a great space should be free – right?

Welcome to TeachersHelpDesk.com, a project directed by Steve Schatz, of the University of Hartford's Educational Technology program and Canteen Consulting. Steve is the architect of the site and funds it through grants and donations. "I've worked on projects that started with \$1.5 million and accomplished nothing. I decided to build something useful, get it right, then see about funding. My payback is the research I get to do on how the system grows and evolves based on use."

An enthusiastic group attended Dr. Schatz's presentation on the second day of this year's CUE conference, Online Professional Development: Teachers Help Desk. "This is exactly what I've been looking for!" stated one participant. "I can add tutorials for my teachers, or find existing resources, make a public library, give them the url, and they will have near instant support."

Demonstrating how feedback drives the site, as Steve was showing off the latest function, a public library that allows members to build a list of resources for students to access, much like a TrackStar track, participants asked for an improvement. "I teach 5 classes. I would like to have multiple public libraries. Can we do that?" Steve has promised that multiple public libraries will be available shortly. "Public libraries came about because users asked for them. Now we will add multiple libraries. This is the essence of THD. It grows based on the needs of the users."

What is TeachersHelpDesk?

Teachers' Help Desk is a dynamic online performance support system (DOPSS) that combines a unique meta tags with controlled vocabulary for fast search and retrieval, educational objects (lesson plans, information and more) tagged and added to the system by users, and communications tools (chat, BBS, blog, web cast). THD came online in June of 2004 and is targeted toward educators in K-12. New functions are being added all

the time. “I’ve known projects that took a million dollars to get going and no one used it. I decided to fund this work on my own with a few small grants and see how to make it useful,” said Schatz. “Then I can see about grants. Now that most of the development is complete, maintaining the site is relatively simple. I use it to study the use and development of online tools”

The three unique aspects of THD are: 1) dynamic growth of functions, tags and content 2) tag based search 3) user centric design.

Let’s examine some of the ideas underlying this new system.

Performance/Not Training

THD does not attempt to teach – as a professional development tool. While it has a collection of educational objects, it is not so much a repository as a performance support tool. To explain the distinction, let us briefly explore performance.

It is useful to distinguish between education, training and performance. I like to think of the garage where my car is repaired. Education is like the shop lights – they provide broad illumination – equally useful for the mechanic, the customer service people and me, as I write this paper. Training is the bright light directly over the car. This light helps the mechanic do most of the work more easily, effectively, efficiently.

Occasionally, when adjusting a setting or reaching in to work on something small and tucked away, the mechanic hangs a movable light, or pulls out a small flashlight. That small, very direct light is like performance support. It is very directed toward helping someone accomplish a task. It is used during the course of doing the task.

For educators, a performance support tool does not attempt to teach. Teachers may learn, but performance support tools are designed to provide specific answers to specific problems and allow the educator to get on with their original task. If the educator wants to teach a lesson using inquiry methods to teach the water cycle, a professional development or educational site would provide information on both the water cycle and (usually a different site would be needed to explore) inquiry methods. A repository would provide many lesson plans. Depending on the search tool, the lesson plans may or may not be inquiry based, may include lesson plans about water, cycles AND the water cycle.

A performance support tool should provide a very few plans that are very targeted to the needs of the educator – specific to the grade level. There should be hints on using the plan. There may be tools to “ask an expert”. The goal of a performance support system is to provide just the information needed to accomplish the performance – no more...no less. While learning may happen, it is not the goal.

Dynamic Online Performance Support Systems

Our work has focused on developing methods for the design of a new class of performance support systems we call DOPSS – dynamic online performance support systems. These systems are online, computer based-systems that are custom made for

specific populations facing specific problems. There are three basic functions that each DOPSS will have. The tools to achieve those functions and the relative importance of the functions will differ depending on the needs of the target population. The three standard functions are 1) meta tags for faster, more effective search/retrieval, 2) communications tools, and 3) matchmaking/ connectors.

The objects in a systems are tagged with a unique tagging schema based on user needs to allow very finely targeted search/retrieval (see example below). The objects are information objects and may have different intents – teaching, sharing facts, providing information. Note that as these objects are used in the service of performance, the size of learning objects must be kept small. If one wants to know how to clear a paper jam, they do not want to download a manual or maintenance tutorial.

All DOPSS will have communications tools, be they synchronous (instant message or web cast) or asynchronous (bulletin board, file sharing). Again, these tools will be different depending on the needs of the target population. In THD, there are discussion boards and chat. Steve can add a discussion topic within minutes – just ask.

The function set for Teachers Help Desk was developed through extensive interviews, observations, and analysis of teachers. Rather than try to be all things to all people, these systems are designed for groups with homogenous information needs. This may be a small group, such as a marketing team working on the international rollout of a phone, or a large group, such as a project we did for maintenance groups in several locations that worked on a single naval aircraft. The number of group members does not matter as long as the information need is homogeneous.

Tag based Searching

Dynamic, Evolving Systems

Often, support systems are designed and built as a fait accompli. The goal of a DOPSS is to provide a framework for sharing information, to support performance in jobs in rapidly changing environments. While the initial function set and structure of THD was built by the design team, much of the content of the system must come either directly from users (uploaded and tagged) or by request from users. Rather than view the development as a ship – worked on and then launched to sail off into the sunset, we view the development of a DOPSS as a garden. We do a lot of work getting the garden in shape, planting what the population wants and needs and taking into account the environment. However, once the garden is planted, there is continued work to do – intense at the beginning, with replanting, weeding, and more, but continuing as long as the garden produces. THD grows and evolves based on your use and your input.

While education may be viewed as a relatively stable activity, keeping abreast of changing standards, requirements, events, technologies and pedagogies during the school year, when the pressures of handling a class of students are intense, is nearly impossible.

While other teachers might be able to help, there is often little opportunity to work with other teachers. Teaching is a solitary profession, performed in the presence of a great number of people. People, people everywhere, but no one to help you think.

This is often where repositories fail. They deliver too much information. Educators have told me that they can always find lesson plans – it is sorting through lesson plans to find ones that are complete, that will work, that have been designed and used by teachers, that is a challenge. THD attempts to be a place for educators to turn to find information – both online objects and information from other professionals.

The search tools allow fast finding of online objects. The communications tools allow teachers to ask each other and experts for information and guidance. The tagging tools allows users to bring new objects, information and solutions into the system, adding to the knowledge base as the system grows and evolves based on usage.

User Centric Design

Users needs were central to the initial design of THD. Extensive interviews with teachers, administrators, teacher trainers and pre-service teachers along with on site observation guided the development of both function set and the tagging schema. We used Weick's sensemaking (Weick, 1995) to guide our investigations. In brief, the concept of sensemaking is an analytic tool. During daily life, our brain filters out a great deal of information without our being aware of it. We "make sense" of the world around us. However, when something provides a discontinuity or a jolt, we must somehow make sense of that abnormal event or input. That process is sensemaking. Weick uses this lens to describe the reasons for decisions that have led to disasters including airplane crashes. We turned the tool around and have used it as a prescriptive tool – making the assumption that, as we are designing a performance support tool, in this context, the users will have a specific problem.. a need.. a discontinuity. One does not turn to a performance

support tool for enjoyment, but to solve a problem. So, we asked potential users what problems that had sought to solve using the web. We sought to find what problems they had and what solutions they wanted. By taking this sensemaking approach, rooting the design in the needs of users, we found that the tag set required was actually very simple. This means that even busy teachers can add important information and tag it for fast retrieval. It means that understandings reached in discussion forums can be tagged for fast retrieval. Because of this, we could reasonably expect that users would be willing to tag and add their own objects and solutions to the system, as the time required would be minimal.

User needs drove the initial design. However, more important will be the ongoing input of users in the continued development. It is to be hoped that the system will change over time, as users discover new needs and new ways to use the system. In order to support this evolution, designers must be available to support the system. The idea of a gardener is core to our view of DOPSS. The gardener is there to provide help, to gather requested information, to engage users to suggest and direct changes. Designers of a DOPSS must take their guidance from librarians, who do not just gather and maintain a collection, but are a resource for help and support, encouraging use and developing programs, gathering new materials and helping the library evolve to meet the needs of the users. Dynamic online performance support systems similarly require constant support. Our current research examines the continued evolution of tags, object set, and functions based on requests of users.

Come On In!

We invite you to try TeachersHelpDesk.com. The first time, you must join. You will be quickly approved (we restrict access to educators). Then, see how it works for you. Add resources. Use resources others have added. Make comments about resources. And PLEASE, PLEASE, PLEASE !!!!! when you find something you would like changed, hit the yellow button that is throughout THD and send us a suggestion. THD is all about evolving based on your inputs and needs.