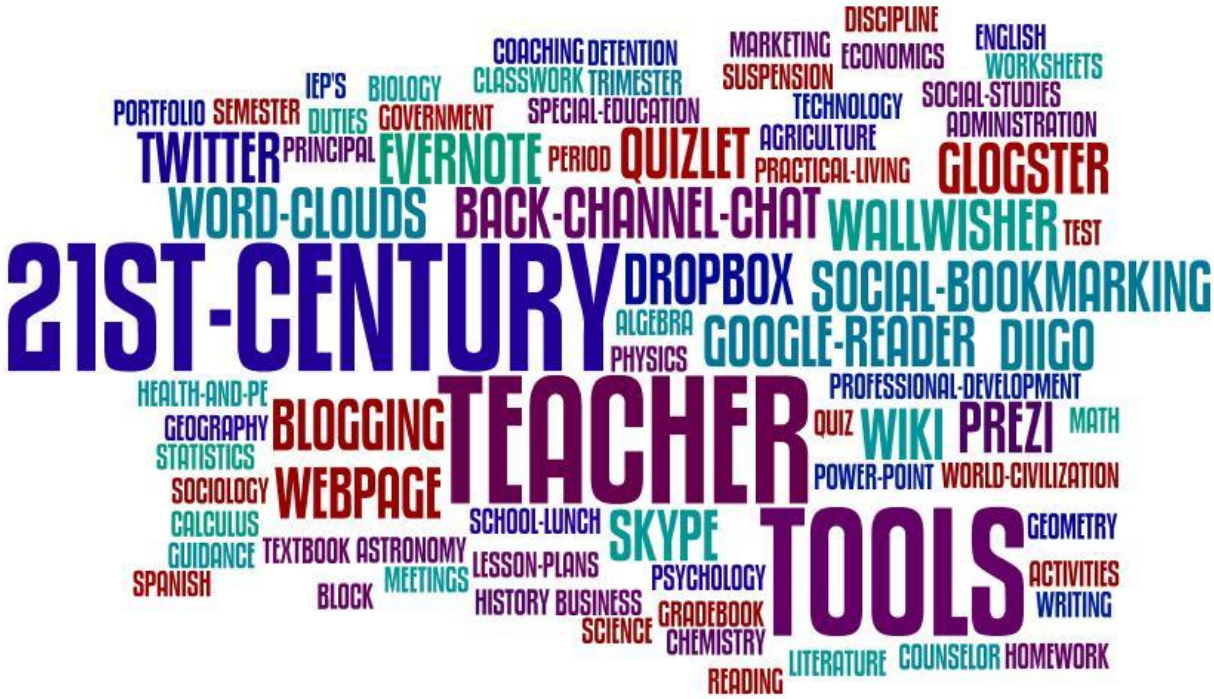
Tools for the 21st Century Teacher



This handbook was created for the purpose of providing information to teachers in the 21st Century about several tools they can use in their classroom.

Created in Spring/Summer 2010

There is a common misconception that new teachers have experience with technology. Most teachers currently feel that a new teacher has more knowledge about technology and therefore does not need help with technology.

There is also a common misconception that current teachers have no desire to learn technology or are scared to learn technology. This can't be farther from the truth. Current teachers want to learn technology just as much as new teachers.

A third misconception is that teachers need to pay for technology in order to integrate it in the classroom. That used to be true. You could certainly have a SMART Board, Document Camera, or FLIP Camera, but there are so many different FREE technology tools out there that teachers could be using.

What teachers need is someone, or something to help explain technology tools that can help them become better teachers in the 21st Century. 10 years ago, overhead projectors and VCR's counted as integrating technology in the classroom. That is not the case anymore.

The tools that teachers can and should be using to integrate technology in the classroom are changing. There are several web-based technology tools that teachers can use to increase their use of technology. These tools can be used independently, in collaboration with students, and/or in collaboration with other educators.

What you will find in this guide is tools that will help you become a 21st Century Teacher. You will find several suggestions for implementation and use, as well as ways to use with students. If you are an administrator, I highly recommend providing this guide to new teachers in your building and teachers struggling with technology integration.

It is important to note that using all these tools is not requirement to be a 21st Century Teacher. Start by using one or two that you think will help you the most. There is a good chance that once you start integrating these tools you will start integrating several more. It is important that you don't just use them for the sake of saying you are using them. Find a way to use them that will be beneficial to your teaching.

Twitter is Social Networking. When it was created, that was its intended purpose. But for educators, it is not about using Twitter socially, it is about using Twitter professionally. Using Twitter is the first step in the creation of a **P**rofessional **L**earning **N**etwork.

There are teachers from all grades and subjects, professors, superintendents, and technology staff that are using Twitter to connect with one another to share resources, information, ideas, concepts, and stories related to education. As one person said, "Twitter means that going across the hall has just gone global."

Imagine being able to get instant feedback from people about lesson plans, activities, or student projects. Just think for a minute about a time you needed to get some ideas for a project. You might login to Google and search and get tons of link that lead you to a site that means even more searching. Now try that same search using Twitter and a PLN, and you get results that are tailored to your inquiry better than a Google Search could ever do.

So how do you get started? Well, visit Twitter and create an account. Next I would view the Glog (see page 7 for what a Glog is) I created that provides a plethora of resources about Twitter and PLN's. That would be a great starting point. You might also want to check out my Blog Post about my personal experience in joining the Twitter Universe.

Getting started with Twitter can take time. The time invested however will be the greatest professional development you could ever get as a teacher. As you are reading this, you are probably skeptical about the idea of Twitter. Well, I was once in your shoes. I was once skeptical myself. Now, the value that connecting with other educators on Twitter has provided me is immeasurable. Don't be scared to "step outside the box" of normal professional development.

Another tool you might want to think about starting to use is Blogging. There are several options that you can see above (Click on the image to go to the site). Blogging is about sharing. You can share opinions, thoughts, ideas, concepts, resources, links, activities, lessons, etc. The first step in creating a blog is determining the focus of your blog. What are you going to discuss? What are you going to share? For a quick introduction, see the following video, Blogs in Plain English.

Blogging provides an area for you to reflect. The great thing about sharing your reflections is it provides an opportunity for you to communicate with others about your personal reflections. In education, discussion alone can breed some of the best outcomes for you as a teacher.

The great thing about Blogging is that if offers up a way to find other people who share your interest because they will read and comment on your blog. You then have found another way to create a **P**rofessional **L**earning **N**etwork. Blogging brings educators together. Blogging can be a powerful tool in becoming a better educator.

What is also great about a blog is that you don't necessarily have to share. It can be a private electronic journal that you keep about your experiences as an educator. A great way to keep those memories from all those days you were a teacher. Then when you retire, you can go back and look at them and write a book about the life of a teacher. I always said one day I wanted to write a book about "Funny Things Students Say, Ask, Suggest, and Think." If I had kept a blog, I would have had the memories stored up to look back upon.

What would you write a Blog about? You can visit my Blog and see what I write about; as well as see other blogs I follow and what they write about.

Once you have decided to create a Blog, you will easily start finding yourself reading other blogs. It happened to me. Google Reader provides a way for you to store, organize, and read the blogs that you follow. Setting up a Google Reader account is very easy. Adding Blogs is as easy as Copying and Pasting. For a quick tutorial, watch Google Reader in Plain English

When you are using Google Reader you are using a feature called RSS; or Real Simple Syndication. The idea behind RSS is that it "feeds" the internet to you instead of you accessing the Internet and checking the sites you look at regularly for updates. To get a better understanding of how RSS works, watch RSS in Plain English. When viewing Blogs, you will want to look for the following icon to get the link to the "feed."

To help you get started on creating a Google Reader list, I recommend the following Blogs to add to your Google Reader:

- http://freetech4teachers.com
- http://web20classroom.blogspot.com/
- http://larryferlazzo.edublogs.org/
- http://ilearntechnology.com/
- http://learninglaffs.blogspot.com/ - Great Education Humor
- http://edtechpower.blogspot.com/
- http://educationaltechnologyguy.blogspot.com/
- http://sharpsav.com/blog/ - Great Blog about SMART Technology
- http://thenerdyteacher.blogspot.com/
- http://teacherbootcamp.edublogs.org/
- http://kylepace.com/
- http://jasontbedell.com/
- http://iteach20.blogspot.com/
- http://theinnovativeeducator.blogspot.com/
- http://tomwhitby.wordpress.com/
- http://educationstormfront.wordpress.com/

I hope that you find at least ONE Blog that provides some insight for you.

Diigo is a site for Social Bookmarking. Social Bookmarking is the concept of taking your favorite websites, bookmarking them on a website, and then sharing them with other people. Many of the Social Bookmarking sites offer the opportunity to join groups to share your links with. For a quick tutorial view Social Bookmarking in Plain English *(Note the video uses Delicious. For the purpose of the handbook, I am discussing Diigo)*

There are several options for social bookmarking, but I personally have come to prefer Diigo. The reason is that there are several features of Diigo that are missing from other Social Bookmarking Sites. With Diigo you are able to highlight text on a webpage and even add post-it notes. You can create list to organize your links by. You can join different groups based on the type of links being shared. To learn more about Diigo, visit their page with a video tutorial.

Being social on Social Bookmarking is by no means necessary. We all normally save favorite links to our favorites in our Internet Browser. The problem is that over time, we end up changing computers and then losing our favorite sites. With Social Bookmarking, your favorite links are available anywhere you have an internet connection.

Using Diigo can help you organize your links to improve your teaching. You can create lists for different subjects/content that you teach and apply links to a certain list. There is also an option to mark a website for "Read Later" in case you just don't have time when originally visited the site. You can also "tag" websites with keywords based on what the website is about. You can then search your "tags" to look at those websites. It sure beats organizing everything in folders.

When you decide to start using Diigo, it will install a toolbar in your browser. This makes using the website a lot easier. I hate toolbars, but I love having this one in my browser. It truly makes the Internet much more usable.

Glogster
poster yourself

The best way to describe Glogster is to think of it as a Digital Poster Board. With Glogster you have the ability to add/embed images, video, and audio into your digital posters. There are tons of backgrounds and text features that you can add to a Glog.

Glogster also is available for Education. With an education account you can create a virtual class of students (up too 100 free student accounts) that you can monitor. As they make changes to their Glog, it shows their changes in your virtual class.

Glogster is a great tool for students to use and for a variety of purposes. It is also a great tool for teachers to use as a way to store resources for a lesson, or even use a lecture tool. Students will love the ability to be creative with their Glogs, and the features make it so much neater than a plain white poster board.

Glogster is always improving. You can now search different categories of Glogs that have been created to see examples as well as incorporate them into your own lessons. There is also an Educator's Resource Library that has tons of lesson and activity ideas for you to use in the classroom. Watch the following Glogster Tutorial Video for an introduction to Glogster. You can also see my blog post with ways for using Glogster in the Classroom.

Glogster is a great tool that can help increase student interest in completing presentations. It gives them more options and more opportunities to express themselves and share their creativity. Students will enjoy the free range of motion that comes with using Glogster and organizing the information on their Glog. A great alternative for any project you have been doing with your students.

Prezi is probably one of my most favorite new tools. It is presentation software that is web-based. They do have an education account that provides features and options that a standard account does not. The best way to describe Prezi is to think of it as 3D Infinite Canvas for creating a presentation.

Power Point is linear based presentation software. With Prezi you have the ability to Zoom In and Out, as well as rotate objects 360 degrees. The great thing about zooming in and out is it offers you the opportunity to focus on a certain aspect of an image, graph, or chart. It offers the ability to embed video and picture, as well as link to outside sources. Since it is a web-based application, it is easy to share with students and other teachers without having to have a certain kind of software.

For an introduction to Prezi, watch the following video tutorial. You also have the ability to search for Prezis created by others about content you are teaching. You might find this Presentation with some Tips and Tricks for Prezi useful as well. If you are set on using Power Point in class, that is fine. Just upload your Power Point Slides and use Prezi to change how you normally present. Students are burnt out on Power Point!

I will be honest and tell you that it takes some getting used to when it comes to learning how to organize your presentation. Getting away from our linear understanding of how we normally do things takes some time, but once you have finished a presentation, it makes it all worth while. Change up the monotonous use of Power Point in the classroom. Impress your administrators with the use of something new. Get them asking you questions about what it is. Make your presentations memorable.

If interested in another option, you could look at a website called Ahead

Dropbox will end up being one of the most useful sites you will use. Dropbox is an online file storage site. You can get up to 2 GB of storage for free. You can pay for more, but when you think about the average Flash Drive that we carry around, 2 GB is plenty of space for saving Word, Excel, and Power Point Documents.

You can access your Dropbox account from any computer that has Internet access, therefore always having access to important files. You can even get the Dropbox iPhone App as well, so that you can have your files on the go.

I can't tell you how many times I have left my flash drive at school and needed it home, or for class. Dropbox allows you to create folders so that you can organize your files. It also allows you to share your Dropbox, so you could make it accessible to students or other teachers as well. Watch Dropbox in Plain English for a good introduction.

Evernote is another site for collecting "stuff" that you find on the web and out in the real world. The idea behind the tool is that it allows you to take notes, record audio and video, and capture web content. You also have the ability to share your notes now with other, making it a very usable tool with students and teachers.

For Evernote, you can use a Browser Toolbar, Download a desktop version, or get the Free App for your Smart Phone. It is the tool for the unorganized. It is a way to take the tidbits of information that you want, but are not sure what to do with and give them a place to be stored. For more information and to get a better understanding of how to use Evernote, I would suggest watching this Evernote Tutorial created with educators in mind.

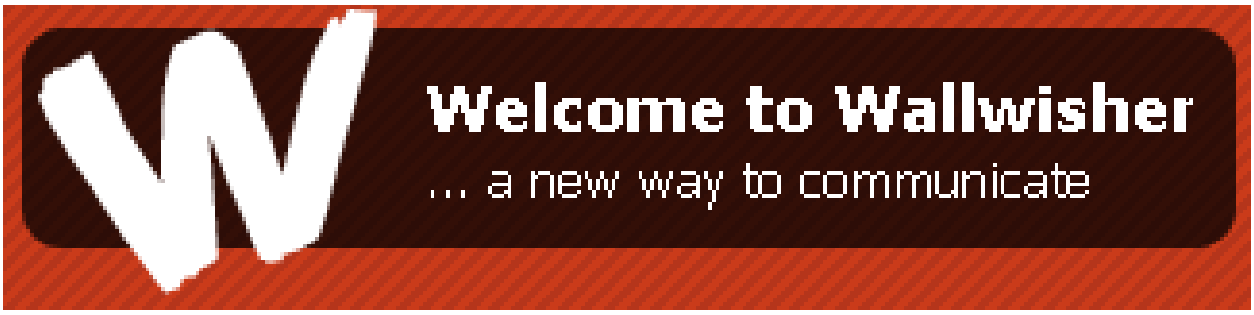
Quizlet was one of the first Web 2.0 websites that I discovered while still teaching social studies. At the time, I did not know that it was considered part of the "Web 2.0" movement. I just thought it was a great site to use with my students. Quizlet allows you and/or your students to create online flashcards.

There are several other flashcard creation websites available, but Quizlet was the first that I discovered and have the best understanding of. Plus, I think it offers the best options for students. The great thing about Quizlet is that students do not necessarily have to create flashcards. You can search for flashcards containing the words that you are looking for and use those to study.

When students create flashcards they can type in the definition, or select from definitions already stored on the site. After creating the flashcards there are several options for learning the vocabulary. There are several different games that students can play, as well as develop their own quiz with different types of questions to learn the vocabulary.

If you create a set of flashcards for your students, they can search for them and access them on their own time in order to learn critical vocabulary. For those teachers strapped for time, this would be a great project for a student or parent aide in your classes. Students can even login with their Facebook account.

What is great about Quizlet is that it was created by a high school kid who was looking for a better way to study vocab. That alone is one reason I enjoy using the site because I know that it will be centered on the needs of students. You can view this Quizlet Tutorial to learn more about the website and how it can be used with your students.



Wallwisher has become one of my favorite websites to use and share. The best way to describe this site is to imagine have a virtual bulletin board that you and others can post notes to. With the "post-its" you can link to other websites as well as YouTube videos.

Each post is limited to 160 characters meaning that responses will be short and specific. Post can be made with a name or as anonymous. If using with students you can set it up so that posts have to be approved before they are posted to the bulletin board. What I like most about Wallwisher is the ability to create a URL address that you determine.

Once you create a wall, however you arrange post is how everyone will see them appear. So you have complete control over the organization of the post. This provides more ways for you to use the site than just as a bulletin board.

I have created a wall that you can visit to try out. Use this wall to tell me what you think about this publication. 21st Century Teacher Tools Wall. The question you might be having is how can you use this in your school?

- Create a wall for teachers to express opinions about something in your school
- Create a wall for students to discuss lecture, news article, or video.
- Provide a place for students to share websites or other assignments that they have created.
- Post events on the wall and have students put in sequential order and then print it off.
- Have a discussion on a topic and allow students to respond to other students on the wall
- Create an announcements and information wall for students and staff.
- Create a resource wall and share links for students and teachers and create separate walls for different subjects/contacts

TitanPad

TitanPad is a website that allows you to collaborate with students or teachers in real time. The concept behind the site is called Back-Channel Chat. Through this site you get an area to discuss with your students in a chat format. You can create your own URL address to make it easy for students to find the site and participate in the discussion.

There are other sites out there that you can use (Todays Meet and TypeWith.Me) but TitanPad is the one that a lot of people are choosing to use. Each person that visits the chat will be able to choose a color that correlates with the text that they are typing. There are several other features, but my best advice is to simply visit the site and see how it works. It is important that you discuss responsible use with your students.

So how could you use this in your school or classroom?

- Provide it as an area during professional development for teachers to ask questions
- Provide it as an area for students to discuss a movie that you are watching with students.
- Provide it as an area for students to ask questions during a lecture that you can go back to and ensure understanding
- Provide it as an area for students and a guest speaker to participate in a different kind of discussion.
- Pre-enter questions that students can answer prior to a movie, lecture or guest speaker
- Link to an article and have students discuss it
- Use it as homework for students to discuss a television show or presidential speech in real time.
- Collaborate with students who are on homebound.
- Invite a school administrator to participate in the chat from their office

Many of you have either heard of Skype, but might not know much about it. Some of you might not have heard of it either, and that is fine. Skype is free video conferencing web-based software that allows you to teleconference with others in real time. I personally have not had an opportunity to use Skype in an educational setting because video conferencing is not available at my school, but there are plenty of opportunities out there to use it with your students.

It is as simple as creating an account and having access to a webcam. I have seen it used several times at conferences and meetings that I have attended, so it would be a great way to conference with teachers in other districts. You can also use Skype with your students. The best way is to Skype in authors of books that you might be reading in your class and allow students to have a guest speaker and discuss the book with the best source possible. If you visit the Skype an Author Network, you can find resources for how to do that with your students.

There are several video tutorials available out there that you can view to help improve your knowledge about how to get started with Skype. You can also download Skype as an iPhone Application and use your phone to contact others on the Skype network via phone or text messaging. With the new iPhone slated this summer that supposedly will have a camera on the front, video conferencing will become even more likely.

Other Resources:

- Using Video Conferencing in the Classroom
- National Parks service Distance Learning Opportunities
- Video Conferencing Directory – From the AT&T Knowledge Network
- Video Conferencing for Educators
- 5 Ways Classrooms Can Use Video Conferencing – From Mashable
- Skype Other Classrooms
- Authors Who Will Skype List – For Elementary and Middle School
- Cybraryman will Skype on Presentation for how he wrote his booklets

One site that has become extremely popular among educators is Wordle and sites like it (Tagxedo, Word it Out, WordSift, Word Mosaic). These sites allow you to create word clouds. Each site offers different features, but Wordle seems to have set the stage for all the others that are out there.

What the software does is it allows you to type in (or copy and paste) any text that you prefer. It will remove common English words (that, is, the, etc) from the text that you enter. It will then create a word cloud of the text. The words that appear the most in the text will appear the largest in the word cloud. For an example, just go back and look at the title page of this handbook.

I have discovered that elementary and middle school students love playing around on these sites. I have also discovered that their teachers love using these sites to create word clouds of their students, their content, their units, etc. View this short video tutorial for more information about Wordle.

There are several ways that you could use these sites with your students:

- Create Word Clouds of your lecture so that students can see the most mentioned vocabulary
- Create a word cloud of a short story or poem
- Take a famous speech and create a word cloud so that students can discover the most used terminology.
- Create synonyms for critical vocabulary
- Create a word cloud from a chapter or unit from the textbook
- Create a word cloud with words and have students create a story or poem using those words
- Have students create a "Who am I" Wordle – Great opening Day activity
- Create a word cloud of Song Lyrics – Students LOVE this.

Once you have started to use many of these great tools, the next step is to create a webpage where you can share and discuss their use with students, parents, faculty, and members of the community. Creating a webpage allows you always edit, locate, and retrieve what you have been doing in your classroom, as well as organize it in a manner that is easy to use. There are several options out there for webpage creation, but out of all of them, there are my favorite and most popular.

The first one is Google Sites. Most people know about Google and most people know how Google works. Google Sites is a great alternative for creating a personal or professional webpage. The interface is user friendly and has many editing features if you are using other Google Products. My school does not have Google for Education, but if it did, Google Sites is what we would be using.

Weebly is a great site for educators because it uses simple drag and drop features. The free account is plenty sufficient for teachers. If you refer 5 teachers, then you will get an upgrade to premium for free. What else is great about Weebly is that they have a Weebly for Education account that provides the ability to create a virtual class and have students create web pages as well. You create their usernames and passwords and can easily monitor their progress. This is a great option for getting students to integrate technology for a project. The great thing is that website creation can be completed across all subject areas.

Wix is for those that like a website to be a little more "flashy." Wix uses an entirely Flash based interface to create a webpage. Surprisingly enough the user interface is rather easy to use because it is all drag and drop. The benefit of using a Flash based website creator is that it allows for more creativity and effects. To see some of the options for Wix, view their video that shows how to create a website in 2 minutes. It quickly details some of the features.

By now, we generally have all heard of Wikipedia. A great resource that sometimes can be a questionable resource because information is user submitted. Wikispaces allows you to create your own Wiki; a place to store links, videos, photos, and files. At the same time you are creating a place for other to upload the same information.

Using Wikispaces would be a great way to organize resources that you use in your classroom with your students. It could be a private place for you to store what you use in class, or you could open it up to students and allow them access to the site to find your resources. It is easy to organize what you include on your wiki into different pages, making finding what you are looking for easier.

You could also create a Wiki for your school as a place for teachers and staff to upload resources based on the subject matter that they teach. Here is a great example of a School Wiki for sharing resources. It serves as a great resource for the staff and even the students who are looking for resources they could use.

As educators we are constantly finding resources. We generally save them to our favorites on the web, or maybe even we started using Social Bookmarking. Using Wikispaces makes it easy for others to add to the resources. It becomes a Collaborative effort within the school and helps to quit reinventing the wheel.

If you are still stuck on what exactly a Wiki is, then view Wikis in Plain English to help explain how they work. Once you watch that video, check out this Wikispaces video tutorial to get a better understanding of how you can setup a Wiki for your students and/or staff.

Once you have created your own Wiki for sharing resources, share it with others so that they can help add resources to yours. Every Wednesday I do a post where I share Wikis that I think would be useful to educators. Take a look at my Wiki Wednesday posts and find one you might be able to use as an example.

About the Author

My name is Michael Zimmer and I am currently employed as a Technology Integration Specialist for Hopkins County Schools in Western Kentucky. Before taking the TIS position I taught Social Studies for six years, covering all subject matter as a Social Studies Teacher.

As a Technology Integration Specialist I am supporting high school teachers with the implementation of various technology based equipment, such as Document Camera's, Airliners, Clicker Systems, FLIP Cameras, etc. I also collaborate with teachers in the development and implementation of technology projects that our students complete using the various equipment and various Web 2.0 tools, several of which are mentioned in this publication. I also collaborate with feeder middle school teachers, showcasing various Web 2.0 tools that they can use in their classroom.

"Tools for the 21st Century Teacher" is a free publication and can be used, printed, and distributed in an educational setting without permission from the author. For more information about many of the tools mentioned in this publication, subscribe to my blog, The Pursuit of Technology Integration Happiness. You can also find and follow me on Twitter.