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Open Source for Education

Open Source Solutions: Real Technology Integration, But Can you Use it in your Classroom?

Open Source for teachers is a lot more than downloadable, installable-on-the-desktop programs. But, can you use them? Sure, you can use anything you want at home, on computers that you pay for.

And, in most cases, you will choose a computer that runs Microsoft's Windows operating system. Yes, there are lots of Open Source software programs for Windows. In fact, more Open Source software is developed for Windows than for any other operating system. Even more, most Open Source development is done using the Microsoft desktop development environment, even if the software will be used on Linux. The question is not whether these programs exist, but whether teachers can use them to "integrate technology" in their classrooms.

The Open Source desktop programs may be useful at home, but in many school districts, teachers do not have permission to install software. The reasons for this reasonable IT Department survival policy include: School district IT Departments are concerned with software piracy, incompatibility with the desktop computer and the network, and with asset management (i.e., maintaining an inventory of what the district may legally install)

Untested software may conflict with other application programs, and the IT Department staff seldom has the workforce to test new software

Unnecessary service calls (to repair desktop computer configurations, remove Spyware, Nuisance war and viruses) place an additional, undue load on understaffed IT Department

Recovering user data (documents, test scores, files that the user failed to back up) places undue strain on the already overstressed IT Staff, often at the most inopportune times So, what is the Gung-Ho Tech-Savy Teacher to do? Options for using Open Source programs with students include:

Use Live CDs and Live USB Drives "Pros" for this strategy include: These CDs and USB drives use a complete operating system and application platform that is "self-contained" on the CD or USB drive. A Linux system can run on the system without installing anything on the hard drive of the desktop computer. To use such a "Live CD or USB drive" you simply reboot the computer. (Of course, the computer must support booting from the CD or USB drive. You might find this ability turned off by the district's IT Department staff to prevent just such a security problem.) "Cons" for this strategy include: The strategy is limited to what ever package will fit on a single drive storage unit

The district's IT Department can disable the ability to boot from CDs or USB drives for security purposes

Setting up and customizing these CDs and USB disks is highly technical, and generally not a focus of classroom teaching; i.e., teachers are too busy with instructional tasks to fiddle with the complicated and complex technical issues of making one of these CDs or USB drives work with the programs that they want

These CDs and USB drives run the Linux operating system, and most of the programs that teachers would like to use are Microsoft Windows applications

These Live CDs and Live USB drives may not be able to access the resources that are needed on the district's network. Access to district network resources generally requires authentication (entering a password on a computer that the network servers recognize as being trustworthy. Network servers are seldom configured to trust live CDs that teachers (or students) bring from home

The network resources that the teacher wishes to use may be incompatible with the Linux applications on the Live CD or USB drive

Launching an unauthorized operating system on the district's network may set off network security alarms and bring a panicked and/ or irate technology staff member to the door of the teacher's classroom, or to the door of the campus principal. Obtain permission before trying to run one of these live CDs or Live USB drives on a school district network Beg the IT Department to set up the software and customize the desktop for the teacher's use "Pros" include: Great if you get this done once, but how many time a year will you ask for this favor?

"Cons" include: Good luck in getting the IT Department staff to go to this much extra trouble (unless, of course, you are married to the superintendent

The cost to the IT Department for this "desktop customization" is from \$18 to \$45 per hour. The work of IT staff is not free like the software that you are asking them to install Run Applications Online

"Pros" include: None of the problems with the strategies listed above "Cons" include: The online applications are not as "robust" as the applications that are installed on a desktop computer. This may be a reason that Microsoft has not pursued the marketing of online applications. (Or, it could be that Microsoft is making so much money as the market leader, with no real competition, that they don't want to bother

You might have to obtain district permission to place anything online. This could include items that you write or use for your classroom, even if it is placed on servers or with services that are outside your district

The district that you work for may claim that the materials that you place online belong to them

The district's Content Filter might block your applications or resources, and you might have to submit a request to get these applications or resources unblocked (Note: a Content Filter is the automated strategy that is used to protect students from detrimental content that can be found on the Internet. Examples of "detrimental" content include: pornography, profanity, hate-mongering, bomb-making, terrorist recruitment, gambling, slave-trading and the trafficking in human beings or human body parts, racism, anarchy advocacy, etc. Don't worry, you are not interested in these topics, either. If you are, your employer has good cause to fire you.)

Purchase your Own Computer and Bring it to Your Classroom

Pros include:

You can install what you want on the computer if you own it
Cons include: The Internet will be off limits to this computer
It is your money. You pay for damages

If you want to print, you may need to purchase your own printer for classroom use, too

Your purchase is not tax deductible

Poor building security could mean that the computer "disappears" overnight

You may still have to obtain permission to bring your own computer to your classroom

The computer probably came with Microsoft's Windows, and you are wasting your money if you wipe the operating system off the computer and install Linux, instead. Buy a computer without an operating system if you really want to use Linux

The Wrong Venue: The Wrong Management

If prospects for using Open Source software in your classroom seem bleak, understand that the problem does not reside with you.

You work for an organization that does not have the resources to manage technology integration, nor the staff that knows how to pull this off.

This leaves you to scramble and connive to get done what you can.

But, because the Open Source folks created software applications without a thought for instructional applications, you have a difficult time documenting to your school district's IT Department that the use that you have for a customized desktop computer with specialized software applications is directly connected to instructional and learning outcomes. The challenge is uphill. With all that you are required to do, this may not be a battle that you choose to join.

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