

LEADERSHIP UPDATE

Volume 8

A publication for Alberta's school administrators

Number 7



PIPA rules and security on USB flash drives



USB flash drives are a convenient mode of sharing information for legitimate purposes; however, they also pose a significant and often overlooked privacy risk.

USB flash drives are small USB (Universal Serial Bus) devices that insert into a USB port of a computer and perform like a mechanical hard drive—data is written to a flash drive (also called a *thumb drive* or, occasionally, a *jump drive*) in the same manner that it is written to a mechanical hard drive. Flash drives are small, easily transportable and very convenient. The issue with flash drives is that private information stored on a flash drive can pose an information security vulnerability.

For example, a flash drive containing teacher information can be easily lost and can be read by anyone. According to the Alberta Privacy Commissioner, individuals are responsible for taking security precautions if sensitive information is contained on a flash drive. The commissioner recommends data encryption as the minimum standard.

Types of Security on Flash Drives

There are multitudes of flash drive brands and security options available from retailers. They fall into the following security categories:

- No security protection
- Password protection
- Biometric protection (eg, fingerprint)
- Password and biometric protection
- Software-based encryption with password (may be AES 128-bit)
- Hardware-based AES 256-bit encryption with password

Both biometric and encryption protection will adequately secure information on a flash drive. Biometric protection usually requires a fingerprint for access to data on the flash drive; data on the drive is not encrypted, but access to the drive is protected. Encryption protects the data by rendering it unreadable. AES (Advanced Encryption Standard) is a standard that can encrypt and decrypt data using algorithms that use 128-, 192-, and 256-bit keys. The more bits in the key, the more secure the encryption. Software-based encryption is less convenient because every computer that will access data from the flash drive requires software to be loaded to enable reading the encrypted data. If software-based encryption is desired, the flash drive should be purchased with the encryption software already loaded. Hardware-based encryption is more convenient because the facility to read encrypted data is on the flash drive and software is not required on the computer into which the flash drive is inserted.

**A successful
man is one
who can
lay a firm
foundation
with the
bricks others
have thrown
at him.**

**—David
Brinkley**



There are system utilities that can be used to encrypt unprotected flash drives. Windows 7 includes BitLocker (AES 128-bit) as a utility. Mac OSX 10.7 includes a utility called FileVault 2 (AES 128-bit). These utilities will reformat unprotected flash drives and will enable data encryption. However, every computer that will be used with the encrypted flash drive must have this particular software.

Security Recommendations

After carefully reviewing the options available for secure storage of information, the Association recommends that the following steps be taken to protect personal privacy:

- Do not transport teacher information on any mobile device. If the information must be accessible from more than one location, use cloud technology (Apple iCloud, Dropbox, Microsoft SkyDrive or a VPN [virtual private network]).
- If you must transport teacher information on a flash drive, use a drive that is AES 256-bit hardware encrypted. These flash drives do not require software to be loaded on the drive or a computer to read the data. The encryption on these devices can be conveniently turned off to permit operation like an unprotected flash drive when the drive does not contain sensitive information.
- Do not use open-source encryption software available on the Internet—it may not be compliant with the flash drive hardware or operating systems installed on the computers used with the flash drive. If you choose to use software-based encryption, buy a flash drive with the software already on the drive.



Q & A

GORDON THOMAS
Executive Secretary

Can the school rep attend a meeting with the principal?

Question: A teacher has indicated that he is uncomfortable about a

meeting he has been asked to attend with me, the principal. The teacher has asked the ATA local council representative for our school to attend the meeting. Is it appropriate for this third person to attend the meeting?

Answer: Occasionally, school representatives are invited by an administrator or by a teaching colleague to sit in on a meeting where it is perceived that difficulties may occur. School representatives should decline such a role and refer the teacher or administrator to ATA Member Services for advice. School representatives do not assist or advise fellow teachers about matters related to their practice, nor do they mediate relationships among colleagues or with administration.

The function of school representatives is to keep their fellow teachers informed about the ATA. They advise members to contact the Alberta Teachers' Association if an issue is troubling. ATA school representatives do not have a shop steward function, which may be present in teacher organizations in other provinces. The Association includes both teachers and administrators, and school representatives do not assist either party.

Member Services executive staff officers are pleased to reflect with teachers and administrators about an issue that leads to a meeting. When a serious matter will be addressed, teachers are often advised to contact the Association by the principal or other officials arranging the meeting. Member Services executive staff will discuss meeting protocol and help the teacher or the administrator clarify issues. If the meeting is for the purposes of discipline or if a central office director or superintendent will be present, it may be appropriate for a Member Services executive staff officer to attend.

To find archived issues of *Leadership Update*, go to www.teachers.ab.ca and click on Other Publications (under Publications), then go to School Administrators.

Feedback is welcome. Please contact Konni deGoeij, associate coordinator, administrator assistance, Member Services, at konni.degoeij@ata.ab.ca.

Metability—the dynamic of learning, creating, changing

Dr Betty K Garner

Cognitive structures develop what I call *metability*, which is the interactive dynamic of learning, creating and changing. To learn is to create, to create is to change, to change is to learn. If students have not created, they have not learned. If they have not changed their thinking, actions or level of understanding, they have not learned. Learning is an ongoing process of creating and changing. We have all experienced those “aha” moments when

students get it. Think how wonderful it would be if this happened every day in every classroom for all students! What do we need to do differently to help students develop their metability so they are continually creating, changing and learning?

We can start by looking at the kind of mediating we do in class. Mediating is more than teaching in the traditional sense. It is facilitating or coaching through questioning so that students

create meaning. I encourage teachers to video a lesson and analyze the kinds of questions they ask, the patterns of student–teacher interaction and the overall effectiveness of the lesson based on students’ cognitive engagement and evidence of understanding. The video provides a nonjudgmental documentation of what is really happening, not just what we think is happening.



Without realizing it, many teachers find they are answering their own questions or giving students hints so that they can come up with the “right” answer. Open-ended questions arouse curiosity and stimulate thinking by encouraging students to use logical reasoning to justify their responses. Here are some sample questions that can be used at every grade level and in every subject area to mediate development of cognitive structures that develop metability.

10 Guiding Questions

1. What sense do you make of this? What do you understand about this?
2. What questions come to mind? What do you wonder about?
3. What part do you know for sure? What part *do* you understand?
4. What do you notice?
5. What kind of pattern do you notice?
6. What do you wish was easier?
7. Why? (5 times) Help me understand.
8. What did you understand the question to be? What are the directions telling you (in your own words)?

9. If you were going to explain this to someone in your own words, how would you do it?
10. If you did know, what would you say? (Use this when students shrug their shoulders or respond “I don’t know” to a question.)

At first, students are uncomfortable when teachers start asking questions like those listed above. We have had older students get very frustrated and say, “Just tell me the answer so I can get the grade. I don’t care if I understand!”

I encourage teachers to start with these questions to mediate development of cognitive structures. In one of my seminars, a middle-school language arts teacher who had training in cognitive structures brought two of her students to demonstrate how they used this approach to develop their portfolios. After the students explained their work, one of the seminar participants asked the students, “Two of your teachers have had this training and two have not. What do you do when you go to classes with teachers who are not using this approach?” Without hesitation, one student said, “In the other classes, I ask myself the questions.” Our job is to equip

students to learn how to learn and to develop their cognitive structures and metability so they can teach themselves and continue to have exciting “aha” moments all their lives.

Here are a few comments from ATA’s conference last November: “The metability piece brought deeper meaning for me, especially with the balance between reflective awareness and visualization.” “Asking the right questions is imperative! So much more to learn! Learning is all about making connections and opening pathways.” “These are some very practical ways of connecting to my staff and students. What we do and who we are matters and affects others. I’m going to implement some of this at my next staff meeting.”

More information is available at the ATA’s summer Educational Leadership Academy, in Banff, July 9-13, where Garner will help participants learn more about how to help teachers help students develop their metability.

Internet sites of interest

The Politics of Personalization in the 21st Century

www.teachers.ab.ca/Publications/ATA%20Magazine/Volume-91/Number-1/Pages/The-Politics-of-Personalization-in-the-21st-Century.aspx

David Hargreaves’s work on the dimensions of personalized learning:

www.ssat-inet.net/en-gb/resources/publications/Pages/publicationdescriptions/personalisinglearningseries1.aspx