Empowering Minority Students through Tech Talk

by Patricia A. Young

Educating culturally and linguisti cally diverse students about technology begins with the conscious use of "tech talk." Tech talk is the active use of computer lingo to communicate. This language of communication is driven by recent technological innovations, and it has become an integral part of the general public's vocabulary. Within the classroom, tech talk can become an integral part of the classroom discourse. Using tech talk with all students, but particularly minority children, is imperative to their acquisition of language and their future in this technologically driven society.

Culturally and linguistically diverse students come from homes that are rich in language, culture, history and expression. The acquisition of discipline specific vocabulary adds to their already rich cadre of words. Minority students must be prepared for this technological revolution with whatever technology is available in your classroom or school. It is imperative that educators facilitate this education by whatever means necessary. If students cannot articulate the language of technology then they cannot compete in this industry.

Teachers have the power to educate students with the tools that they need to be successful. These "codes or rules" relate to "linguistic forms, communicative strategies, and presentation of self; that is ways of talking, ways of writing, ways of dressing and ways of interacting" (Delpit, 1993, p. 25). Minority student's success is contingent upon their mastery of these codes of power.

The assumption is that all students receive the same quality of instruction; however this is not the case. Schools that house poor and minority students face challenges such as insufficient funding, undertrained teachers, students with low academic performance, and outdated curriculum materials. Given these factors, there are also teachers who feel that African American, Latino and poor children come from deprived home environments and that they are not academically as smart as other students (Gay, 2000). These deficit perceptions lead to the miseducation of these children. Subsequently, the language and skills that minority students need to acquire and to compete in this technologically driven society are not taught.

The flip side of this situation is that "there can be no doubt that in many classrooms students of color do reject literacy, for they feel that literate Discourses reject them" (Delpit, 1993, p. 290). Given this situation, some teachers have students who they perceive do not want to learn; the teachers in turn may choose to not teach (Delpit, 1993). "Believing themselves to be contributing to their students' liberation by de-emphasizing dominant Discourses" (Delpit, 1993, p. 290). This is a false perception of some teachers. Poor and minority students want to learn and they deserve to be accepted by literate discourses in all forms.

What is tech talk?

Tech talk is the language of communication used in the technology industry. Whether you are working with hardware, software or the Internet, the vocabulary and terms used are tech talk. The only way to become proficient in tech talk is to use it.

When using or engaging in discussions, the proper use of technological vocabulary better facilitates understanding and recall. Tech talk about hardware includes terms like computers, videocassette recorders, DVD (digital versatile discs) players, projection devices, or an overhead projector.

If students are using a computer, they need to know the terms for its hardware like monitor, printer, and central processing unit (CPU). The peripherals of a computer are things like the floppy drive, modem, CD-ROM drive, or the zip drive. Students should know whether they are working on a PC or a Macintosh computer. If possible, they should know the specifications of the machines that they are using. How much memory is the computer system operating on?

This is referred to as Random Access Memory (RAM) that acts as a temporary storage while the computer is turned on. RAM is usually described in terms of kilobytes (thousands) KB, Megabytes (millions) MB, gigabytes (billions) GB, or terabytes (trillions) TB (Roblyer & Edwards, 2000). Students also need to know the capacity of the hard drive but this varies from PC to Macintosh computers.

Even a basic lesson about the keyboard is needed. Students need to know where the keys are on the keyboard. Or that the [esc] key stands for escape and this key allows you to exit out of functions that are tying up the computer. (That's tech talk!)

When tech talking about computer media that stores information you should use the proper terms like diskettes (3 1/2" or 5 1/4", floppy disks), CD-ROMs, DVDs or zip drives.

Tech talk should include terms related to the desktop like *icons* and *windows*. When navigating students through an instructional process make sure you refer to the mouse and use terms like *point*, *click*, *double-click*, or *drag*. Show students how to *scroll* down the page, *minimize* or *maximize* the screen, and *open* and *close* windows. Point out the difference in icons for *programs*, *files*, and *folders*. Teach them how to manage files and folders. This should include moving, removing and copying.

Most importantly show students how to take care of hardware and software. Demonstrate how to handle computer media with care and how to keep it clean. Don't forget to lecture on the importance of saving information. Teach students multiple ways to save their materials. Save, save, save is my motto.

For whatever software you are using tech talk about its features. For example, a list of vocabulary for the hardware and software could become a part of a spelling lesson, the class vocabulary board, or an on-going dictionary of computer terms. Students begin to model your speech and they have visual reminders of terms posted throughout the classroom. In no time, they are tech talking too.

Then there is tech talk associated with the Internet. Become familiar with terms like web browsers (Netscape, Internet Explorer) and search engines (Yahoo, MSN). Search the Internet and teach yourself or take a class, and then teach your students.

Making tech talk your own

Make tech talk a part of your daily vocabulary. When speaking, writing or thinking about technology, use the correct technical terms. Get into a "tech" craze. The consistent repetition helps you become comfortable with speaking, writing and teaching about technology. This comfort level enhances your ability to use technology. Students notice your ease of using tech talk, and they become more comfortable.

This is a good time to search your computer dictionary, take a couple of technology courses, or use the help features of your application software for assistance. A computer dictionary helps in understanding many terms. A couple of websites to try are *<http://www.instantweb.com/D/dictionary/contents.html>*, *<http://www.techweb.com/encyclopedia/>*, or *<http://www.pcwebopaedia.com/>*. Use these terms and definitions as a regular part of your teaching approach and throughout your curriculum. The integration of technology into the curriculum begins with tech talk.

Technology is rapidly changing, teachers have to constantly educate and re-educate themselves. Accept the fact that teachers are life long learners who have to continually educate themselves about the fundamentals of technology. Teachers have to be knowledgeable about integrating technology into the instructional process. Plan to take several technology courses. Check with your school district or local college. An introductory course in computer basics should provide a brief overview of terms. Then look for courses that teach a variety of software programs in one course. This limits the amount of money needed to spend on multiple courses. If books are your thing, I recommend a basic book on integrating educational technology into teaching.

Get on a "tech" track. Form a technology committee at your school. Through the discussion of technology issues, these terms become part of your regular vocabulary and everyone learns that others have the same technical challenges. Tech talk must be shared otherwise it is easy to forget old and new terms.

The "help" features in software applications are the quickest way to refresh your memory. Whether working in a word processing program or searching the Internet, use help features to learn and relearn. Get into the habit of using these features and it will be easier to remember the valuable tech talk information that is needed to be an effective communicator of technology.

Motivating students with tech talk

There is much concern about the declining academic success of minority students (Gay, 2000). Tied with this concern is that of how to reach this generation of failing children — how to motivate them. Students must be motivated to make gains academically. Motivation promotes positive attitudes, less anxiety (Kinzie, 1990) and self-empowerment. The question then becomes how can technology enhance this desire to succeed.

To be a participant in the information superhighway minority students must have the tools to enable them to be consumers and producers of technology. The classroom teacher can begin by creating a culturally responsive learning environment that supports and validates the child and their community. Second, educate students with the language used in the technology industry. A third tool is to provide contexts where students can comfortably interact with technology. Fourth, minority students need continued opportunities to engage technology and

continuous learning opportunities with technology. Show minority students how they can be producers of technology. Without these tools minority students run the risk of total exclusion from the technological revolution.

Tool #1 — Create a culturally responsive learning environment

To create a culturally responsive learning environment requires that teachers engage in "Culturally Responsive Teaching" (CRT). CRT is about teaching; however it is the kind of teaching that "centers classroom instruction in multiethnic cultural frames of reference" (Gay, 2000, p. xix). This is achieved by considering students prior experiences, community environment, ethnic identities (Gay, 2000), and cultural & linguistic backgrounds. A culturally responsive learning environment is first a way of thinking and second a way of doing.

In thinking, about the integration of culture, curriculum and computer technology, ask the following questions:

1. What are my learning objectives? Acknowledge that everyone in your classroom can achieve or exceed these learning objectives.
2. How can I incorporate student's prior experiences with computer technology? Engage in class discussions about who owns a computer. Find out students experience with computer technology? (Have students go out into the community documenting where computers are used [e.g., cash registers in grocery stores, computers operate washing machines in Laundromats]).
3. Ask students if they know anyone who owns a computer? Have students do research on the people they know who own computers or who use computers at work? (Students can gather the following information: age, race, sex, profession, computer use, etc.). Who are these people (e.g., family members, friends)?
4. Do some reflective research on student learning in your classroom. When students use computers are they engaging in tech talk? Do students only tech talk in English? If you have second language learners, what part of their conversations are in English and what parts are in their primary language? How do students engage in cultural forms to learn? (e.g., engaging group versus individual interactions for academic activities, incorporating that ethnic group's way of thinking or doing something).

Use these observations to begin to understand how the integration of culture, language, curriculum and computer technology belongs in your classroom. Then work towards developing other culturally responsive learning environments.

Tool #2 — Acquiring the language of technology

To begin the process of learning about the technological revolution have students use tech talk throughout the school year. When asking questions or offering an explanation, they must use computer lingo. Even when writing, students should use tech talk. Use these writings to create a class journal about technology. Now, students can read stories that incorporate the language of technology.

Tool #3 — Help students feel comfortable with technology.

Often we shun students away from computers and other technology with the fear that they will break the equipment. This fear can also turn students off to technology. Allow students opportunities to interact with hardware and software. Letting them know that the proper use of the equipment will ensure its longevity is a better approach.

Teach students how to trouble shoot when error messages appear (Error messages are just feedback from the computer asking you to respond. It's how the computer interacts with its user). Help students to be active learners by first trying to figure out the problem themselves. Second, students should ask a neighbor for assistance, and then they should come to you as a last resort. In a class of 20 to 30 students with tech questions, teaching students how to trouble shoot gives them a sense of autonomy and self-empowerment.

Allow students many opportunities to use computers with software and the Internet. Do not take away computer use as a form of punishment. This will only create animosity toward this valuable technology.

Model how you enjoy using the computer. Smile when you are using the computer (especially with lower grades). Show students how the computer helps you learn many things about the world. Demonstrate mock examples of how important technology is in our daily lives. For example, use the computer to find a recipe and make that recipe in class.

Tool #4 – Provide opportunities with technology

All students need opportunities to engage technology but particularly poor and minority students who may not have access to computers or the Internet. Provide opportunities where students produce things with technology. For example, students can publish a class newsletter and distribute it throughout the school. They could produce videos as an extension activity to a lesson. Or using hypermedia-authoring programs like KidPix, Hyperstudio, or PowerPoint, students could create presentations, class hypermedia books, or other learning activities. Again, students should be allowed to incorporate things specific to their prior experiences, culture, language, community or ethnic identity.

Help students to understand that these skills are useful in many professions because everyone will need to have computer skills. Review the types of jobs related to the technology industry. This helps students connect the process of learning with the prod-

uct of obtaining valuable technical skills. Poor and minority students may or may not have enough role models to emulate; therefore teachers need to provide real and vicarious examples of people who work with technology.

You can help minority students by getting them to buy into the wonderful world of technology. Do an entire thematic lesson on technology? Look at earlier forms of technology to present day inventions. Have students brainstorm about the technical inventions in their communities and then create a timeline. Students can hang pictures of the technical inventions on the timeline. This can lead to discussions about the inventions and inventors (many of whom were African Americans and Latinos). This thematic unit empowers students as they see how their people have been inventors of technologies and how they also have the capability of being producers of technology.

With minority students you must connect your pedagogy to something that they can relate to within their world; this is "culturally responsive pedagogy" (Gay, 2000, p. 111). Show minority students that you value their language, culture, ethnic identity, communities, and history, and you are half way to achieving your learning goals.

Conclusion

Minority students need to be provided with many opportunities to use technology at school, the library or at home. However the basics must begin at school because many children do not have access to computers and other contemporary forms of technology.

The consistent use of tech talk empowers minority students and helps them to be competitive participants in this technologically driven society. Use tech talk as a daily recipe to linguistic, cultural, ethnic and academic empowerment for all students.

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Marcy Driscoll gave the following special Presidential awards:
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