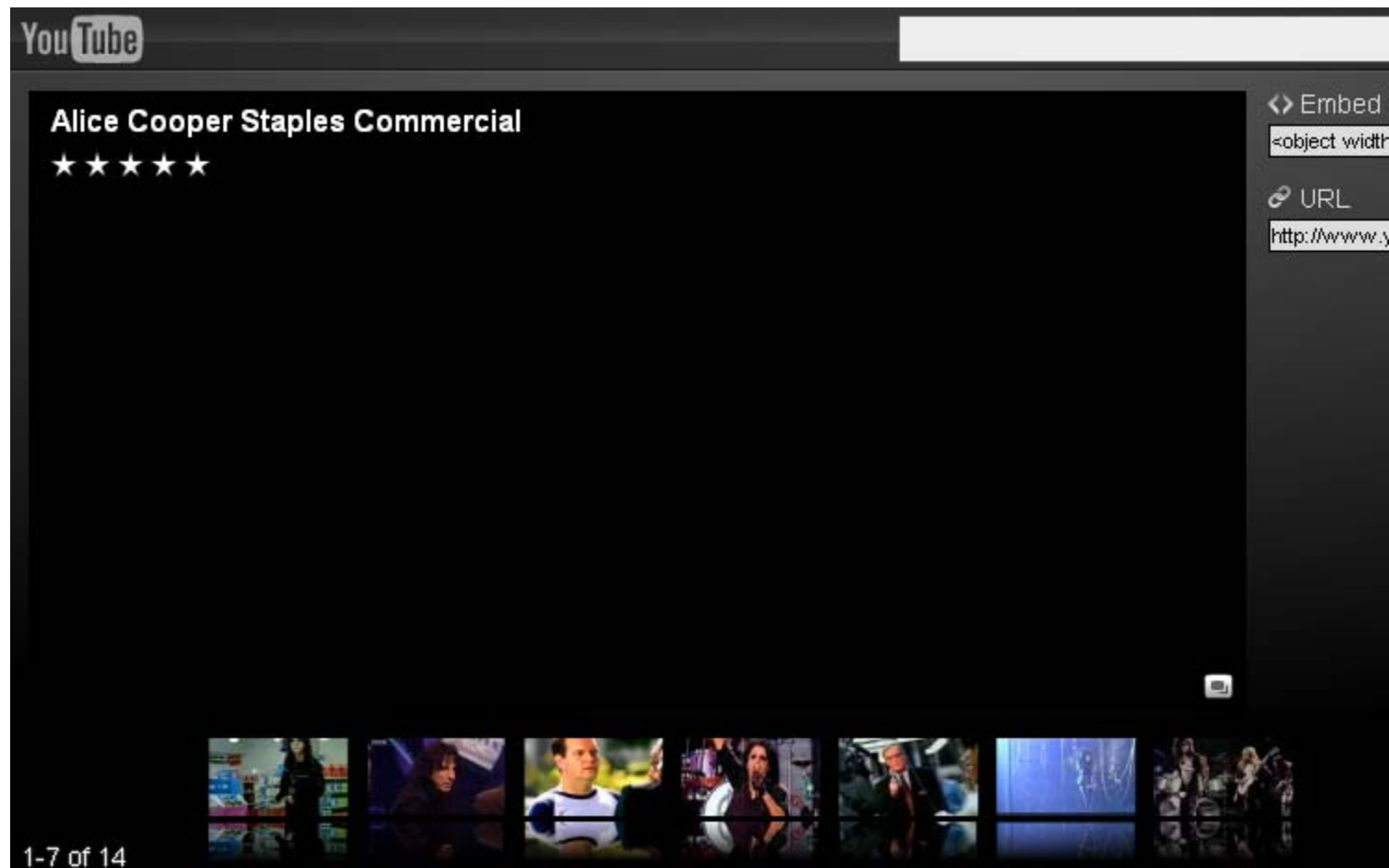




Achieving Success Through Assistive Technology

*By: Marianne Salvo, Assistive Technology Resource Teacher
Kim Slomka, Special Education Consultant
Susan Palijan, Research Officer*

Introduction





Go Go Gadget Student
Find the tools that
meet your needs.



What are the web tools that students are using outside of the classroom?

Wikipedia

Podcasting

Skype

You Tube

Instant Messaging, Email

Twitter and Social Networks

How can these tools help transition students from elementary to secondary?

Have students considered using tools that they use outside of the classroom for academic success?



GLE Students

Transition Planning

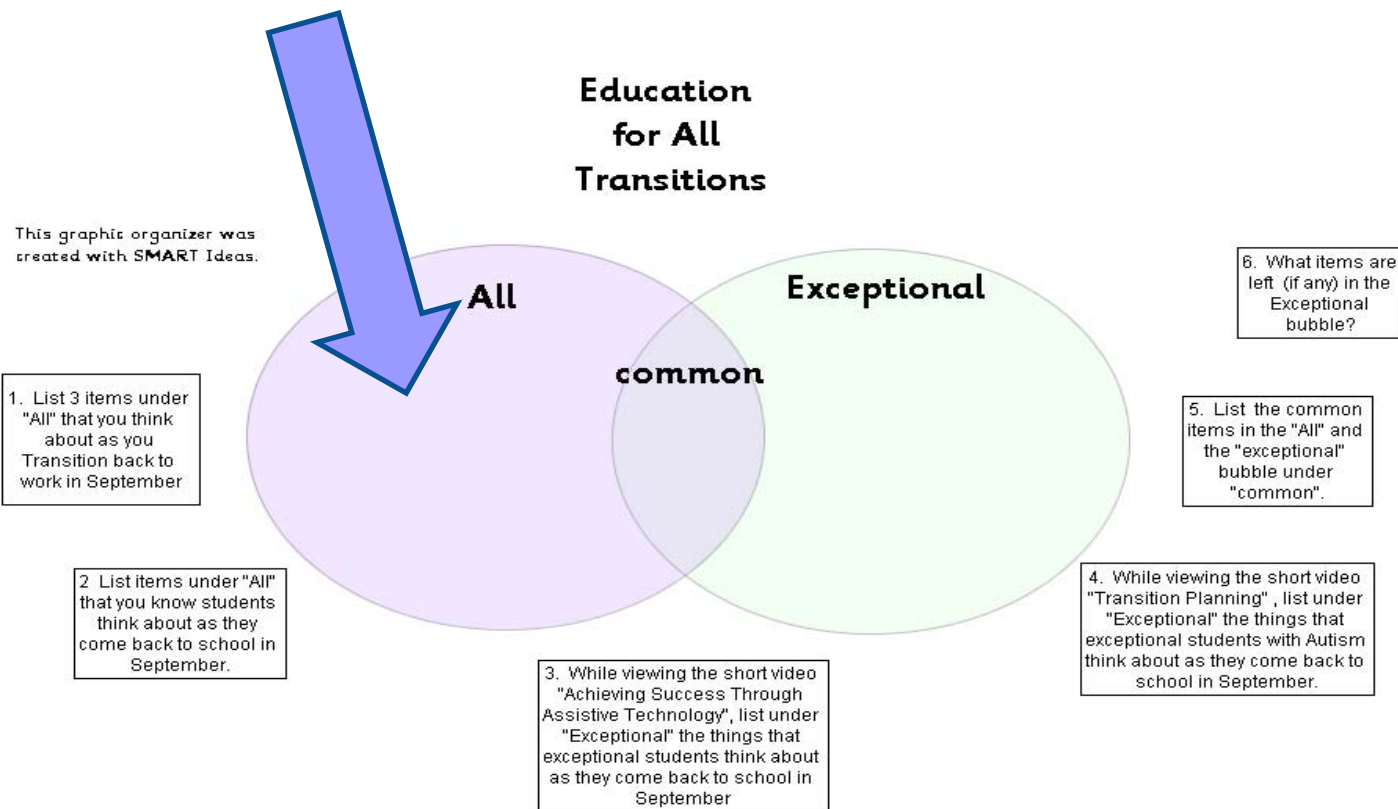
Transition planning is an important process for all students. Considering a student's **transition is an important part of developing class and individual student profiles.** Thoughtful planning for transitions provides the foundation for successful transition experiences that help a student learn to cope with change and adapt to a variety of settings.

Learning for All (Draft: 2009)
p. 44

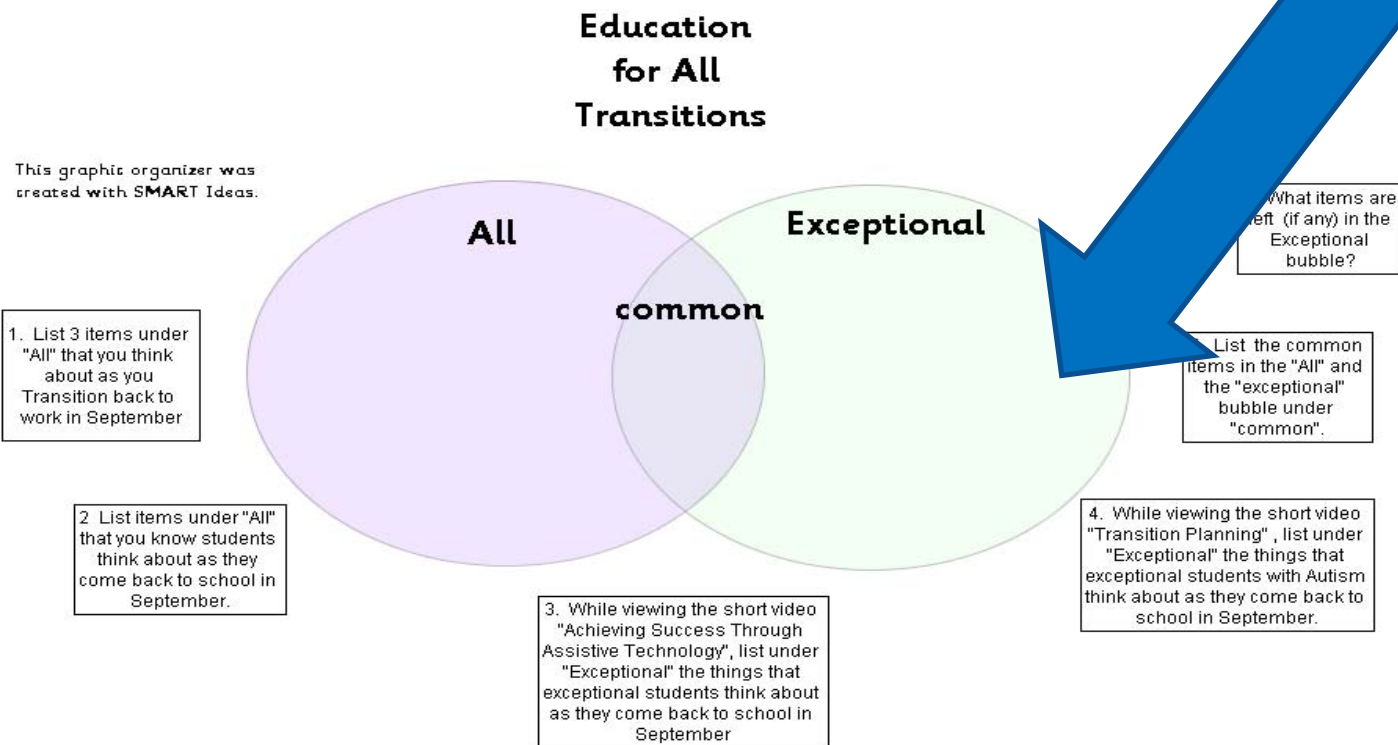


All Students Transition Grade 8 - Grade 9

Transitioning



Transitioning





Achieving Success using Assistive Technology

View “*Achieving Success with Assistive Technology*” video

What do students already know about AT and ICT before starting high school?

<http://at4gle.googlepages.com/>

AT for GLE

Congratulations the completion of GLE10 - Learning Strategies course
As a final part of the course you will need to complete the survey below:

[STUDENT SURVEY](#)

For GLE10 Students Only

Welcome Tools For Learning

How fun would learning be if you were able to use many different technical gadgets to help you learn.
GO GO GADGET STUDENT...

Welcome to your high school experience.

**You may be wondering what (low, medium and high) tech tools are out there to help you learn.
Can these tools fit in your binder?**

In this course you will be taking a closer look at your interests
and activities that you enjoy.

Do you use **GMAIL?**

Would emailing yourself assignments or having an on-line agenda
be a tool that would helpful ?

Have you ever thought of **asking your friends on-line** with **helping you with Math homework** when you
are stuck on a question?

Did you know there is a website called [Ask a Teacher](#) to **help you on-line with your homework?**



Data Informing Practice

- How has the students' perception of AT from the start of the GLE classroom changed over time?
- What are next steps of gathering data of teachers' perception of AT and their comfort level of using it within their classroom instruction?



GLE 10 Student Survey

- An online survey was available to all GLE 10 students in Sept/Oct 2008 (pre) and Jan 2009 (post)
- Survey questions measured students' attitudes and perceptions towards computers and assistive technology
- There were a total of 194 “pre” responses from eight secondary schools and 121 “post” responses from seven secondary schools
- 96% of students completed the survey in less than 15 minutes

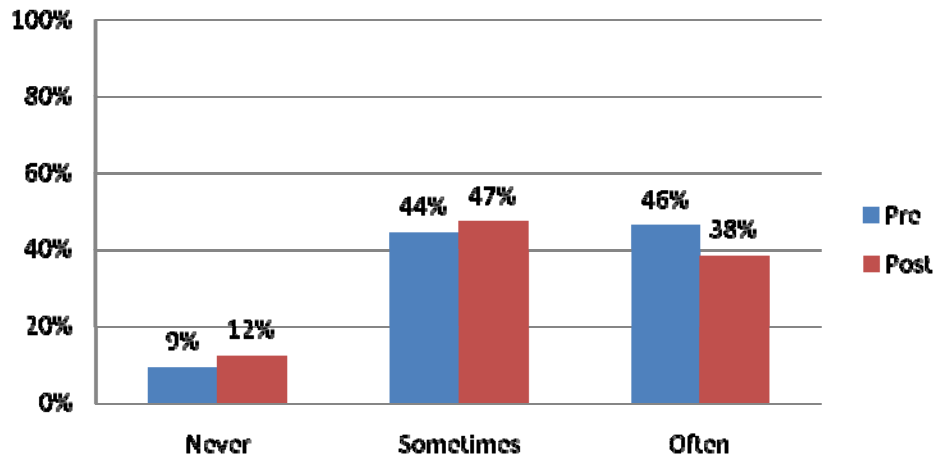


Student Profile

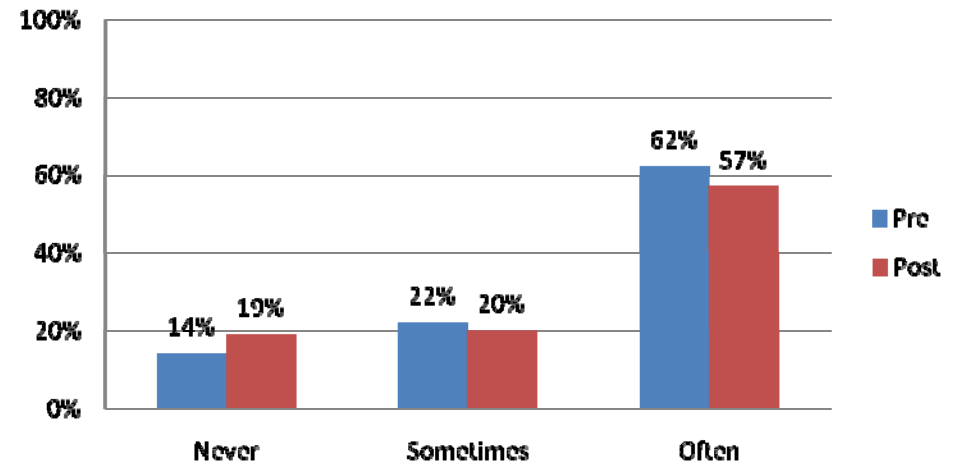
- The majority of GLE 10 students responded to the “pre” survey (78%), while less than half (48%) responded to the “post” survey
- The majority of respondents were male (65% pre, 69% post)
- On average, most respondents reported using their home computer for school work for one hour or less a day (69% pre and post)

Survey Results – Computer Use

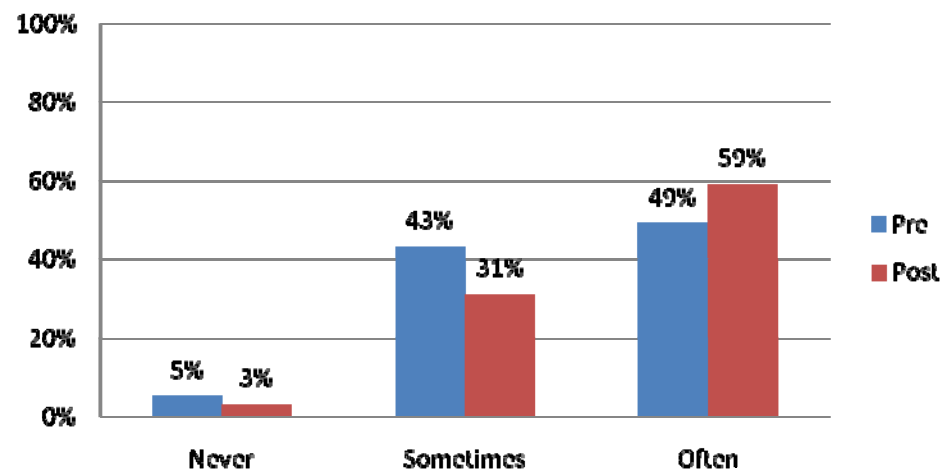
Email Use



Instant Messaging Use

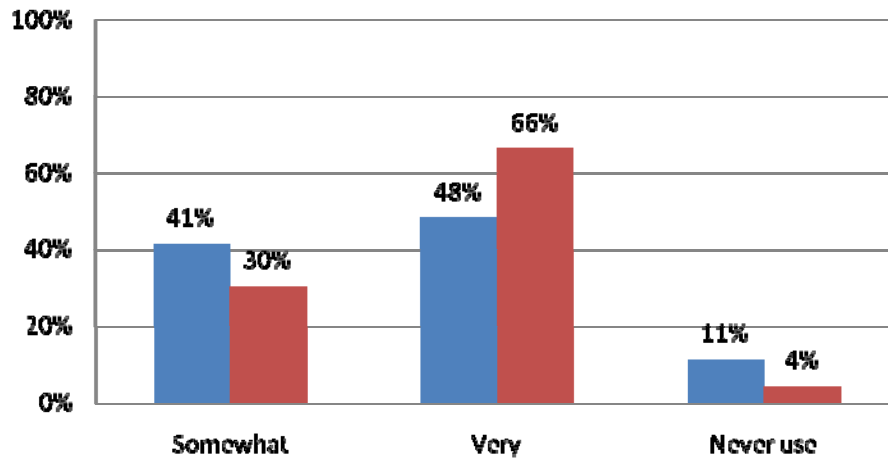


Search Engine Use

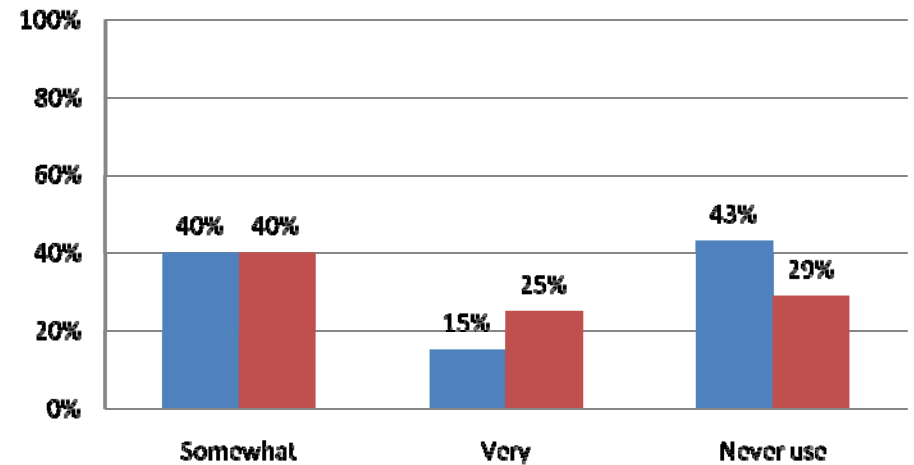


Survey Results – Computer Knowledge

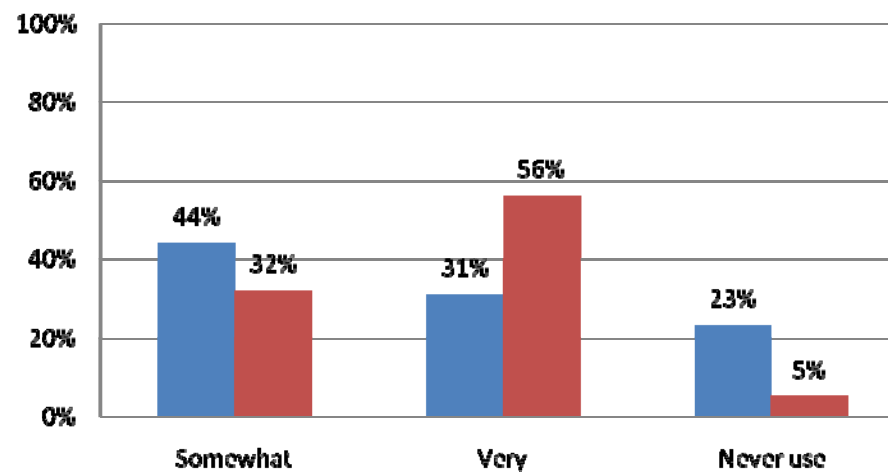
Word Processing Knowledge



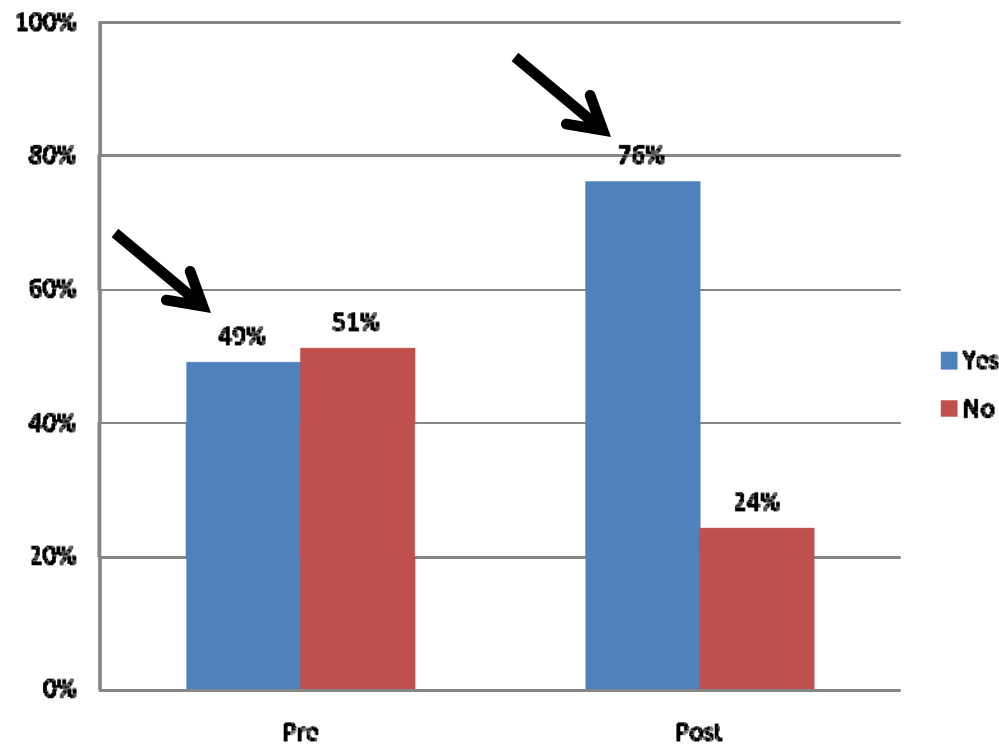
Spreadsheet Knowledge



Presentation Knowledge



Survey Results - Assistive Technology Knowledge



At the end of the semester, 76% of respondents understood what assistive technology was – this represents an increase of 27% since the beginning of the semester.

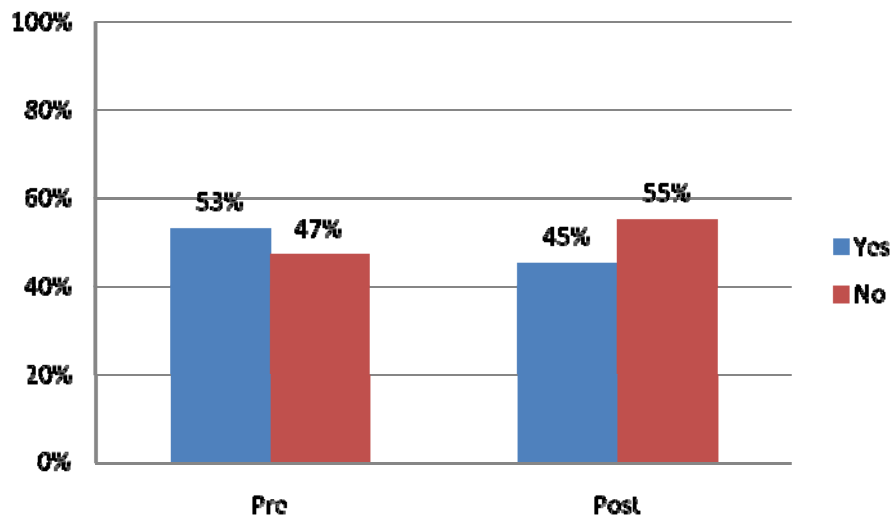


Survey Results - Assistive Technology Use

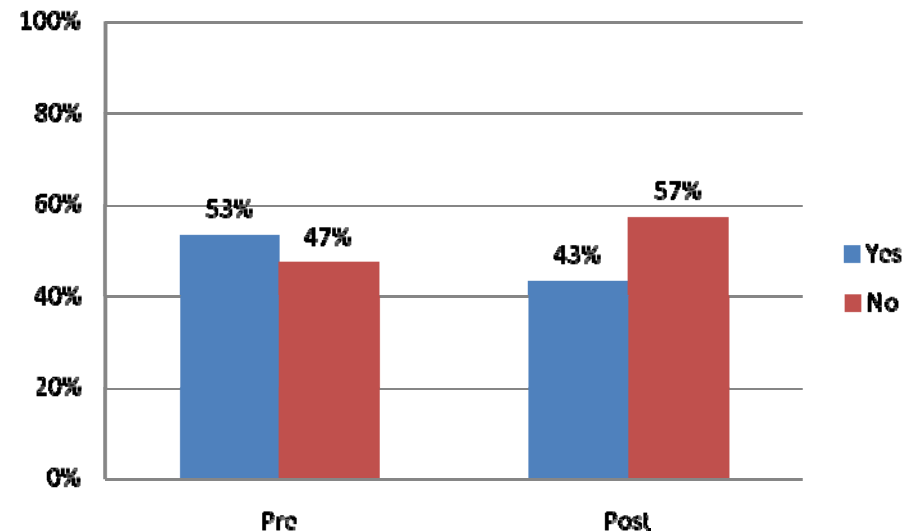
- Based on responses to the frequency of use (pre and post) of Smart Ideas, Smart Board, Premier TWP, and UTD, it is reasonable to assume that the instructional focus during semester one of the GLE 10 course involved these tools.
- At least 55% of “post” students stated that they *used* the following tools in the classroom: Smart Ideas (62%), Smart Board (70%), Premier TWP(65%), and UTD (55%). This finding supports the results above, in that, the same four tools were identified by students.

Survey Results – Assistive Technology Use

English Novel on Computer

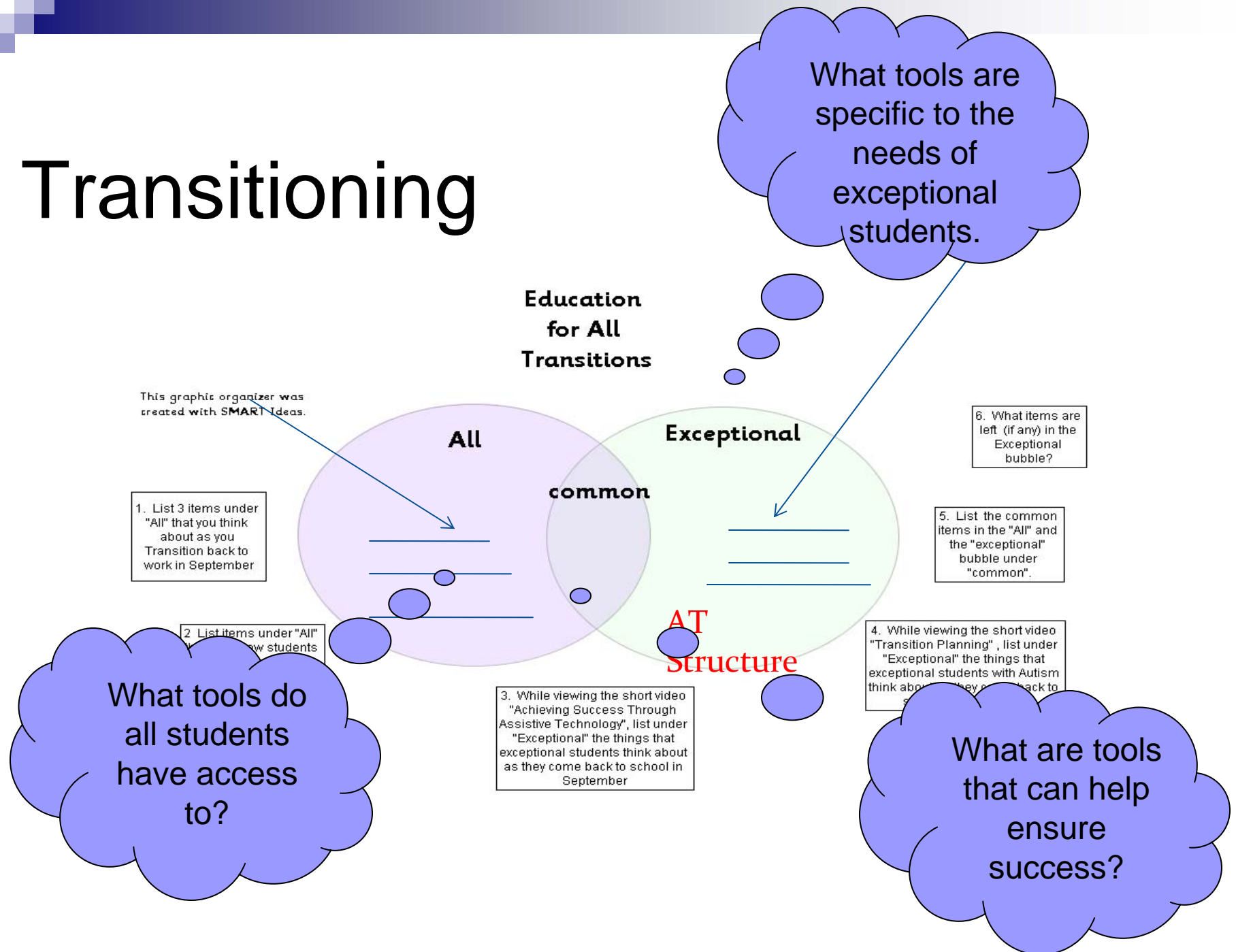


English Novel on MP3



At the beginning and end of the semester, about half of students indicated that they would read their English novel from a computer or else listen to it on their MP3.

Transitioning



Essential for Some Good for All

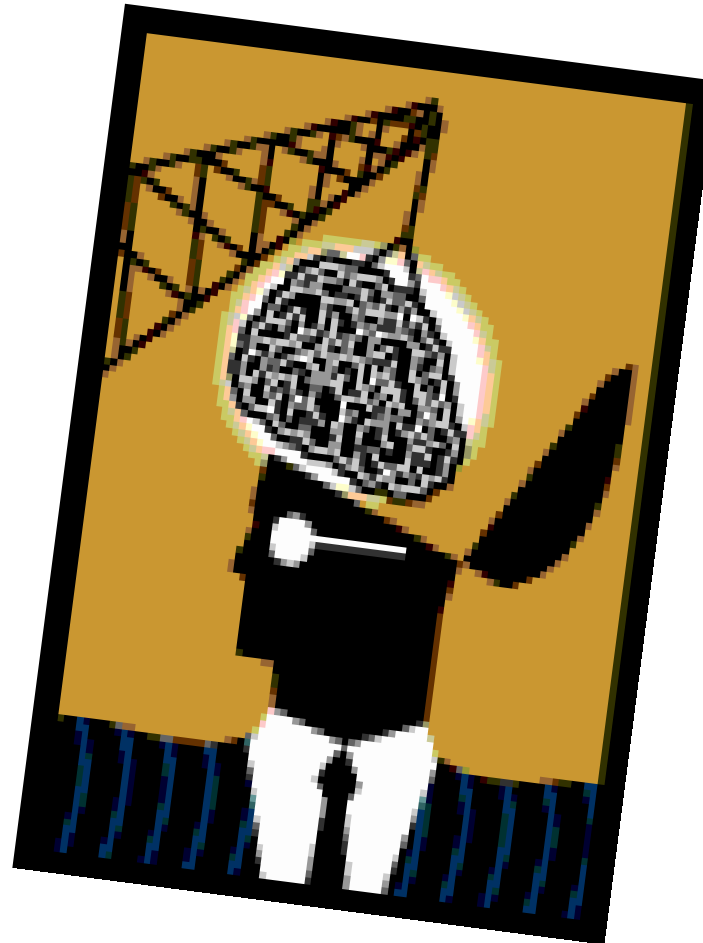
All students can
succeed.

Each student has his or
her own unique patterns
of learning.

Successful instructional
practices are founded on
evidence-based
research, tempered by
experience.

Learning for All (draft:
2009)

Beliefs One-Three



Assistive technology refers to tools that help all students learn effectively. When creating an AT toolkit, a student needs to think about

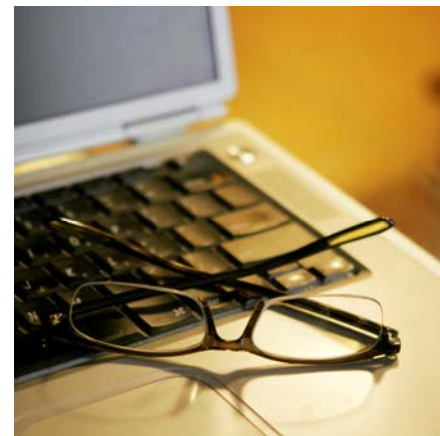
"what tools meet my needs in order to be able to function more effectively?"

Many of the web based tools can be found free on the internet.



Specific Benefits for Literacy and Numeracy

- Assistive technology can specifically address reading, writing, and numeracy challenges (Edyburn, 2000, 2003).
- AT is **necessary for some students** in the same way that eyeglasses or other aids are necessary for **some students**.



Transitioning Students

Universal Design and differentiated instruction are effective and interconnected means of meeting the learning or productivity needs of any group of students.

*Learning for All (2009)
Belief Number 4*





Among its capabilities are the following:

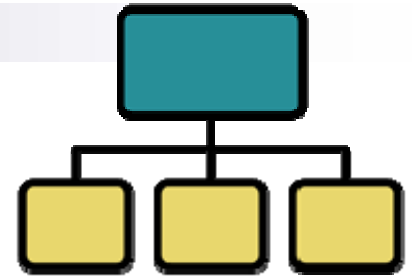
- Word processing can address fine motor difficulties.
- Spell-checking tools can reduce some spelling difficulties.
- Importing graphs and charts through the use of spreadsheets can allow students to produce a higher quality of work, reinforcing the value of published writing.

Did You Know:

Many word processors have features such as **autocorrect** and **autosummarize** built into the program.



Concrete Instructional Tools That Support Student Learning



- Students who learn differently may better encode and retrieve new information if it is presented in a structured way (e.g., **graphic organizer**, advance organizer) (DiCecco & Gleason, 2002).
- A graphic organizer is a visual aid that can be helpful in demonstrating how concepts are connected or related. These tools may be helpful to those who have difficulty in making inferences or understanding relationships among the main ideas and supporting details.

Brain-based research shows that visual organizers, such as concept maps, can be highly effective in helping students who struggle with reading and writing.

Engaging in Reading: Sorting Ideas Using a Concept Map, pg 48

THINK LITERACY: Cross-Curricular Approaches, Grades 7-12

Visual Graphic Organizers

Did You Know???
There are graphic organizer that are available free through the internet that students can access at home?

<http://bubbl.us/>



<http://www.exploratree.org.u>



<http://www.thebrain.com/>

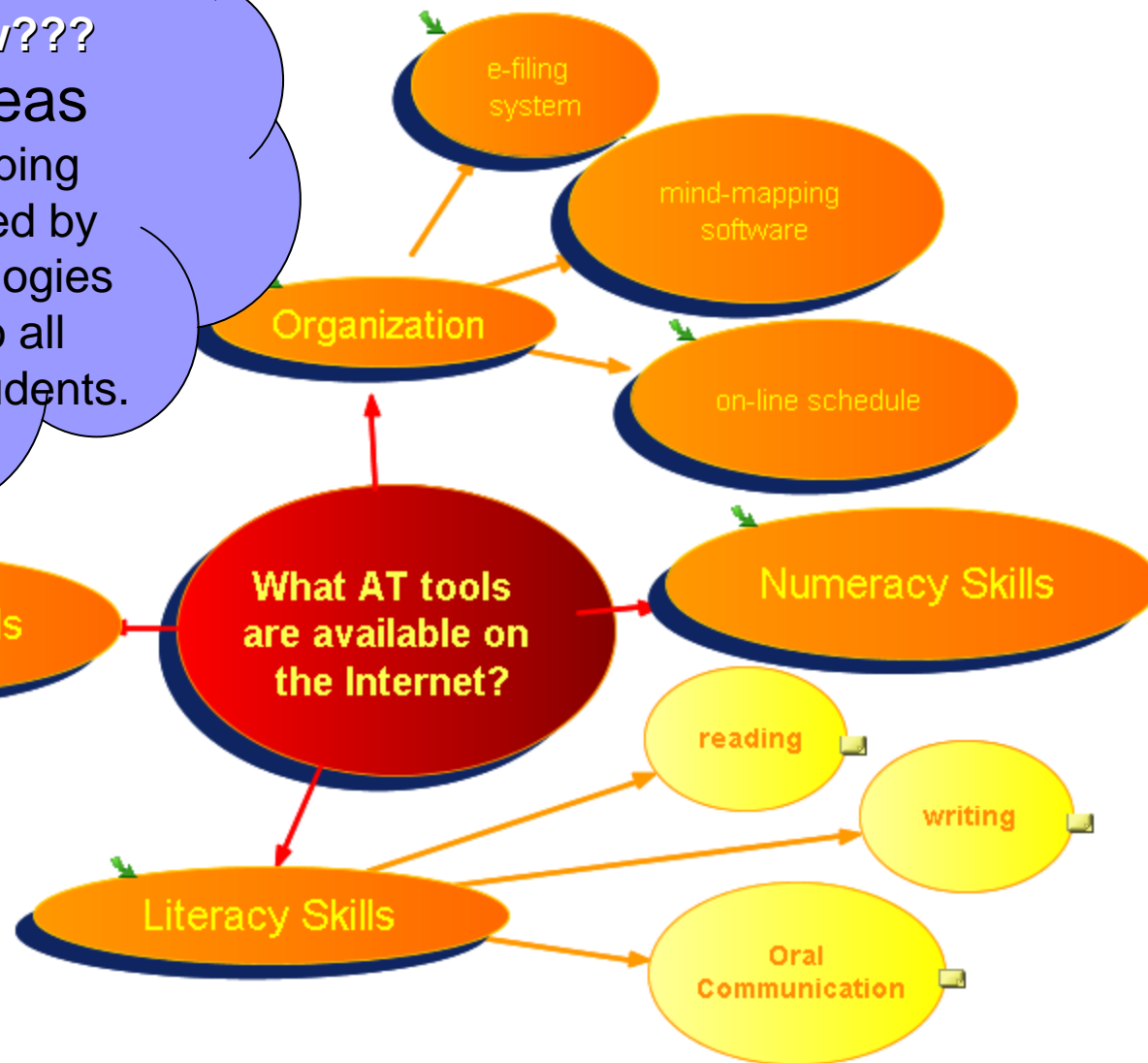


http://freemind.sourceforge.net/wiki/index.php/Main_Page

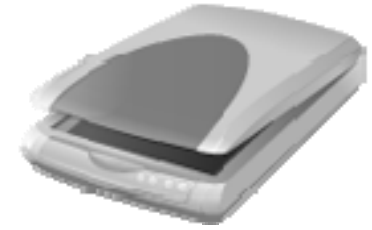
FreeMind



Did You Know???
SMART Ideas
(concept mapping
software created by
SMART technologies
is available to all
teachers and students.



Supports with Reading



- A wide range of software tools support reading across different learning abilities and styles. Three specific types of effective technological supports are **Optical Character Recognition (OCR)** for **scanning text**, **speech synthesis of text (text- to-speech)**, and the **thesaurus** found in most word-processing programs.

Text-to-Speech Software

Free NaturalReader 7

<http://www.naturalreaders.com/>



<http://www.readplease.com/>



<http://www.readthewords.com/>

Did You Know???

You can use text-to-speech software for a wide variety of tasks including class work, reading for fun, and finding grammatical mistakes of written work by listening along as the computer reads the work back to you. It can also help with the correct pronunciation of certain words or with reading comprehension.



Available to HCDSB students at school and at home...

Promoting oral communication

- Students can highlight key aspects of language and new vocabulary in all the activities that are related to the exploration of the theme or subject by:
 - listening to recorded texts
(Audio books)
 - listening to new vocabulary
(Talking dictionary)





<http://librivox.org/>



<http://dictionary.reference.com/>



<http://quizlet.com/>

Study vocabulary or almost anything
Create your own flashcards - sign up free
Share flashcards with your friends

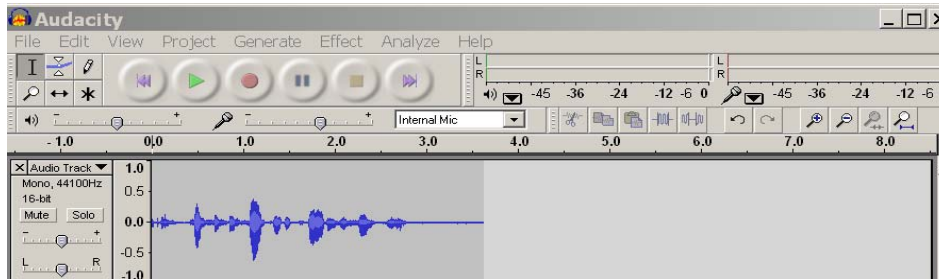
Did You Know???

You can do a search for free audio books online and find books in MP3 format.

To promote students' production of written compositions, students can use an audio-recording software to record their compositions in an alternative format.



<http://audacity.sourceforge.net/>



You can search for recorders online that allow you to record your voice and are available for free.

You mean I can record my own voice notes as an MP3 and listen to them on my MP3 player.



Using Peer Editors to help with Writing Process

- Students may have difficulty with aspects of the written language such as grammar, punctuation, spelling, and organization. A writing buddy can be critical to support the student with the writing process.

Peer Editing
Teach

Collaborative
revision with
Google Docs

Sign in to Google Docs with your
Google Account

Email:

Password:

☐ Remember me on this computer.

[I cannot access my account](#)

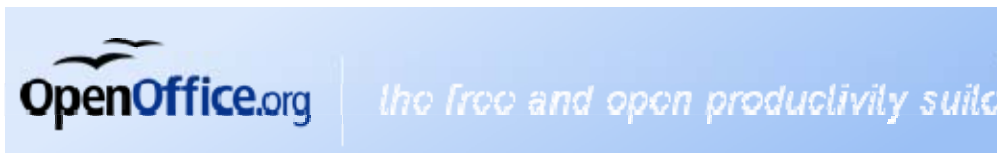
Google docs
beta

<http://docs.google.com/>

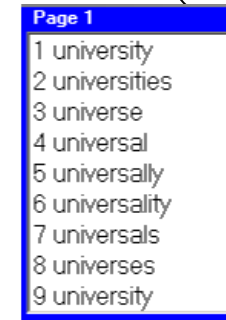


- You can encourage students to use peer editors to help promote group work and peer editing skills by sharing their documents and inviting others to be collaborators.
- Some word processors have the **insert comment** feature which allows for tracking revisions on a document.

More AT Tools For Writing



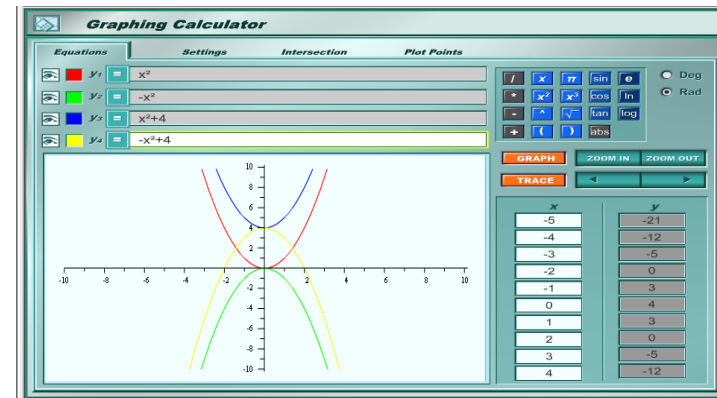
Word-prediction is word completion on a text message.



- **word-prediction software** - some programs have built word completion capability into the program
- **voice-to-text software** allows you to talk to your computer and watch your spoken words appear in documents, email and instant messages. You will need a high-quality headset with a microphone to train the program to recognize your voice.

AT Tools For Numeracy

- **Talking calculators** that vocalize data and resulting calculations through speech synthesis;
- **on-screen computer calculator** programs with speech synthesis;
- software that allows students to manipulate objects and geometric shapes;
 - National Library of Virtual Manipulatives site, you will find a number of online Java math applets that teach numbers and operations, algebra, geometry, measurement, data analysis and probability.



Websites:

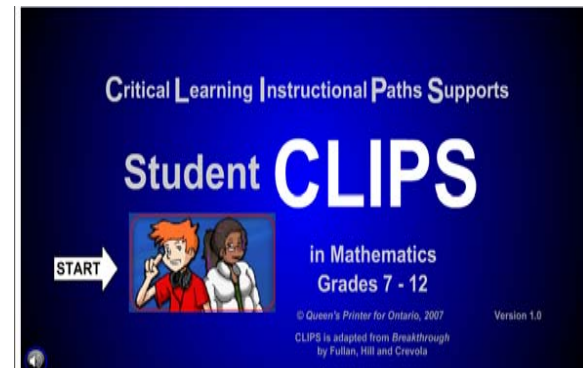
Free online graphing calculators
http://my.hrw.com/math06_07/nsmedia/tools/Graph_Calculator/graphCalc.htm

More AT Tools for Numeracy

- internet math games and math sites for the development of numeracy skills;
- textbooks on PDF; you can find out through publishers if an electronic version of the textbook is available.
- SCREEN CAST with recording of math lessons;
- Programs such as JING allow you to record video of onscreen action.



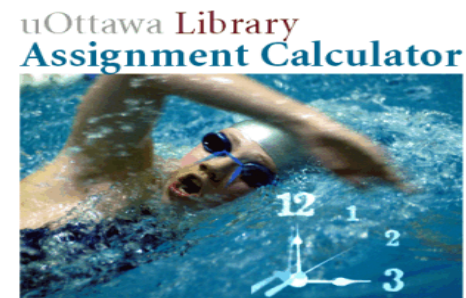
<http://nlvm.usu.edu/>



<http://www.jingproject.com/>

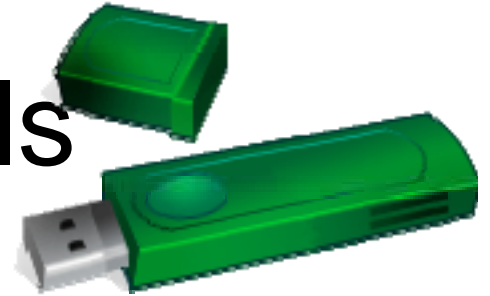
AT Tools for Organization of Tasks

- Google Calendar is a free online calendar service. It lets you schedule events, and share your schedule with friends and family. You can choose to be reminded of upcoming events by email or pop-ups.
- There are online “assignment calculators” to help break down tasks for research projects.
<http://www.biblio.uottawa.ca/assign-calc/index-e.php>





E-filing electronic materials



- If students use an electronic online filing system, this will give them a central place to access all of their electronic materials.
- If materials are accessible, students can learn how to manage time and assimilate information more effectively.

Tech Tuesday

Catholic
Professional
Learning
Communities

Adobe Connect

Classroom teachers are the key educators for a student's literacy and numeracy development.

Classroom teachers need the support of the larger community to create a learning environment that supports all students.

Learning for All

(Draft: 2009)

Beliefs five and six

Secondary Connections sharepoint

Web Folder To Share Resources

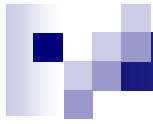




Department Action Plan

WHAT?...Worry List

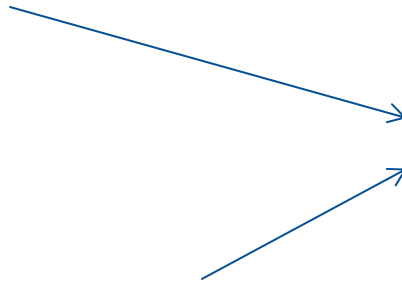
- Access to etext?
- how to use Premier?
-
-
-
-
-
-
-
-



Department Action Plan

SO WHAT does it all mean?...main
ideas/topics

■ e-text?



AT

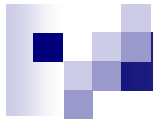
■ Premier?



Department Goal Planning

Now WHAT will I do with this information?...resource list

- Topic#1: AT-match some presentations from the lists
- Topic#2
- Topic#3
- Topic#4



Department Goal Planning

NEXT STEPS:

Based on the prioritized “Now What” , list up to 3 goals that your department would consider for the 2009-2010 school year.

- 1. write some goals for your department-
what do you want to know/learn/try this year?
- 2.
- 3

School Improvement Planning

Arts P P P P	Business P P P	Canadian World Issues P P P	English P P P
Moderns P P P	Guidance P P P	Math P P P	Physical Education P P P
Religion P P P	Science P P P	Technology P P P	Support Staff(EA and CYC) P P P P
Administration P P P	Special Education SERTs ✓ ✓ ✓		



Reflections with regards to the use of AT in the classroom

About students:

- What are students' **needs** and **abilities** *(strength, interest, learning style)?*
- Why does a student **need assistive** technology?
(how will the AT tool assist the student in having greater success in performing the task?)
- What are the **major areas of concern** that need to be addressed?

About the learning environment:

- Where and when will the student use assistive technology?
(classroom, home, library)

What supports and resources are available?

- How can the computer be accessed for ease of use for student learning and instructional demands?

About tasks: What does the student need to be able to do that is difficult for the student at this time?

- What is the expected level of independence?