

What IT Skills Should Teachers Expect of Incoming ISD77 HS Freshmen?

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At a recent district curriculum council meeting we discussed how we might be able to determine the level of technology proficiency of our incoming 9th graders. While we have a fairly good handle on what we teach all students grades K- 6 through our library media program, we still find a large disparity among students as they enter high school. Much of the difference can be attributed to the varying levels of teacher enthusiasm for reinforcing skills in the classroom and, of course, levels of home access.

A paper and pencil test on ICT skills seems shallow. A full-blown performance assessment would be a huge time commitment. A self-assessment rubric would be unreliable.

There are the inklings of some online “performance tests.” ETS is designing one for college students. (You can look at a flash demo at <http://www.ets.org/Media/Products/ICT_Literacy/demo/index.html>. But I have seen little work done on how we accurately measure the skills of incoming high school students.

Here is my very modest proposal: we pick the top 5 “ICT skills” that classroom teachers should be able to expect of all students and design short, authentic “tasks” that can be easily assessed. If each “core” classroom teacher gives and evaluates one skill at the beginning of the freshman year, a profile of every student can be compiled and remediation can be provided through classes taught by the library media specialist.

It’s been awhile since I’ve been a classroom teacher, but I will start the conversation by suggesting that these tools and skills are essential for all students if they are to be able to do basic work assigned by classroom teachers.

1. Word processing
2. Spreadsheet use (and graphing).
3. Multimedia presentation software and digital image handling
4. E-mail use.
5. Internet-enabled research.

A suggested performance task to assess the level of competency of incoming high school freshmen:

Word processing

The expectation of this school that you have some basic technology proficiencies in order to complete work expected of you. These proficiencies include:

1. *Word processing*
2. Spreadsheet use and graphing.
3. Multimedia presentation software and digital image handling
4. E-mail use.
5. Internet-enabled research.

Expectations:

I can use the word processor to complete assignments when requested: reports, essays, and other written work. I can compose a document in a word processor and edit it using commands like copy and paste, find, undo, and “save as” to create multiple drafts. I can spell check, and change the format of a document. I can paginate, preview, and print my work. I am able to perform the following tasks when using a word processor:

1. Identify a word processing program and open a new word processing file.
2. Set preferences/options to show special formatting characters such as spaces, carriage returns and tabs.
3. Type in text and delete text by letter, word, sentence, and paragraph.
4. Insert text at the beginning, middle, and end of a document.
5. Cut and paste text. Copy and paste text.
6. Use **select all** and **undo** commands.
7. Format text by changing font, size, and style.
8. Change paragraph justification and line spacing. Change the margins for a document.
9. Use the program’s spelling checker and thesaurus.
10. Create a footer that includes an automatic page number.
11. Preview a document and print the document.
12. Save a document under another name.
13. Save document to a specific location.
14. View multiple documents at the same time, and switch between multiple documents on a desktop, Copy and paste between documents.

If you have questions about any of these skills, please contact your library media specialist for help.

Assignment:

Compose a 3-5 paragraph 500 word personal essay on a topic of your choice (or as assigned by your teacher) using a word processor. Print a copy for submission. Your printed copy will be assessed using the following checklist. You may also be asked to submit an electronic copy.

Assessment checklist:

- ❑ Name of the file, along with your name, your teacher's name, class name and hour is in the upper left corner of the paper.
- ❑ First paragraph is pasted at the bottom of the document, separated from the main text by several blank lines.
- ❑ Body of paper is printed in 12 point Times New Roman font, and is double-spaced. Each paragraph is indented, using the tab function, 5 spaces.
- ❑ Title of paper is centered, in bold, and in 18 point Arial font.
- ❑ Paper has one-inch margins with one paragraph inset to a 2-inch margin.
- ❑ At least one word is underlined that was flagged by the spell checker.
- ❑ A word replaced using the thesaurus is in italics and bold.
- ❑ There is a page number in either the footer or header.

A suggested performance task to assess the level of competency of incoming high school freshmen:

Spreadsheet use and graphing

The expectation of this school that you have some basic technology proficiencies in order to complete work expected of you. These proficiencies include:

1. Word processing
2. *Spreadsheet use and graphing.*
3. Multimedia presentation software and digital image handling
4. E-mail use.
5. Internet-enabled research.

Expectations:

I can use a spreadsheet for basic applications such as keeping a budget, analyzing data and creating charts and graphs. My spreadsheets use labels, formulas and cell references. I can change the format of the spreadsheet by changing column widths and text style. I can use the spreadsheet to make a simple graph or chart. I am able to perform the following tasks when using a spreadsheet:

1. Understand the function and uses of the spreadsheet.
2. Open a new spreadsheet. Identify rows, columns, and cells.
3. Know and use labels, values, and formulas.
4. Use a range of values in a formula.
5. Add additional rows and columns. Delete columns and rows.
6. Change the width of columns and heights of rows.
7. Format spreadsheet cells, rows and columns (for example as numbers to a certain decimal point or as currency.)
8. Create a chart or graph using data in a spreadsheet with axes labeled or a legend.
9. Select a print range.
10. Select a horizontal print orientation.

Assignment:

Create two spreadsheets to the following specifications.

- A. Conduct an informal poll of at least 10 of your classmates about an issue or preference. (For example, favorite drink at lunch – milk, water, pop, sports drink, juice.) Enter your data into a spreadsheet and use the data to create a bar or pie chart that is labeled. (Printed in a vertical print orientation.)
- B. Create a spreadsheet containing the following data for a class play that gives a running balance of profits or loss and calculation with the number of tickets needed to be sold in order to break even. (Printed in a horizontal print orientation.)

Expenses:

\$1000 – Scripts and royalties
\$500 – Sets and props
\$300 – Costumes
\$100 – Program printing
\$200 – Piano accompanist

Income

\$5 tickets sold
\$500 Program advertisements
\$300 Donation from student activity funds

Assessment checklist:

- ❑ Name of the files, along with your name, your teacher's name, class name and hour is in the upper left corner of the printouts
- ❑ Both spreadsheets have data clearly labeled.
- ❑ Both spreadsheets have correct print orientation.
- ❑ Both spreadsheets have columns of different widths.
- ❑ Spreadsheet A
 - Data is entered in correct format (whole numbers, no decimal points)
 - Graph is of correct data and is clearly labeled
- ❑ Spreadsheet B
 - Data is entered in correct format (currency) and in correct arrangement
 - A formula adding a range of numbers is used for totaling Expenses and Income
 - A formula to subtract expenses from income is used and labeled as Balance.
 - A formula multiplying ticket price by tickets sold is used to calculate expected income from ticket sales.

A suggested performance task to assess the level of competency of incoming high school freshmen:

Multimedia presentation software and digital image handling

The expectation of this school that you have some basic technology proficiencies in order to complete work expected of you. These proficiencies include:

1. Word processing
2. Spreadsheet use and graphing
3. *Multimedia presentation software and digital image handling*
4. E-mail use
5. Internet-enabled research

Expectations:

I can create a computer-generated slide show (*PowerPoint, Keynote, AppleWorks*) that can be used to accompany a presentation I would give in class. I know some basic rules of graphic design that apply when creating the presentation. My slide shows include images (clip art, original graphics, scanned images, and photographs) and text fields. The computer generated slides help reinforce or amplify my spoken message. I am able to perform the following tasks when creating a slide show:

1. Explain the features, uses, advantages, and disadvantages of multimedia/presentation programs and projects.
2. Create an original slide show file.
3. Use the outline feature of the program to organize the presentation.
4. Add and delete slides to the presentation.
5. Select or create a background/master.
6. Add titles, text and bulleted text.
7. Add, resize, and move images to slides including:
 - a. Original photographs.
 - b. Clip art.
 - c. Original graphics using drawing tools.
 - d. Scanned images.

Assignment

Create an original slideshow of at least six slides on a single topic. The slide show must be organized, have a consistent style and format, and include both text and graphics. Submit a printout of the slides.

Assessment checklist

- ☐ Name of the file, along with your name, your teacher's name, class name and hour on the first slide.
- ☐ There is a minimum of six slides.
- ☐ All slides have readable text and a consistent format (background, font, layout).
- ☐ Each slide has a title.
- ☐ At least one slide has a block of text.
- ☐ At least one slide has bulleted text.
- ☐ The slide contain each of the following (and are labeled)
 - An original photograph.
 - A piece of clip art shown in 3 sizes at various locations on a single slide.
 - An original graphic created with the program's drawing tools.
 - A scanned image with the source clearly given.

(This performance assessment makes me uneasy since such projects should include presentation skills along with the technology skills.)

A suggested performance task to assess the level of competency of incoming high school freshmen:

E-Mail Use.

The expectation of this school that you have some basic technology proficiencies in order to complete work expected of you. These proficiencies include:

1. Word processing
2. Spreadsheet use and graphing
3. Multimedia presentation software and digital image handling
4. *E-mail use*
5. Internet-enabled research

Expectations:

I have an e-mail account that I use on a regular basis to communicate with teachers, other students and people who might be considered experts in areas in which I am doing research. I know proper e-mail “netiquette” and safety precautions. I send and open e-mail attachments. I have an address book and signature file. I can:

1. Access and open my school e-mail account.
2. Identify e-mail user name, mail server domain name, and password.
3. Check and configure e-mail settings.
4. Get new mail.
5. Open, read and delete a message.
6. Send a message.
7. Reply to a message, forward a message and print a message.
8. Create an address book.
9. Set up a mailing list.
10. Create a signature file.
11. Organize and store sent and received messages.
12. Send, receive and open attachments
13. Understand e-mail “netiquette” and safety including:
 - a. Privacy issues.
 - b. Spam/spoofing.
 - c. Virus threats in attachments.
 - d. Importance of a signature file.

Assignment

Send an e-mail to the teacher giving you this assignment. Attach a word-processed document that answers the following questions:

1. What does the concept “limited right to privacy” mean in school and business settings?
2. What precautions should one take when opening an attachment and why?
3. What do “spam” and “spoofing” mean and how do you protect yourself from them?
4. Should the same rules that apply to verbal harassment in school apply to e-mail? Why or why not?

Assessment checklist

- ☐ Your name, your teacher’s name, class name and hour on in the e-mail message.
- ☐ The message includes a signature.
- ☐ The e-mail message includes a message indicating that it includes an attachment.
- ☐ The attached document adequately answers questions regarding safe and ethical use.

A suggested performance task to assess the level of competency of incoming high school freshmen:

Internet-enabled research

The expectation of this school that you have some basic technology proficiencies in order to complete work expected of you. These proficiencies include:

1. Word processing
2. Spreadsheet use and graphing
3. Multimedia presentation software and digital image handling
4. E-mail use
5. *Internet-enabled research*

Expectations:

I can use the Internet to efficiently locate information to answer my educational and personal questions. I know about and can locate information from the “free” Internet, full-text periodical databases, reference materials, and books located using the online library catalogs. I have criteria by which I evaluate the reliability of the information sources I find. I can properly cite electronic sources of information.

1. Effectively use an Internet browser.
2. Use directories and search engines to locate information on a topic.
3. Use the “Advanced Search” feature and term delimiters (and, not, or quotation marks, etc.) to effectively locate information.
4. Know the subscription databases (reference materials and full-text magazine databases) available to you.
5. Use your school’s and region’s on-line library catalogs to locate books. Know the procedure for interlibrary loan.
6. Print or copy a selection of a page from the WWW.
7. Know and understand the district’s Acceptable Use Policy for Internet use
8. Use selection criteria to determine the reliability of information taken from Internet resources.

Assignment

Submit a short paper that includes:

A word-processed bibliography of five information sources located by using the Internet on a single topic of your choice (or assigned by the teacher). The bibliography, in the citation style required by your teacher, must include:

A magazine article accessed using a full-text magazine index.

An Internet site.

A book in your school or local public library.

A paragraph copied from one these sources, with a clear indication that this is copied material.

A paragraph defending the authority of an Internet source you listed.

Assessment checklist

- ☐ Your name, your teacher’s name, class name and hour on the bibliography.
- ☐ Five sources of information including:
 - A magazine article accessed using a full-text magazine index.
 - An Internet site.
 - A book in your school or local public library.
- ☐ Each source is correctly cited.
- ☐ A paragraph copied from an online source with a clear indication of its origin.
- ☐ A short rationale for the authority of an Internet source.
- ☐ An example of using limiters with a search engine in conducting an Internet search.