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Office of **Information Technology**

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Defining "full" text. Some help from a Thesaurus.

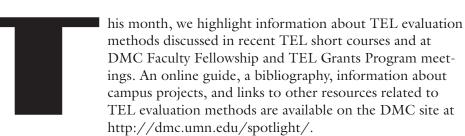|	
Entry:	full
Function:	adjective
Definition:	thorough
Concept:	completeness

Synonyms:

absolute, abundant, adequate, all-inclusive, ample, blow-by-blow, broad, choate, circumstantial, clocklike, complete, comprehensive, copious, detailed, entire, exhaustive, extensive, generous, integral, itemized, maximum, minute, particular, particularized, perfect, plenary, plenteous, plentiful, unabridged, unlimited, whole

Source: *Roget's Interactive Thesaurus, First Edition (v 1.0.0) Copyright © 2003 by Lexico Publishing Group, LLC.*

UMN

▼ DMC Spotlight Issue
TEL Evaluation Methods

Each month, Digital Media Center (DMC) consultants publish new information on our web site about a current educational technology issue discussed at sessions of the Technology-Enhanced Learning (TEL) Seminar Series, in our classes, or at our program or project meetings.

This month, we highlight information about TEL evaluation methods discussed in recent TEL short courses and at DMC Faculty Fellowship and TEL Grants Program meetings. An online guide, a bibliography, information about campus projects, and links to other resources related to TEL evaluation methods are available on the DMC site at http://dmc.umn.edu/spotlight/.

An excerpt appears below.

Description

As educational uses of technology have become more common, faculty members, administrators, and staff members have begun to investigate the impact that technology is having on students' learning environments. Are students able to integrate the use of technology into their study habits? Does it permit them to work effectively with their peers? Have their learning outcomes improved? A well-conceived evaluation project can produce very illuminating answers to these questions. For instance, a recent technology survey of students at the University of Minnesota revealed that:

- in general, students' feel strongly positive about the effects of technology on their educational experiences;
- students find WebCT sites to be the most useful for their coursework of any technology listed on the survey; and
- students find that procrastination is a significant problem when doing online coursework.

Conducting a TEL evaluation is not very different from performing a standard educational evaluation. In essence, it's a matter of determining whether you have reached the goals you hoped to reach through your use of educational technology.

Online guide

An online TEL Evaluation Methods guide is available on the DMC web site at http://dmc.umn.edu /evaluation/. Highlights include the following.

Determine purpose and goals

You need to determine the **purpose** of the evaluation. Your evaluation could be formative or directed at revision and improvement of a TEL project; or it could be summative, directed at determining whether a TEL program continues, is expanded, or is reduced. You also need to set out with some specificity the **goals** of your TEL project. These will often need to be clarified and operationalized in order to be amenable to evaluation.

> *Example:* An instructor decides to conduct a formative evaluation and that one of her goals is to promote a learning community among the members of her class. She then needs to clarify terms such as "community" and operationalize the signs of success, such as that students should demonstrate mutual concern and respect.

Select strategies and tools

Once you've laid your goals out in this way, you're ready to think about what evaluation strategies to use. Some strategies produce different types of data and make possible different sorts of inferences. **Quantitative strategies** focus on research that produces numbers, often attempting to quantify changes in learning outcomes; **qualitative strategies** focus on research into phenomena that are not amenable to easy quantification, like understanding and analytic ability.

The distinction between quantitative and qualitative data often polarizes people in the evaluation field. The best approach probably is to use both approaches in complementary fashion. Quantitative evaluation is good at telling you what has occurred, while qualitative evaluation is good at telling you why those things occurred as they did. Quantitative methods provide data that is comparable and amenable to powerful analytic techniques; qualitative methods provide richness of context and depth of understanding.

You also need to determine which **tools** you will use to collect data. Each has its advantages and disadvantages, and is appropriate for evaluating certain sorts of goals. It's often a good idea to use several different tools, such as the following:

- direct observation or videotaping
- focus groups
- interviews of sample students
- learning tests
- minute paper
- pre- and post-class surveys, questionnaires, or misconception checks
- student confidence logs after different activities

> *Example:* The instructor in the previous example could distribute a survey with both open- and closed-ended questions to gather both quantitative and qualitative data; she could use a focus group to collect qualitative data; or she could employ direct observation to gather both kinds of data.

Collect data

Once you have selected your strategies and tools, you need to construct and distribute them to students. You'll need to consider when to deliver each tool, what questions to ask, how to phrase the questions, how to deliver the tool, how to record data, and how to report results to the students if possible.

The exact structure of a given evaluation project depends heavily on the goals and objectives of the educational experience and on the particular research questions in which you are interested.

> *Example:* A fairly comprehensive approach might involve administration of the examples in Figure A, taken from the University of Glasgow's TILT group, http://www.elec.gla.ac.uk/TILT /E-Eval.html.

Analyze and share the results

When your evaluation is complete, you will need to analyze the data you've collected and draw appropriate conclusions about your use of educational technology. The analysis you perform can either be qualitative or quantitative. Whatever sort of analysis you perform, others will be interested in your results, so you might want to consider publishing them.

> *Qualitative analysis example:* You might review responses to an open-ended survey question to identify **themes or patterns**. In a recent student

1. A pre-task questionnaire to discover aspects of what each student brings to the session (e.g., prior experience, personal motivation).
2. Confidence logs after each kind of activity.
3. A learning test ("quiz") … [that] would be administered at the start of the session, at the end of the session, and after a delay of some weeks.
4. Access subsequent exam performances on one or more relevant questions.
5. A post-task questionnaire to elicit personal reactions … and to ask about the relative value each individual puts on various resources.
6. Interviews of a sample of students,
7. Observation and/or videotaping of one or more individuals.

technology survey at the University of Minnesota, researchers asked the question, "What advice would you [the student] give to students who are new to instructional technology?" The researchers discovered several conspicuous themes, which were subsequently addressed in student orientation materials:

- "Don't slack off."
- "Ask for help when you need it."
- "Don't procrastinate."

Quantitative analysis example: If you collect **frequency data**, you might discover (as did the investigators who administered a spring 2001 University of Minnesota technology survey) that about 47 percent of students usually access online materials via a dial-up connection. You then may decide to provide low-bandwidth alternatives for multimedia presentations.

You also could **cross-tabulate answers** about the type of Internet connection they use with their answers to questions about the frequency with which they access a course Web site or with their attitudes about the usefulness of online course materials. You then might discover that students with high-speed Internet connections access online materials more frequently or feel more positive about such materials.

You then could **recode the variables** to compare the answers given by freshman and upper-class students. If you obtained information about the students' year in school through a survey question, you could recode the variables to gather several of the answers to this question (e.g., by sophomores, juniors, and seniors) into a single variable, and then compare the answers given by freshmen and upper-class students.

Other resources

If you are interested in evaluating a TEL project, you may want to use one of the campus and outside resources that will be highlighted on a Spotlight Issues TEL Evaluation Methods page at http://dmc.umn.edu/spotlight/, such as the following

- Meet with one of our **consultants** to discuss research design, questionnaire construction, and data analysis issues. See: http://dmc.umn.edu/consultations/.

- View University of Minnesota faculty and student **surveys** and **reports** about the results. See: http://dmc.umn.edu/surveys/.

- Take our **Evaluating and Assessing Technology-Enhanced Learning TEL short course** offered each semester. See: http://training.micro.umn.edu/ShortCourses/ClassDetail.cfm?ClassID=1572.

- Learn about an **online nursing curriculum evaluation project** conducted by staff members in the School of Nursing and our consultants. See: http://dmc.umn.edu/nursing-evaluation/.

- Get **citations to literature** about the effectiveness of TEL. See: http://dmc.umn.edu/research/eval-bibl.shtml.

- Learn when you need to get **Institutional Review board (IRB) approval** for your evaluation and research projects: http://www.irb.umn.edu.

Other spotlight issues

The next DMC Spotlight Issues will be the topics of the spring sessions of the TEL Seminar Series.

- To find the TEL Seminar Series schedule, see http://dmc.umn.edu/series/.

- To find information about past and future DMC Spotlight Issues, see http://dmc.umn.edu/spotlight/.

Just what is full-text?

Nancy K. Herther, University Libraries, http://www.lib.umn.edu

No standard definition

If you try to find "full-text" in the online Oxford English Dictionary you will find nothing on "full text" or "fulltext" or "full-text". (The OED is available to current students, staff, and faculty on campus at http://www.lib.umn.edu/reference/dict.phtml) Also http://www.dictionary.com has nothing, perhaps for good reasons.

There is clearly no standard definition of exactly what full-text is, despite the fact that the term is used in many information products today. This can be a major problem in secondary research, whether you are working on a term paper or starting research for your dissertation.

Often library staff are contacted by confused patrons who are trying to make sense of some article they have found over the web, including some found in various databases offered through the Libraries' indexes. In some cases, if a database says it is giving you full-text, it is truly giving you the complete material (article, book chapter, etc.) that you seek. However, very often you will be told that you are getting full-text by the database only to "click" and find that major portions of the work are missing, such as figures, pictures, graphs, sidebars.

If you need to do some serious research, this could be a major stumbling block to getting your work done efficiently; and it might even jeopardize your project by giving you, in effect, inaccurate information.

Something's missing!

When something's missing — a key concept, key data, or other important information — people often assume they have done something wrong.

The recent New York Times versus Tasini decision further complicates the issue of finding full-text of materials. (In this decision Justices upheld an appeals court ruling that the reuse of a freelance author's work on CD-ROMs and in commercial electronic databases without the author's permission constituted copyright infringement.) However, the problem is most often the lack of a standard definition for full-text; and the marketing plans of database vendors, who advertise that by pushing some button the user will, in fact, have the full-text of some document.

Search Tips ■■■■■■■■■■■■■■■■■■■

▼ Tip 1 — don't rely on any single source for information

- In most cases, to be comprehensive, you must run your search in multiple databases, whether you are using an article index or other type of database.
- For help identifying useful databases, contact the Libraries' reference staff or liaisons for assistance or use the handy guides available here: http://www.lib.umn.edu/articles/indexes.phtml
- For a complete list of selectors and liaisons, see: http://www.lib.umn.edu/about/selector.phtml

- When searching the Internet for information, do not rely on only one search engine. Always try a few different ones. To use the search engines well, be sure to read any help information and any information about advanced search options.
- For information on search engines, see: http://tutorial.lib.umn.edu/infomachine.asp?moduleID=7>

▼ Tip 2 — get to know the databases you select

- Play around with each database you choose to search for awhile to get a feel for the type of information that is included in the database.
- Check through the references found with your initial search. Ask: do they look appropriate for your topic?
- Look at the subject headings or descriptors used by each database to see what terms the database uses.
- Read through the abstracts to see if the articles are on target to your needs. If not, try another database or other search terms.

For example, one key business database here in the Libraries is Business Source Premier. The vendor describes the database this way:

> As the world's largest full text business database, Business Source Premier provides full text for more than 3,000 scholarly business journals, including full text for nearly 1,000 peer-reviewed business publications. Coverage includes virtually all subject areas related to business. This database provides full text for more than 300 of the top scholarly journals dating as far back as 1922. This database is updated on a daily basis via EBSCOhost.

This looks like an excellent place to get at the texts you might need and do one-stop research, getting not only a good list of materials on some topic, but also direct access to the resources themselves. However, this is not necessarily true.

Citations often list various full-text options for the articles included in the database. However, what you get depends on how you access the article. For this citation from Business Source Premier, for example, you are given two options to receive the full text:

> **On object modelling for technology management in enterprise.**; By: Chandra, Charu; Kumar, Sameer., Human Systems Management, 2001, Vol. 20 Issue 1, p35, 11p, 3 diagrams

However, to see the article and the diagrams, you must choose the PDF (portable document format) option, because the HTML (web browser) full-text option does not include the diagrams. The database only includes everything in the articles if you select the PDF option for the full-text; which gives you, basically, a copy of the article as it appeared in the print edition of the journal.

Business Source Premier is, in many ways, an excellent source of information. However, when it comes to full-text, user beware!

Other examples of not quite full-text

Expanded Academic Index and LexisNexis Academic are two other examples of databases that say they give you the full-text or the complete "body" of the article. However, in many cases, charts, figures, tables, and photographs are not included.

Years ago, the Libraries had a newspaper database that regularly cut out all sidebars and even claimed to extract news wire supplied information from articles that they included in their "full-text" of papers. This may make sense to the vendors, but it spells problems for good secondary research.

■ ■

▼ Tip 3 — examine each full record to see what is included

- Print or examine on-screen a complete, descriptive record in the database.
- Make sure you are getting all of the bibliographic information you will need to retrieve the article or book.
- Look for any indication of special features to the article that would be beneficial to you: charts, graphs, pictures, maps, figures. To effectively search for the full text of references, make sure you have the full details about each item.
- Make sure the citations are clear. If the database gives you information that doesn't make the citation clear, copy the entire descriptive record and ask for assistance at a reference desk. For example, the Wall Street Journal has various editions, and the location articles may be on different pages for the different editions.

▼ Tip 4 — check for added features to make your search time more effective

- When viewing specific citations, look for links to full-text in the database, links to full-text or ejournals in the holdings information in MNCAT records or other sources for the text itself.
- Check for features that allow you to download the citations on disk, send them via e-mail, or use a bibliographic management program like RefWorks, which might make developing your bibliography easier.

▼ Tip 5 — reveal the secrets of library research; attend special workshops

- Every term, Libraries' staff offer free workshops intended to help beginners or advanced researchers as they navigate their secondary research projects. Check them out here: http://www.lib.umn.edu/registration/

Many full-text sources of news information in the Libraries do not include photographs, charts, graphics, or cartoons/drawings that might be significant if you are studying how information is being presented. Ethnic NewsWatch (a wonderful source of information from the ethnic presses of North America), Wall Street Journal, and Gender Watch are other examples of textual full-text without any of the potentially useful, accompanying graphics, figures or pictures.

Is this good enough for your research? Only you can decide.

User beware

The bottom line is: to be sure you are getting all the information contained in some source, you, as the researcher, must be aware of what you need, must be careful and cautious of what you find, and be willing to go back and check a print edition (or PDF version of the original source). The best advice for pain-free full-text researching is to:

1. Select the PDF version whenever possible, and confirm that the PDF version includes all the pages from the citation. If done fairly by the vendor, the PDF version should look exactly like a copy of the original.

2. Use MNCAT as your first choice for getting access to journals with full-text electronic versions. Within the MNCAT record for each journal, we have linked URLs to any available ejournals or ebooks to which we would provide access. Use these links to find your source materials.

3. If you have an HTML or other version, read it carefully. Remember, there is no standard definition for full-text. If something doesn't make sense, stop and seek out a "hard copy" of the resource as a reality check.

If the results seem too good to be true, perhaps they are! This may be the information age, but we are also in an information economy, an economy populated by businesses that are not from an academic tradition. Their understanding of the needs of serious researchers is not necessarily complete or accurate.

If you have problems making sense of some source material or using some database, stop in at one of the Libraries' reference desks or call us. We also offer basic reference services 24/7 through our Ask Us web page: http://infopoint.lib.umn.edu/.

If you have a question, Ask Us!

My thanks to Dennis Lien, Wilson Information, Reference and Instruction Service Department for his input on this article.

■ Communications about this column should be addressed to: Nancy K. Herther, Social Sciences Librarian & Bibliographer, 170b Wilson Library, West Bank; n-hert@umn.edu; 612-624-2020.

Training, workshops: Fine tune your research skills

The Libraries offer a wide variety of important workshops and training sessions for the Spring term. Classes for 2004 include:

✦ *7 Keys to Grad Research Success*! ■ What resources/databases should every grad student know about to get ahead in their program? This session covers the best resources to help you be more efficient, more effective, and more successful in your career here, regardless of your major. ■ Offered twice: Wed, Jan. 14, 10:15–11:15 AM and Thur, Feb. 5, 9:15–10:30 AM.

✦ *Current Awareness Services* ■ Many key databases — Psychological Abstracts, COMPENDEX, Sociological Abstracts, MEDLINE, EconLit, Business Source Premier and tens more! — offer current awareness services, giving you updates of newer journal/book literature on a regular schedule. Learn more, including how you can set up your own alerts to have information on key new research sent to your e-mail box each month! ■ Offered twice: Wed, Feb. 11, 9:15–11:00 AM and Tue, Feb. 17, 11:30 AM–12:45 PM.

✦ *Automatic Browsing of Current Contents from your desktop* ■ Setting up your own alert service to get information on core journal research *as it is being published* delivered right to your e-mail box. ■ Offered twice: Wed, Jan. 28, 10:10–11:45 AM and Tue, Feb. 3, 12:20–1:30 PM.

Registration

For location, registration, and other information on all of the Libraries workshops, see: http://www.lib.umn.edu/registration ■

To improve, get everyone to participate

Back in the early '90s I went to a TQM (Total Quality Management) seminar. One thing they taught at this seminar was to look at your total process, from A-Z.

I agree that it's important to understand and take into account the whole process, especially if you want to make changes. You cannot improve a process without taking into account the process as a whole. However, over the years I've learned that if you want to improve your process, not only must you look at it as a whole but you must also get everyone involved.

It's important to get everyone involved because you, as a manager or director, will never fully understand the details of the process without involving those who actually work the process. Their input is vital to your understanding of the real process. If you don't have their input, you'll be left to make assumptions about the process that may or may not be true. Any changes you make to a process that are based on assumptions could result in things getting worse not better.

If you, as a manager, make changes to a process without fully understanding that process, real change will not occur. It will be like having a lot of thunder and lightening but no rain; the results will be lacking.

For real change to occur, everyone has to buy into it. Those who don't buy into the change will end up being barriers to the change. The best way I know to get people to buy into change is to include them in the process.

Let them tell you about their part of the process. Let them define the process for you. Encourage their feedback. Ask what they think would improve the process.

From my experience, when I fully understand how a team works and what their role is in the process, then as a manager I can come along side of them and help them improve their part of the process. I can see how they fit into the bigger picture, and I can help them make changes to improve their process.

If I spend the time to get to know how a team functions and encourage them to be a part of the process of change, then real change can occur. The team members are more likely to trust the changes I propose because they have had the opportunity to give input and be a part of the process. They are more likely to buy into the change and help facilitate it, rather then become barriers to it.

■ Shih-Pau Yen, Academic and Distributed Computing Services and Networking and Telecommunications Services

The views expressed in this column are the personal opinion of the author and not the official view of the Office of Information Technology.

▼ Help

Computer Misuse or Abuse (also see Procedure 2.8.1.1)
- Emergency Network Help Line 612-625-0006
- Non-emergency, e.g., spamming .... abuse@umn.edu

1–HELP 612-301-4357

Dial 1-HELP. Listen to the voice menu list of options.
Press the number of your desired option.
- Technology Help.................. www.umn.edu/adcs/help

▼ Modem pool for active UM accounts

Internet/PPP: up to 53kps if v.90................ 612-627-4250

▼ Quick Guide

- Internet/Email account options .... www.umn.edu/validate
- Office of Information Technology ....www.umn.edu/oit
- One Stop Services .... onestop.umn.edu
- Techmart .... www.techmart.umn.edu
- Computer Accommodation Program .... cap.umn.edu
- University Computer Services .... www.umn.edu/ucs
- MNCAT/LUMINA (Library) ....www.lib.umn.edu
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