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Technical Evaluations Report

7. *Software Evaluation Criteria and Terminology*

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Abstract

This report discusses issues of software selection and terminology, highlighting terms that are useful in evaluation studies. A framework for the evaluation of educational software is presented. Links are cited at the end of this article to the *American Society for Training & Development* (ASTD), and *CNET Network's* glossaries of terminology relating to online collaborative methods.

Product Selection Criteria

Building effective online learning environments requires a change in the perception of knowledge and the roles and tools of learners, teachers, support staff and administrators. The task of selecting appropriate tools to facilitate online learning is complicated by the sheer volume of product choices and funding constraints. Ideally, product selection should be based on rigorous investigation and evaluation of the ability of each product to meet criteria specific to the learning needs and objectives of its users. A series of categories and criteria is suggested for the evaluation of online collaborative tools in the development, delivery, and administration online learning (ASTD, 2001).

1. *Cost (institutional and user):*

- System requirements namely open platform, platform-specific, server purchased vs. hosted.
- Bandwidth (modem, cable, ADSL, T-1, etc.)
- License fees (scaled per user)
- User software/ hardware (webcam, etc.)
- Download/ installation

2. *Complexity (user focus):*

- Technical support (user manual; frequently asked questions; online and offline help)
- Collaborative tools (Asynchronous – email, conferencing; Synchronous – chat, audio-conferencing, whiteboard, virtual networking; Isosynchronous – desktop video-conferencing)
- Usability (seamless technology; degree of intuitiveness; ease of use; navigation; consistency; stability; functionality)

3. Control:

- Secured access (password protection; encryption; firewall)
- Personalization
- Privacy (protection by parental/ teacher controls; banner/ pop-up ads)

4. Clarity:

- Resolution, sound, size, layout, etc.

5. Common Technical Framework (CTF) - an ASTD classification scheme:

- Interoperability
- Advanced Distributed Learning (ADL) partnership (protocol or standards: IEEE, ISO, SCORM, etc.)
- Scalability
- Platform
- Integration
- File-sharing

6. Features:

- Learner tools (search; references/ URL links; glossary; spell-checking; formatting; attachments; upload/download files; self-assessment; grades)
- Teacher tools (content development; student assessment; student management; student tracking)
- Administrator tools (registration; report generation)

Weighing Product Selection Factors

Before selecting specific online educational products, educators and institutions should consider each of the above factors, balancing as far as possible the merits of specific products against the general features of the educational programme and system. The selection of a specific product requires attention to:

- Software reliability
- Availability of technical support by the institution to the users
- Availability of support by the software supplier to the institution and the users
- Cost to the institution – e.g., is full ownership (i.e., local server support) available for the software?
- Cost and/or burden to the learner

Four specific questions arising in product selection are as follows.

1. If the success of the course or programme depends heavily on the software tool, can the institution guarantee the software's longevity? In the current state of development of online

collaborative software, this is possibly the most difficult variable for an institution to control. For all of its efforts to identify appropriate and reliable software sources, the institution should identify back-up products through evaluation studies such as those reported in this series.

2. Is the institution prepared to provide the necessary support for the selected tools? [**N.B.** Athabasca University's Centre for Distance Education (source of the current report series) provides online support mechanisms for its selected collaborative tools, in addition to the more general support provided by the University's main helpdesk (Baggaley, 2002).]

3. Will learners derive sufficient learning benefits despite the costs imposed by the collaborative technologies? During the current, relatively early state of development of these technologies, evaluation studies such as reported in this series generate valuable discussion among teachers and students about the technologies' merits and demerits in specific situations.

4. Will instructors use the technology to transform or direct learning? (Garrison, Anderson, & Archer, 2000; Sherry & Wilson, 1997; Shotsberger, 1997). The instructors' will and ability to use the technologies are at least as essential to their successful adoption in online learning as the selection of the product itself.

The [next report](#) in this series will compare the merits of fully-featured and stand-alone conferencing product.

References

ASTD (2002). *Online Glossary*. Retrieved on April 25, 2002 from.

<http://www.learningcircuits.org/glossary.html>

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Sherry L., and Wilson, B. (1997). Transformative communication as a stimulus to Web innovation. In B. H. Khan (Ed.) *Web-based instruction*. Englewood Cliffs, NJ.: Educational Technology Publications. 67 – 73.

Shotsberger, P. G. (1997). Emerging roles for instructors and learners in the Web-based instruction classroom. In B. H. Khan (Ed.) *Web-based instruction*. Englewood Cliffs, NJ: Educational Technology Publications. 101 – 106.

N.B. Owing to the speed with which Web addresses are changed, the online references cited in this report may be outdated. They can be checked at the Athabasca University software evaluation site: cde.athabascau.ca/softeval/. Italicised product names in this report can be assumed to be registered trademarks.

*Belyk & Feist, Technical Evaluation Report 7:
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