



## **Policies Regarding the MERLOT Peer Review Process**

### **Evaluation Standards for Learning Materials in MERLOT**

One of the goals of MERLOT is to develop and apply evaluation standards for web-based learning materials. Faculty can use these evaluation standards to:

- Select new materials to submit to MERLOT,
- Review existing materials in MERLOT, and
- Provide requirements for development of new materials for MERLOT.

There are three general categories of evaluation standards to be used within MERLOT:

- 1) Quality of Content
- 2) Potential Effectiveness as a Teaching-Learning Tool
- 3) Ease of Use

#### **Quality of Content**

There are two general elements to quality of content:

- Does the Learning Material present valid (correct) concepts, models, and skills?
- Does the Learning Material present educationally significant concepts, models, and skills for the discipline?
- To evaluate the Validity of the content, the reviewers should rely on their expertise. To evaluate the educational significance of the content, reviews can use the following guidelines:
  - Content is core curriculum within the discipline. Core curriculum topics are typically covered to some degree in the introductory classes within the discipline and/or “Everyone teaches it” and/or it is identified as a core area by the discipline’s professional organizations
  - Content is difficult to teach and learn.
  - Content is a pre-requisite for understanding more advanced material in the discipline



## Potential Effectiveness as a Teaching and Learning Tool:

**WARNING:** This evaluation is the most difficult. Determining actual effectiveness requires actual use of the Learning Material by real students and faculty. Evaluating Potential effectiveness is asking you to judge, based on your expertise as a teacher, if the Learning Material is likely to improve teaching and learning given the ways the faculty and students could use the tool.

Sometimes the Learning Material being evaluated is “taken out of context”, making it difficult to evaluate. Remember that the value of the resource is its ability to be re-purposed for others to use in different contexts. In evaluating the Potential Effectiveness for Teaching and Learning, it is Critical to define the purpose of the Learning Materials. That is, you must contextualize your reviews. The MERLOT materials on Evaluation Standards and the Peer Review Reports emphasize this point. In performing a review, you can use the following three questions to help you define the pedagogical context.

- What stage(s) in the learning process/cycle could the materials be used .
  - Explanation or description of the topic/stating the problem
  - Demonstration of the curriculum/exploration of the problem
  - Practice using the curriculum/analysis of the outcomes from solving the problem
  - Applying the curriculum to “new” problems/application of the outcomes to other problems
- What is (are) the learning objective(s)? What should students be able to do after successfully learning with the materials?
- What are the characteristics of the target learner(s)?

An evaluation would be conditional on how the Learning Material was used. For example, “if the faculty using tool X in a supervised lab with freshman, reviewed the content beforehand, and had the students do tasks A & B, then the software should enhance students’ learning. The reasons are...” All these issues and more are also represented in the Learning Assignment wizards in MERLOT.

There are other general elements to effectiveness as a teaching-learning tool that MERLOT asks reviewers to consider:

- Does the interactive/media-rich presentation of material improve faculty and students’ abilities to teach and learn the materials?
- Can the use of the Learning Material be readily integrated into current curriculum and pedagogy within the discipline?
- Can the Learning Material be used in a variety of ways to achieve teaching and learning goals?
- Are the teaching-learning goals easy to identify?
- Can good Learning Assignments for using the Material be written easily?



## Ease of Use

The basic question underlying the ease of use standard is: how easy it is for teachers and students to use the software for the first time? Elements that affect ease of use include:

- Are the labels, buttons, menus, text, and general layout of the computer interface consistent and visually distinct?
- Does the User get trapped in the software?
- Can the User get lost easily in the software?
- Does the Learning Material provide feedback about the system status and the User's responses?
- Does the Learning Material provide appropriate flexibility in its use?
- Does the Learning Material require a lot of documentation, technical support, and/or instruction for most students to successfully use the software?
- Does the Learning Material present information in ways that are familiar for students?  
Does the Learning Material present information in ways that would be attractive to students?





## The MERLOT Rating System

The primary purpose of the Peer Reviews and Member Comments is to allow faculty from any institution of higher education to decide if the online teaching-learning materials they're examining will work in their courses. The emphasis on the User's perspective is the reason why the Peer Reviews are performed by peer users of instructional technology, and not necessarily peer authors of instructional technology. The text in the Peer Review report is the most important information for faculty. Ratings should be used mostly as search indicators, rather than "answers".

Members providing Member Comments also use a 1-5 star rating scale.

- 1 Star: Materials not worth using at all
- 2 Stars: Materials do not meet minimal standards but there might be some limited value
- 3 Stars: Materials meet or exceed standards but there are some significant concerns
- 4 Stars: Materials are very good overall but there are a few minor concerns
- 5 Stars: Materials are excellent all around

Rating the three (3) criteria (Quality of Content, Potential Effectiveness, and Ease of User) allow users to separate the different aspects of the learning material. Three combinations of ratings are provided below as examples:

- High Quality, High Potential Teaching, and Low Ease of Use
  - Possible interpretation: Good curriculum but will require extensive user support and training.
- Low Quality, Low Potential Teaching Effectiveness, and High Ease of Use.
  - Possible interpretation: Bad curriculum but easy for a new users to get accustomed to using instructional technology.
- Medium Quality, Low Potential Teaching Effectiveness, and High Ease of Use.
  - Possible interpretation: Materials are accurate and easy to navigate but require extensive background knowledge.

### Posting Ratings for Peer Reviews: No Stars, 3, 4, 5 stars

The current protocol for Peer Review ratings on the MERLOT website is to post ratings of 3, 4, or 5 stars and not post ratings that are 1 or 2 stars overall. Consequently, "no stars" attached to the Learning Material could mean that the material was rated poorly by the Editorial Board or



the materials were not yet reviewed. Users could not distinguish between these two possibilities if there are no Member Comments. .

Member Comments do have the 1-5 star range so users can (and have) provided 1 & 2 star ratings. Any MERLOT Member and/or Editorial Board Member can post Member Comments if they wish.

Why does MERLOT not post Peer Review ratings of 1 or 2 Stars? There are a number of different reasons:

- MERLOT is an open resource. People contribute material to the collection because they see some value in the material. For an open resource to work, it must enable participation and provide value to the participants. We must recognize that there is a diversity of standards related to quality and this diversity is supported by the principle of academic freedom. Academic freedom does not mean that faculty are free to do a “poor job” teaching, but it is a delicate balance between establishing quality standards and enabling the freedom to use diverse learning materials.
- MERLOT is a resource of End Products and Developing Products. The End Products should be ready for immediate and effective use. Developing Products are at an early or intermediate stage of development and will by definition have problems. Both End Products and Developing Products provide ideas and guidelines for developers and users of instructional technology. It will be critical to support the Developing Products because we need to create a process for encouraging the expansion of the collection.
- There are a lot of good learning materials “out there” to review first. Practically speaking, identifying the good materials first is more important and useful than identifying the bad materials first.
- MERLOT needs to build a sustainable culture of volunteerism and professional responsibility.
- Posting positive reviews supports the good materials and provides the community with recognized samples of good materials.
- Constructive criticism on the “bad” materials will identify areas that need improvement. The feedback can be used to engage Authors to participate more fully in MERLOT.
  - Authors can remove their materials from MERLOT
  - Authors can improve the materials and resubmit them to MERLOT







## Peer Review Process

MERLOT will conduct the peer review of the online teaching-learning materials. The peer review process for evaluating teaching-learning materials will follow the model of peer review of scholarship.

Faculty selected in accordance with the MERLOT guidelines will perform the peer review of the MERLOT learning materials. Each Editorial Board will have an Editor and Editorial Board Members who may be supported by a MERLOT Partner. These Editorial Boards will be supervised and managed by the MERLOT Management Team.

The Editorial Boards will perform the following activities in the Peer Review Process:

- Notify Author of Potential Review
  - Upon submission of the materials into MERLOT, Authors are automatically notified that their materials might be peer reviewed and are provided a description of the peer review process.
- Develop Evaluation Standards
  - The MERLOT Editorial Boards are provided leadership, tools, and training in developing evaluation standards and processes.
  - The MERLOT Management Team will provide the discipline teams with a framework of evaluation criteria:
    - Quality of Content
    - Potential Effectiveness as a Teaching Learning Tool
    - Ease of Use
  - The Editorial Board will need to develop substantial inter-rater reliability in the evaluations before evaluation procedures on all materials are implemented.
- Conduct evaluations:
  - Discipline teams typically use a two stage review process:
    - Stage 1: Triage Review to identify worthy candidates and
    - Stage 2: Intensive Review of worthy candidates.

### Stage 1 Triage Review Process:

- The Editors assign materials to Peer Reviewers for Triage.
- Board Members efficiently review the collection and provide cursory evaluations. There are five evaluations possible in the triage process. The material is:
  - **Definitely worth** reviewing (High Priority) These appear as Editor Review on the Material Detail



- **Possibly worth reviewing** (Low Priority),
- **Defer reviewing** Language of material precludes two reviewers from reviewing,
- **Not worth reviewing at this time** (Remove from Peer Review process), or
- **Should be removed from the collection.**
- Peer Reviewers record their Triage in Workspace.
- Peer Reviewers can post Member Comments based on cursory evaluations as appropriate.

### Stage 2 Intensive Reviews:

- Editors or Associate Editors review Triaged Learning Materials and assign High Priority materials to Peer Reviewers.
- If desired by the Editorial Board, Editors can provide Authors of materials opportunities to decline participation in review process within a two-week window.
- Each Learning Material is reviewed by two (2) different Peer Reviewers for the Editorial Board. The reviewers will apply the Editorial Board's evaluation standards and review procedure, including the use of the Review Form.
- Peer Reviewers will write Peer Review reports in Workspace and advise the Editor/Associate Editor when they have completed the review.
- IF THERE IS A SIGNIFICANT DISPARITY IN THE TWO REVIEWS, the Editor will assign the material to a third reviewer or review the material himself/herself.

### Reporting Evaluations:

- Editors/Associate Editors will integrate the two peer reviews into a Composite Review report that will be posted on MERLOT
- The Editor will send the review to the Authors for their feedback using the email address in the MERLOT Material Detail record.  
The Author has two weeks to respond before the review is posted on MERLOT. The Author can respond by:
  - Providing his/her response to the review which would be posted with the Peer Review Report in MERLOT.
  - Providing feedback to the Editorial Board about the accuracy of the review.
  - Requesting a delay in the posting of the Peer Review to enable the author to revise the materials in response to the review.
  - Decline the posting of the review.
- Editors will post the Peer Review Report(s) in MERLOT upon author feedback or two weeks after notification.



- The author” of the Peer Review Report is the “MERLOT Discipline] Editorial Board”
- A list of the members of the “MERLOT [Discipline] Editorial Board” will be posted on the MERLOT site and on the Discipline Portal.
- The evaluation criteria and the review procedure will be posted in MERLOT





## The MERLOT Peer Review Report

Members of the MERLOT Editorial Boards write a Peer Review Report containing the information below:

- Description of the Learning Material comprised of the Peer Reviewers' summary of the material. The summary description will include:

- Overview: General Description of learning material
- Type of learning material (simulation, tutorial, animation, etc)
- Technical requirements (HW/SW/network)
- Learning goals: Concepts to learn, skills to acquire, attitudes to develop
- Recommended uses: conditions under which the material would be used
- Targeted student population(s) and teachers who would find materials most useful
- Prerequisite knowledge/skills required to use the learning material

- Evaluation of the Learning Materials, composed of the reviewers' judgment of

- **QUALITY OF CONTENT:**

- Evaluate the accuracy or validity of the material. Does the software present valid (correct) concepts, models, and skills?
- Evaluate the importance of the content for the discipline.
  - Strengths of the Learning Material
  - Concerns with the Learning Material

- **POTENTIAL EFFECTIVENESS AS A TEACHING-LEARNING TOOL:**

- Evaluate the effectiveness of the presentation of the content. Does the software illustrate the concepts effectively so the students can successfully achieve learning goals (learn concepts/acquire skills)?
- Evaluate the effectiveness of the activities or ways of using the software that would facilitate student learning. Will the students learn the concepts and skills by using the software? Would the software be used in a supervised laboratory setting, in in-class demonstrations, in self-paced, home or lab setting?
  - Strengths of the Learning Material
  - Concerns with the Learning Material



- **EASE OF USE:**
  - Evaluate how easy it is for teachers and students to use the software. How much instruction would be needed for most students to successfully use the software?
    - Strengths of the Learning Material
    - Concerns with the Learning Material

