Dimensions of Quality Management Systems in Self-Improving Communities

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POSTER ABSTRACT

A growing number of online communities build, contribute and share collections of information. While consumers are delighted with the prospect of access to large collections of resources via the World Wide Web, they are increasingly concerned about how they can select the highest quality resources. In response to this issue, online communities are seeking to evaluate and maintain the quality of their resources and create sustainable processes of improvement.

Funded by the NSF (grant# REC-9804930), Educational Software Components of Tomorrow (ESCOT, http://www.escot.org) is an educational software project that is exploring the issue of quality online resources in the context of developing reusable, interoperable component-based software for middle school mathematics. The ESCOT community has encountered quality issues that stem both from specific project requirements as well as those found more broadly across online communities. Some of the issues that have arisen include: defining how a community thinks about quality, developing mechanisms for quality assurance that reflect multiple perspectives, and creating measurement and improvement processes that are sustainable and manageable.

Rather than applying a single quality management process such as an expert ratings system or community-based standards, our approach is create a hybrid, flexible model that takes into account various dimensions of the quality question including community requirements, communication patterns, timeline, resources, knowledge base, incentives, etc.

Our poster will present a framework for looking at the quality problem in self-improving communities and examples of potential solutions. The dimensions of this framework include: (1) expert or consumer-based ratings, (2) explicit ratings or inferences from patterns of use (3) free form or structured ratings (4) example-based criteria or rule-based criteria. We visualize each dimension as a continuous spectra, and will illustrate points along these dimensions with examples chosen from a variety of actual communities. By interacting with conference participants from diverse fields, we hope to stimulate discussion around emerging dimensions of quality management processes in online environments given the diverse characteristics and requirements of these various fields.

Keywords

Quality, education, software components