

Summarize the Thesis

Digital Libraries

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The purpose of evaluating digital libraries is to determine well-designed digital libraries. Evaluation criteria are usability, performance, and content evaluation in the domain. Here, the validated digital library consists of an International Open Public Digital Library (IOPDL), along with a collection published by itself. This helps you find the advantages and disadvantages of traditional digital libraries, strengthening them, and complementing them. This will improve the overall quality of digital libraries.

Traditional evaluation methods evaluate one or two specific areas of many areas, so there is no appropriate way to evaluate multiple performances together. Therefore, we propose the proposed evaluation criteria CUPE criteria to evaluate multiple performances. Content evaluation, usability evaluation, and performance evaluation for digital libraries are mainly performed.

You should evaluate the content of a well-designed collection of digital libraries, the usability of the interface, and the performance of existing digital libraries. Present and use CUPE criteria, one of the main criteria for content, usability, and performance evaluation. Seven of the three main criteria and checklist are as follows: The criteria are selected from the

existing evaluation criteria to suit the project purpose of the project.

1. Content quality evaluation criteria

- Accuracy: Whether the collection contains accurate information about the subject area that users can trust
- Range: Appropriateness of collection range considering both width and depth
- Privilege: Depending on the reputation of the organization or sponsor, how authoritative the site looks
- Satisfaction: The overall response of experts to digital library books

2. Accessibility

Evaluation criteria are whether users have error-free or at least unrestricted access to information in the digital library.

3. Convenience/Ease of Use

Evaluate whether it is easy for users to learn and use digital libraries from browsing or scanning.

4. Interface Consistency

Evaluate whether the same words, colors, fonts, graphics, and layouts are used between web pages.

5. Visual design and aesthetic appeal of digital library

Evaluate whether unique and descriptive titles and visibility convey the purpose and value of the interface components clearly and visually and have attractive aesthetic value.

6. Response, search time

Evaluate the time it takes to perform the task. The average time it takes for a digital library to process all requests, including link response time and search response time

7. Relevance of the results obtained

Evaluate how accurate the results from the query you requested are.

CUPE criteria use several criteria evaluation methods, such as heuristic, public resource usage, and specifically designed computer programs. Three evaluation steps have been designed to assess whether an existing digital library is well designed. The first step is to assess content that experts investigate whether a particular subject area has high-quality books. The second step is to evaluate the usability of interfaces that use open tools and heuristic methodologies to ensure high-quality usability. The third step is to use a set of performance assessment criteria to simulate a specially designed computer program to assess whether the performance is reliable for the user. Using a scale of 5 points in total, select digital library candidates based on 7 criteria of CUPE.

The total average for all candidate digital libraries is 3.2003 out of 5. This means that the digital library candidates exhibit sufficient quality performance. The survey found that 34 out of 62 digital libraries were well-designed digital libraries in that they scored higher than average.

The International Open Public Digital Library (IOPDL) is proposed as a global national digital library with access to information from various subject areas of the public. The proposed IOPDL, in collaboration with them, consists of a well-designed digital library in 15 subject areas. This method will save a lot of effort and time in establishing a well-designed digital library and save huge budgets. IOPDL can be used as an

educational community that provides lifelong learning opportunities for the disabled and all ages with state-of-the-art technology.

Building the proposed International Open Public Digital Library (IOPDL) requires efforts to find which digital libraries are well-designed digital libraries. Seven evaluations based on CUPE select 34 well-designed digital libraries from 62 candidate digital libraries in 15 subject areas. The results showed that 34 digital libraries had a higher final average than the overall average and were well-designed digital libraries with sufficient evidence in content, usability, and performance.

Taken together, seven evaluations using CUPE criteria are very efficient at finding well-designed digital libraries or evaluating multiple performances. In addition, this criterion is suitable for evaluating the collection quality, interface usability, and performance of content for 62 digital library candidates. This is expected to play a major role in establishing the proposed IOPDL.

Experiments are run primarily in digital libraries in the United States for future evaluation. However, IOPDL needs to be evaluated, including national digital libraries in more countries. In addition, there are many excellent digital libraries that have not been evaluated because they are not included in the prototype.

We encourage many experts to participate in evaluating content quality in existing digital libraries for future content quality assessments. It is also desirable for more users to participate in the assessment for future interface usability

assessments. This provides a better objective majority assessment. Performance assessments may improve the performance of the search engine if synonyms and combinations are considered queries to evaluate the response time and relevance of query results. In addition, collaborating with well-designed digital libraries through a generalized commercial operability approach can create an ideal international open digital library.