

Evaluation Criteria of Electronic Journals Indexed in Scientific Databases from End User's View: a Proposed Checklist

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Abstract. The aim of this paper is to present factors, criteria and indicators to evaluate academic electronic journals Indexed in Scientific Databases from the users' point view. This checklist was developed in two stages. In the first stage, a collection of factors to evaluate electronic journals thorough librarian study was created. The factors and the criteria and the indicators for evaluation scientific electronic journals were selected and defined. In the second stage, the checklist was validated by 7 professionals in electronic journals and scientific databases field to evaluate clarity, importance, relevance and coverage of each factor, criteria and indicators. As a result, 5 factors, 17 criteria and 83 indicators were classified. It should be mentioned that these classified factors, indicators and criteria are restricted to end users' view.

Keywords: Electronic Journals (E-journals), academic electronic journals, Users, Evaluation, Factors, Criteria, Indicator, Scientific databases.

1. Introduction

Nowadays, due to the use of computers and computer networks, accelerating its use, considering strengthening communication infrastructure and reducing communication costs, the use of strong lines of communication, publishers 'effort and users' needs to access large volumes of information, producing, publishing and distributing publications in electronic format has been expanded [1] As a matter of fact, in this article, set a framework of factors, criteria and indicators of evaluating E- journals indexed in scientific databases from the end users' view point is considered. Thus the importance of electronic journals as a source of information on the needs of users, high percentage of academic libraries' annual budget spent on library subscriptions and journals are purchased annually [2] [3] [4]. In Iran millions of dollars spend by shopping centers and educational institutions and sites that contain information to electronic journals annually. [5] [6]. So trying to promote this type of information released, defining a set of criteria for evaluating these cases is absolutely necessary.

This checklist was developed in two stages. In the first stage, a collection of factors to evaluate electronic journals which have been indexing in scientific databases by studying resources, books and related articles was created. The factors, the criteria and the indicators to evaluate academic electronic journals were selected and defined. in the second stage, the checklist was validated by 7 professionals in electronic journals and scientific databases fields to evaluate clarity, importance, relevance and coverage of each factor, criteria and indicators. Finally restricted based on the end users' view. As a result, 5 factors (main level), 17 criteria (subdivision level) and 83 indicators (sub of subdivision level) were classified.

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2. Literature Review

López-Ornelas, Cordero-Arroyo and Backhoff-Escudero[7] present the methodology developed to create a system to evaluate academic electronic journals. The researchers ultimately concluded that due to lack of knowledge of methodology to evaluate scientific electronic journals, lack of knowledge about standards and assessment criteria, in evaluating the publication neither pays attention to traditional standards nor to quality criteria. The system just covered 3 criteria and 12 indicators. In comparison the framework of this article is more completed and comprehensive. From the research background it would be concluded that due to the growth of electronic journals in the scientific community, methodology to evaluate the growth of electronic journals in the scientific community is important and because of lack of research in this case, there are many hidden aspects and areas that are needed to be investigated. Since the correct evaluation of the various aspects of electronic journals perspectives and awareness of particular audiences, stakeholders and the public and analyze the causes and contributing factors to its growth in the scientific community was also important. So, taking advantage of research result steps were taken in production, acquisition, selection, retrieval, and dissemination and general awareness.

3. Factors, criteria and indicators

Factors, criteria and indicators of evaluation of electronic journals indexed in scientific databases from end users' view point are presented as 5 factors, 17 criteria and 83 indicators. 5 factors included: Save and retrieval capabilities, User friendliness, Introduction of journal, Customization capabilities and electronic journals' dependence (hardware and software dependence).

3-1: Save and retrieval capabilities: Save and retrieval capabilities in electronic journals and databases are divided to 7 subdivisions (criteria) that are included:

3-1-1: search capabilities in entries: End users can retrieve in 3 entries (title, author and subject) or even search capabilities can be expanded and provide some facilities such as search in abstracts or full text [8]. In addition to the traditional plain text, tables, images and other innovative ways of presenting the results of articles can be supported by an electronic page layout. Interactive three-dimensional models, animated videos and audios are samples of mentioned facilities [9]. As a result, factor "Search capabilities" in various entries divided to search in title, subject, abstract, full text, archive, just in one journal, in no text content (i.e. figures, charts) and multimedia. Simultaneous search in several different journals is another advantage that helps end users to get lots of materials and choose the best one. [8] [10] [11] [12] [1] [13] [14].

3-1-2: Simultaneous search capabilities: Several users can simultaneously from any point access and in various journals.(14).

3-1-3: Search: Search factor included "simple search" and "advanced search". There are various searches in the usage of electronic journals such as quick, simple and advanced specialized search [15].

3-1-4: search method: Factor "search method" included 4 criteria "usage Boolean operators, usage truncation, use stemming, use thesaurus" [15].

3-1-5: Search limitation: For more useful and efficient search results can limit search through language, by document type and time. [15] So that, factor "Search limitation" included two indicators search limitation with year and document type.

3-1-6: Links: Criteria "links" included indicators "internal and external links". Hyperlink and hypermedia features provide facilities to make link between internal parts of an article or even between articles of journals and electronic resources of scientific databases. Publishers, research group or even authors can be connected through links of electronic letters. [9].

3-1-7: save capabilities: Save capability of full text, save abstracts, save bibliographic information and presenting volume download of articles are 4 indicators of criteria "save capabilities". [1] [7] [14].

3-2: user friendliness

Factor ‘user-friendliness’ included 8 criteria and 40 indicators, the followings will be referred to them.

3-2-1: Browse capability: Ability to browse and search in the same subject and in different publishers’ journals is their features. [8] [17] [14]. simply browse, subject browse a topic, browse through the author's name, browse through the issue and title of journals are indicators of browse capability”.

3-2-2: interface: Language, Text format, Word and document text format, Markup language format (HTML, SGML, XML, and GML) and PDF are classified as indicators of factor “interface”. [1] [13] [18] [19] [20].

3-2-3: Environment: The criteria “environment” in electronic journals included 2 indicators “graphical and multimedia environment” and they are supposed as advantages of them. [14] [1] [13] [10].

3-2-4: Helps: Help, Search tips, FAQ, tutorials are as a guide for users of electronic journals are considered as indicators that classified for "help" criteria. [14] [15].

3-2-5: Interaction capabilities: It is noted that the main point of electronic journals than printed ones is "interactive nature”. [21]. Presenting complementary information, such as tables, pictures, diagrams, using multimedia facilities to enhance the value of published articles and the audience can comment on articles to improve them. Other interactive feature is “my paper" that through the user can select a subject area and receive published article on the favorite field. Collaboration between authors and readers has increased, so that they are able to talk and to express their opinions. [11]. On this type of journals and databases, network communication between authors, reviewers, editors and even the users and the ability to comment, commentary and annotations are as major advantages. [11] [1] [12] [22] As a result of this part, indicators such as comment, authors’ and editor’s email, Contact us, Send to a friend are classified for the criteria “Interaction capabilities”. [23] [24]

3-2-6: Access level: Access level of users to articles and content that are indexed in scientific databases are totally different and various. [25] [1] [13]. The criteria “access level” included 5 indicators such as Just access to TOC (table of content), Just access to abstract, Just access to TOC and abstract, Access to full text and image.

3-2-7: Related and supplementary information: Related articles and records, See article in other data bases, Citation map, Article type, Related articles from reference works, The author evaluator, Most read articles, Most downloaded articles are 8 indicators of the factor “related and supplementary information”.

3-2-8: Information services: Alert, RSS, Information for readers, Information for librarians, and Information for authors are supposed as 5 indicators of the factor “information services”. Results of retrieved electronic journals can be saved in a specific work area. For this aim “result history” can use. With activation “alert” and “R.S.S Feed”, Each time when the database will be updated and an article will be added an email will be sent to user’s email address to the user's email address. It’s needed that user already have logged in the database and have registered. [23] [1] [14] [15] [26].

3-3: Introduction of journal: The factor “Introduction of journal” is divided to 2 criteria “Printed source and Introduction criteria”.

3-3-1: having printed journal in a library: Having printed journals in library will preserve users’ old links print resources with links to their favorite magazine and print resources to maintain. To have or not to have printed journals are 2 indicators of this factor. [1] [13] [23] .People 25 to 30 percent study slower on displays than paper.[27]

3-3-2: Introduction criteria: ISSN, Publication frequency, subject coverage, publisher, aims and Scope, DOI (Digital Object Indicator), sending article instruction, editorial board are as indicators for this criteria.

3-4: Customization capabilities: This factor included 2 criterias called “Content customization capability” and “Text appearance customization capability”.

3-4-1: Content customization capability: My Profile [29] [28] ,My history search, My saved search[28] [15] (SDI: Selective Disseminative Information[28] [15] [26],My saved Citation[28] [15], My Favorite Journals, save in Endnote, bookmark are as indicators for this criteria.

3-4-2: Text appearance customization capability: Users can customize their own information display with using some parameters. They can change the page and display layout. [28] (Changes of color, change of font, change of background are indicators of the criteria.

3-5: electronic journals' dependence: This factor included 2 criteria called “Add-ins” and “computer literacy”.

3-5-1: Add-ins: End users to benefit existing text and files of electronic journals may need some add-ins such as Adobe Acrobat reader, Direct X, Document Download manager.

3-5-2: computer literacy: Readers of Electronic publications need some basic skills and computer networks in order to exploit electronic journals possess. Basic computer skills and the ability to browse the World Wide Web are required. To more efficient use of the advantages of electronic publications, readers should be able to create their favorite files of papers. [8].

4. References

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