

## Chapter 49

# Quantitative Evaluation of Web2.0 Application

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### ABSTRACT

*Web 2.0 is a new generation of web applications where the users are able to participate, collaborate and share the created artefacts. Web 2.0 is all about the collective intelligence. Web 2.0 applications are widely used for all the educational, professional, business and entertainment purposes. But a methodology for quantitative evaluation of web2.0 application quality is still not available. With the advancement of web technology various dimensions to evaluate web2.0 application quality is changing. So studies will be made to select a quality model that is required for web 2.0 application. Then the quantitative analysis will be done on the basis of questionnaire method and statistical formula. Quantitative analysis is necessary to know the weakness and strength of a website and then to improve the web quality. Quantitative evaluation can also be used for comparing two or more websites. In this study, quantitative analysis is done for each quality attribute of two social networking sites. Then the two sites are compared on the basis of the quantitative value of quality.*

### INTRODUCTION

Quality in all the fields like business, manufacturing and engineering has a pragmatic interpretation as the superiority of something. Quality is also defined as fitness for purpose. Quality is a perceptual, conditional, and subjective attribute and may be different for different people. Every user focuses on the quality and specification of a product or service. They compare the product or service with the competitors in the market. The producers might measure the conformance quality, or the degree to which the product or service was produced correctly. A quality product or service has the ability to attract users and perform satisfactorily in the market. So, the evaluation of quality is very much important. But there is not a consolidated methodology for the evaluation of website quality. Web-based applications are fast

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becoming larger, more widespread, more interactive, and more essential. The most successful Web-based application companies are realizing that the critical factors for success or failure of any Website must be dependable on delivering a high-quality website. To achieve the desired quality of a Web-based application, it is necessary to suggest a model that organizes and enables the identification of Web-based application quality perspectives. The development and usage of Web applications in different platforms and devices are continuously increasing. Web 2.0 applications have become the most popular in mobile phones now a day.

Web 2.0 describes the website that uses technology beyond the static pages of earlier web1.0 websites. The term Web2.0 was coined by Darcy Dinucci and was popularized by Tim O'Reilly (O'Reilly, 2005) at the O'Reilly Media Web 2.0 conference in late 2004. Although Web 2.0 suggests a new version of the World Wide Web, but it does not refer to any upgrade of any technical specification. It refers to cumulative changes in the way web pages are made and used. A Web 2.0 application may allow the user to interact and collaborate with each other in a social media. Web2.0 allows the users to create their own content in a virtual community where as web1.0 is only limited to the passive viewing of content. In web1.0 there is a content provider who publishes something on the websites and the users read it or download it. So web1.0 is read only application which allow only download of content. But in web2.0 there is active participation of users. Web2.0 supports both upload and download. Web2.0 is about sharing information and knowledge. The content of web2.0 applications are highly dynamic and changes continuously with time. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites, hosted services, web applications, mashups etc.

According to Tim O'Reilly (O'Reilly,2005, O'Reilly,2006), the Web 2.0 is considered as a new version of the Web and it does no longer consider the user as a consumer of information, but rather as a producer who is a potential for the realization of the contents of the Web (Hussher,2006). The quantity of information is increasing significantly, which will offer the possibility of production, communication, sharing and dissemination of content by users. Thus, a collective intelligence on the network is necessary. According to Cavazza (Cavazza, 2005) "Web 2.0 is a marketing concept for some people, a vague term for others, Web 2.0 suffers from a lack of explanation of its impact."

The Web 2.0 is not a standard. But it is a series of principles for the use of existing technology. Web 2.0 allows users to modify and renew the contents making it an area of information storage, which is not only flexible but also in continuous movement. Taking into consideration that the amount of data has never been more important, the function of information dissemination is exploding with the advent of collaborative applications and platforms of wikis and blogs (Hussher, 2006).

Web 2.0 applications are generally a combination of one or more technologies such as AJAX (Asynchronous JavaScript and XML (Extended Mark-up Language)), Flux, Mash up etc. in website development. Web2.0 applications provide richer user experiences through robust functions and elegant user interfaces (O'Reilly, 2005, Ogawa, 2006). The aim of Web2.0 application development is the real-time communication between websites and the users or among various users and thereby enhancing the website quality and rich user experience. Web 2.0 environments are all about collective intelligence. Collective intelligence applications depend on understanding, managing, and responding to monolithic amounts of user-generated data in real-time. Thus, real-time data usage is the backbone of the next generation of web 2.0 applications (Saha, 2011).

According to Rajeev Saha and Sandeep Grover (Saha, 2011) the most significant characteristics of Web 2.0 service are the Web as Platform, User-centred Design, Rich User Experience, Crowd-sourcing and Collaboration.

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