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     STATEMENT OF THE PROBLEM

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     RESULTS & DISCUSSION

     FINDINGS

     RECOMMENDATIONS/SUGGESTIONS

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CONTRIBUTIONS TO BOOKS

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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

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QUALITY DATA REPRESENTATION IN WEB PORTAL – A CASE STUDY

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ABSTRACT

Web information systems are characterized by the presentation of a large amount of data to a wide audience, the quality of which can be very heterogeneous. Every organization and individual can create a web site and load every kind of information without any control on its quality, and sometimes with a malicious intent. The information systems on the web need to publish information in the shortest possible time after it is available from information sources. The information has to be checked with regard to its accuracy, currency, and trustworthiness of its sources using the data quality measure. The Quality of the Data presented by the web portals has to be analyzed. Intrinsic and representational categories of data quality are very important in the web portal to give the data in most effective manner. The main aim of this paper is to quantify the Data qualities through their dimensions. This paper has made a study about the attributes of quality representation of data and a case study about how effective, the data representation has been made with "Education" column of 'The Hindu' daily news paper web portal (online).

KEYWORDS
Data Quality, Web Portal.

INTRODUCTION

A web portal or public portal is a web site that has lot of information from multiple sources on the web. It organizes the information in an easy user-friendly manner. In worldwide numerous users use web portals to obtain information for their work and to help with decision making. The users and data consumers need to ensure that the data obtained are right for their needs. Thus the organizations that provide Web portals need to offer data that meet user requirements. Dirty data is a serious problem leading to incorrect decision making, inefficient daily operations, and eventually wasting both time and money. Data Quality is a very important aspect in web services. Data quality is a new research area that represents one of the biggest challenges for data mining. Data quality refers to the accuracy and completeness of the data, also measured by the structure and consistency that is, how the data has been represented in the web portal. For the effective representation of quality data in the web portal, certain important attributes has to be followed. Data quality represents a common interest between data consumers and portal providers. Data quality is very important for its efficiency and effectiveness of web organization.

CLASSIFICATION OF DATA QUALITY

The concept of data quality has emerged only during past ten years due to the exchange of data among the business organizations, government etc. In particular the concern on data quality has been increased due to the growth of internet. The review of data quality is done here apart from the context of DBMS like data integrity and data security.

Data Quality is classified into four categories, Intrinsic DQ, Accessibility DQ, Contextual DQ and Representational DQ. Each category has many dimensions like Accuracy, Completeness, Consistency, Timeliness, etc. from literature survey [2] in Table1.

TABLE 1: DQ CATEGORIES AND DIMENSIONS

DQ Category	DQ Dimensions
Intrinsic DQ	Accuracy, Timeliness/Currency.
Accessibility DQ	Accessibility, access security
Contextual DQ	Relevancy,value-added, completeness
Representational DQ	Content coverage/Amount of data, Consistent Representation/Writing Style, Interactivity, Layout, Multimedia Presentation, Navigation Quality, Organization, Achieves/Documentation.

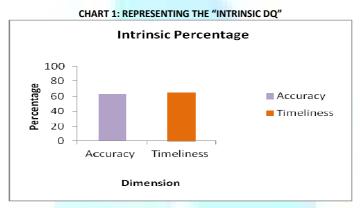The scope of the study in this paper includes only the intrinsic and representational data quality categories. The following Table 2 shows the Data quality, its dimensions and its definitions.
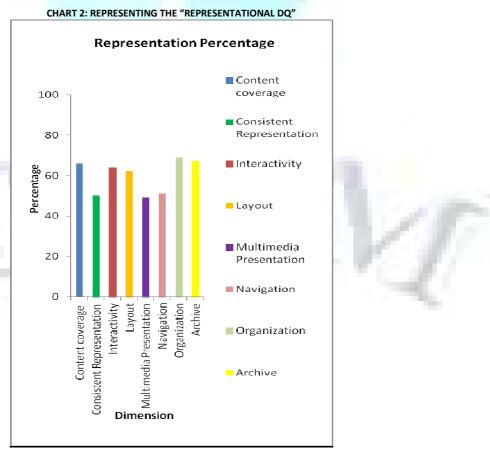
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TABLE 2: DEFINITION FOR THE DQ DIMENSIONS

Category	Dimensions	Definitions
Intrinsic	Accuracy	Ensure data are the correct and valid values.
	Timeliness or Currency	The news is up to date. Information in the articles is useful to your work or life.
Representational	Content coverage	The website includes appropriate information and features.
	Consistent Representation or Writing style	The pages of the portal should be consistent in style. Choose a style and apply it to all the pages in the portal. Alternatively, try not to use more than two or three styles.
	Interactivity	Easy to effectively retrieve specific information on the site.
	Layout	The art of the overall design of a page, such as arrangement of graphics and text
	Multimedia presentation	Use of audio and video content.
	Navigation quality	Links to other websites or between pages
	Organization	The information presented on the pages of the portal should be organized by combining various visual characteristics such as size of letters, images, colours, data grouping etc.
	Archives	Storage and provision of past articles or past newspapers.

CASE STUDY

Newspapers can provide online versions, that are not mirror images of print versions, instead offer something extra such as interactive features or information that could not fit in print version [1]. There are number of newspapers available on internet some with general information and some papers are complete with archives. The Hindu newspaper is one among the complete newspaper available on the internet via the web portal http://www.thehindu.com/.The online web portal of this paper consists of many columns which covers various information every day. But the case study in this paper has analyzed the data qualities like Intrinsic DQ, and Representational DQ in the 'Education column' alone.

The "Education" Column of the portal includes several sub columns like Careers, College & Universities, Issues, Research and School. The study has been done by feedback analysis using statistical tool. A questionnaire has been framed and the feedback has been collected from the undergraduate and postgraduate students of various disciplines who go through this portal in a regular basis.

CHART 1: REPRESENTING THE "INTRINSIC DQ"

CHART 2: REPRESENTING THE "REPRESENTATIONAL DQ"

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In the above chart1 the accuarcy is 63% and the timeliness is 65%. On an average the quality of data , that's is accuracy and timeliness is to be present as 64% on an average.

In the above chart2 the data representational quality has been observed through the factors of content coverage, consistent, interactivity, layout, multimedia presentation, navigation, organizaion and archive.

From the above chart we observe that the organization of data is high as 69%,and the multimedia presentaion, Navigation and consistency of the presentation of data is very low and its found to be 49% , 50 % and 51% with a very small difference of 1% among them.

CONCLUSION

The study on the "Educational" column of this is web portal have shown just the amount of presence of Intrinsic and Representational Data qualities which is quantified by their Data quality dimensions as previously mentioned in the data classifications section. But through quantifying the data quality dimensions we study the exact presence of Intrinsic and representational data qualities. This paper has made a sample study to quantify the Data qualities through their dimensions, so that importance can be given to areas in which a poor quantifying measure is shown. Future study can lead to all the columns of the paper, identification of lacking data quality in the portal, suggestions to improve the data quality can also be included .

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