

Qualitative Data Analysis, Tools and its Implementation

Vrushal Rathod
Student, MCA Department
Sardar Patel Institute Of Technology
Mumbai, India
vrushal.rathod@gmail.com

Sanman Chavan
Student, MCA Department
Sardar Patel Institute of Technology
Mumbai, India
sanmanchavan1991@gmail.com

Prof. Harshil T. Kanakia
Assistant Professor, Master of
Computer Applications
Sardar Patel Institute of Technology
Andheri (West) Mumbai, India
email2harshil@gmail.com

Abstract—The important goal of this paper is to provide an overview on the concepts of big data analysis. Furthermore the growing emergence and importance of qualitative data analysis in the field of business intelligence and data science is broadly explained. It also marks out effective tools and techniques used to obtain prominent qualitative analytic results on the global level. Moreover we have concluded on the basis of comparison of the tools depending on various factors and parameters by representing it on a tabular manner.

I. INTRODUCTION

Today, the information utilization rate is immensely extending, the measure of information produced and put away is almost imperceivable and exceedingly developing. Enormous information that is only a huge volume of unstructured or organized information that keeps running done into a business on regular routine. This enormous information is broke down keeping in mind the end goal to accomplish noticeable business development and enhanced business procedures [1]. Consistently there is no less than 40% expansion in the measure of information development on worldwide level, prompting which organizations have begun embracing new information systematic strategies and instruments furthermore have ventured ahead moving their information towards the cloud for their huge information diagnostic prerequisites and for better analysis.[3][2] In enormous information investigation it is not the measure of information that is key but rather how effectively we handle, prepare and dissect it is the key element. Enormous information investigation doesn't rotate around the amount of information we possess, it manages how well you make utilization of it. Subsequently with an appropriate blend of huge information expository systems, and apparatuses according to your business needs can successfully accomplish numerous business related focal points.

Qualitative Data Analytics

Data analytics (DA) is the exploration of analyzing crude information with the motivation behind reaching determinations about that data. Information examination is generally utilized as a part of the field of business and information science so as to improve business pick up and to endorse or object existing models and techniques individually. It exclusively works and spotlights on

information that is as of now been gathered and known. This study of information examination essentially comprises of three sections viz, Exploratory data analysis (EDA) where fundamental components of information are outlined and imagined. Confirmatory data analysis (CDA) is the place the current suppositions and speculations are assessed to demonstrate genuine or false. Qualitative Data Analysis (QDA) manages non-quantifiable information, for example, recordings, words, pictures and so forth which can't be numerically measured. Subjective Data Analysis has numerous points of interest over quantitative. Subjective information investigation is information driven as the information proof is not generally quantitative.[5] It gives precision, places quantitative information into applicable connection furthermore to decide the nature of our scientific result. It contains overviews, recordings, sounds, pictures, report, client reaction structures and information from online networking. Beforehand, dissecting non-numerical information for numeric perception was a human –rigorous errand be that as it may, now with the developing rise of subjective information there emerges astute approaches to look at subjective information framing a quantitative result. [6]

Some transformation techniques are :

A. Scoring

Assigning a specific rank or a score within a defined range to a particular qualitative data such as images or some comments.

B. Sentiment Analysis

In this technique some positive or negative value is assigned to a particular sentiment which is expressed in a

information for a specific code and utilize it for future reference.

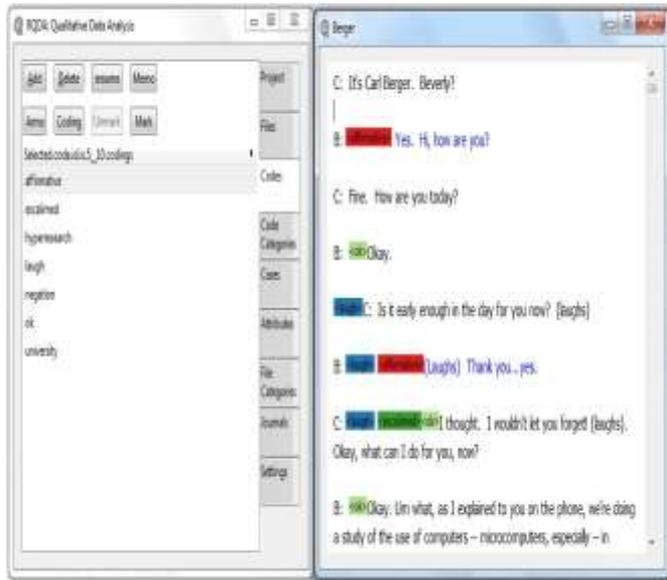


Fig. 2. User Interface Of RQDA

C. HyperResearch

HyperResearch was first introduced in 1991 for qualitative researchers. Hyper Research is fully cross-platform tool which means it is compatible with different Operating Systems. Hyper Research gives it users' facility of coding and retrieval of source material, theory building, and analyses of your data.

HyperResearch is used by qualitative researchers in areas such as health care, legal, sociology, anthropology, music, geography, geology, education, theology, philosophy, history, market research, focus group analysis and most other fields using qualitative research approaches.[9] Hyper Research has a simple installation process and an elegant user interface which needs a user of medium knowledge to handle the tool. The tool does not support input through the database. Hyper Research is not an open source tool. It has an auto code feature which assigns the code automatically to the respective code. Hyper Research gives an important feature of word count which shows the total count of each word and displays it in a very good format which makes it very easy for the user to get details of the source file.

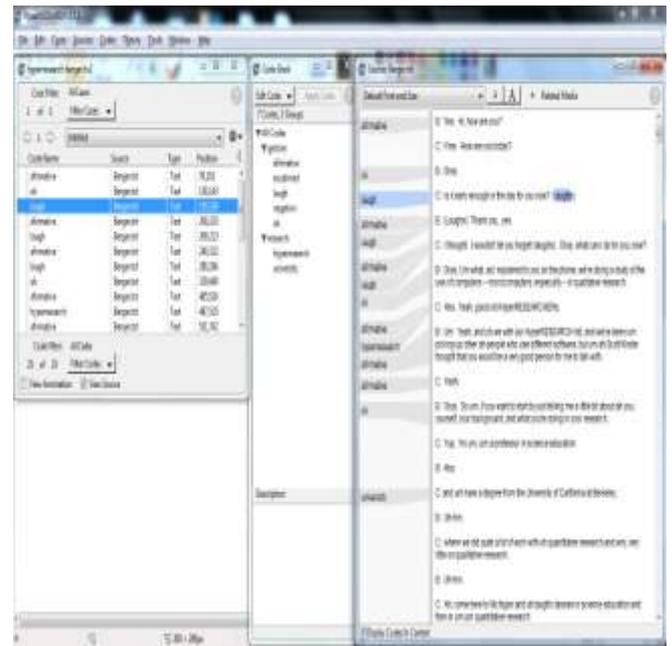


Fig. 3. User Interface Of HyperResearch

III. COMPARISON

	<i>QDA Miner- Lite</i>	<i>RQDA</i>	<i>Hyper-Research</i>
Cross-platform	Yes	Yes	Yes
Open Source	Yes	Yes	No
Input Format	Text, Multimedia, Database	Text, Multimedia, Database	Text, Multimedia
Auto Assignment of Codes	Yes	No	Yes
Convert data to Graph	Yes	Yes(Using other package)	Yes
Skill Level required	Beginner	Expert	Mediocre

Fig. 4. Comparison of Tools Conclusion

In this paper, we have given the basic idea of what are data and the meaning of qualitative data and kinds of data analytics and transformation of these data using various methods. Also three different tools are compared on the basis of text files. These tools play an important role in analysis of data. These tools as compared have their pros and cons depending on the type of data analysis that needs to be done. The final conclusion cannot be given on which tool is the best as each one is good for different kind of user and the features being added day by day in tool to improve it. But, one can make out the tool suited for him/her depending on the needs.

IV. REFERENCES

- [1] <http://www.emc.com/>
- [2] www.sas.com
- [3] www.qubole.com
- [4] <http://searchdatamanagement.techtarget.com/>
- [5] www.mapr.com
- [6] <http://onlineqda.hud.ac.uk/>
- [7] <http://provalisresearch.com/news-events/the-new-qda-miner-lite/>
- [8] HUANG Ronggui (2014). RQDA: R-based Qualitative Data Analysis. R package version 0.2-7. <http://rqda.r-forge.r-project.org/>
- [9] <https://en.wikipedia.org/wiki/HyperRESEARCH>