

**CONTENT ANALYSIS OF DOCTORAL THESES ON
BOTANY SUBMITTED TO THE UNIVERSITIES OF
WEST BENGAL (2000 - 2020)**

**Synopsis of the thesis submitted for the Degree of
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at

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1 Introduction

1.1 Content Analysis

Content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given qualitative data. Using content analysis, researchers can quantify and analyze the presence, meanings, and relationships of such certain words, themes, or concepts. As an example, researchers can evaluate language used within a news article to search for bias or partiality. Researchers can then make inferences about the messages within the texts, the writer, the audience, and even the culture and time of surrounding the text.

According to Gheyle and Jacobs (2017), Content analysis (CA) is a research methodology to make sense of the (often unstructured) content of messages – be they texts, images, symbols or audio data. In short it could be said to try to determine textual meaning.

Holsti (1969) has defined content analysis as, “Any technique for making inferences by objectively and systematically identifying specified characteristics of messages.” Content analysis is used in the social sciences as one means of studying communication — its nature, its underlying meanings, its dynamic processes, and the people who are engaged in talking, writing, or conveying meaning to one another. Although not a research method *sui generis*, content analysis is roughly distinguishable from other methods by two characteristics. First, its data—in contrast to ethnographic reports, for example, or census enumerations—are the verbal or other symbols which make up the content of communications (letters, books, sermons, conversations, television programs, therapeutic sessions, paintings, and the like). Second, its procedures differ in emphasis from those of the historian or literary critic: they aim to be exact and repeatable, to minimize any vagueness or bias resulting from the judgments of a single investigator. Thus, each content analysis employs an explicit, organized plan for assembling the data, classifying or quantifying them to measure the concepts under study, examining their patterns and interrelationships, and interpreting the findings.

Within these broad limits the techniques of content analysis are diverse, and the objectives range from mapping propaganda campaigns, for example, to explaining international conflict and integration; from abstracting the ideas and beliefs expressed in folklore or movies of a given period to tracing the epochal alternations in societal values over many

centuries; from charting the interaction between patient and therapist to assessing the psychological states of great men in the past.

1.2 Statement of the Problem

“Content Analysis of DOCTORAL THESES OF BOTANY IN GOVERNMENT UNIVERSITIES AND DEEMED UNIVERSITIES OF WEST BENGAL.” Botany is a very vast subject. There are many universities that provide PhD degree in Botany in West Bengal. Hence, many researchers are working on this subject, so that content analysis of doctoral thesis can be useful in further research in this subject.

1.3 Review of the Related Literature

A literature review introduces the problem, develops the background providing a history of scholarly work on the subject, and ends with the purpose and the rationale for the study (Wysocki, 2008). It constitutes an integral part of any research, its main goals are to situate the current study within the body of literature and to provide context for the research. Literature review is an essential part of any research in an academic area. The undertaken research area is very new in the domain of Library and information science, hence only a few studies have been taken place in this area. The available research and non-research studies which are found relevant for this study have been thoroughly reviewed along with their findings.

Akkusa , Saria and Unera (2012) analysed 75 graduate theses in chemistry education from six universities between 2000-2010 years by using content analysis. A total of 38 criteria were developed by researchers with the help of literature which includes Research design, population and sample, validity and reliability studies, analyzing methods and data collection tools. Data were analyzed by using SPSS and the results were given as percentages and frequencies.

Chu (2015) has conducted a content analysis to address some recurring themes about research method selection and application in the scholarly domain. A total of 1162 research articles, published from 2001 to 2010 in three major journals of library and information science (LIS), are analyzed quantitatively and qualitatively. Replacing the dominant positions that questionnaire survey and historical method previously held, content analysis, experiment, and theoretical approach have become the top choices of research methods in the field. This study also examines two recurring themes regarding

research methods in the LIS field, namely, use of multiple methods in one study and adoption of the qualitative approach.

Dirlikli , Aydın and Akgun (2016) provides an excellent and comprehensive overview of content analysis of theses concerning cooperative learning prepared in Turkey between the years 1993 and 2014. A total of 220 theses which were accessible online (open access) at the site of Council of Higher Education (CoHE) were analyzed. The data were analyzed and are presented in graphics, frequency and percentage tables, and in a descriptive manner.

Durak et al (2017) reported a content analysis on Master's Theses carried out in the field of distance education at higher education level in Turkey between 1986 and 2015. The study sample consist of 285 Master's Theses were examined to determine the key words, academic disciplines, research areas, theoretical frameworks, research designs and models, statistical analyses, data collection tools, participants, instructional design models, variables/research focus and related institutions. They tried to reveal the research trends of distance education in Turkey and to determine the related research trends.

Erdogan (2015) discussed about the research trends in studies of problem-based learning (PBL) from 2002 to 2013 in Turkey. For that, the master's and doctoral dissertations in the National Thesis Database of Council of Higher Education (CoHE) were selected for content analysis. The domains of the content analysis include the type of study, the learning domains, research designs, research domains, subject groups, group sizes, and length of treatments.

Gogoi (2018) undertaken the bibliometric analysis of 548 PhD theses in LIS of Indian Universities during the year 2013-2017 based on "Shodhganga", hosted by INFLIBNET. This paper focuses on quantitative study of research contribution made by LIS researchers in the field of LIS. All the studies will be helpful for improving their quality researches in this field. It is concluded that majority of work has been done upon the area of Library survey/User studies/Library Use while a very little work had been done in the field of Library Legislation, Library-Finance, database and indexing during the span of time 2013-2017. Factor considered for the study are Year wise, Universities wise, State wise, Subject wise and Guide wise contribution of PhD theses in LIS.

Haviz et al (2019) explains the trend of biological education research (BER) from 2000 to 2017 in the thesis of pre-service biology teachers. A total 1347 thesis from two universities were analyzed in terms of sample, method, design, elements and topics and subject matter.

Hopkins and King (2010) explained the method of automated nonparametric content analysis for social science. Although computer scientists have methods for automated content analysis, most are optimized to classify individual documents, whereas social scientists instead want generalizations about the population of documents, such as the proportion in a given category. They develop a method that gives approximately unbiased estimates of category proportions even when the optimal classifier performs poorly.

Stemler(2015) describes the methodological techniques of content analysis. the massive explosion in permanent, archived linguistic, photographic, video, and audio data arising from the proliferation of technology, the technique of content analysis appears to be on the verge of a renaissance. He also described how content analysis is being applied or might be applied to the study of areas as diverse as education, criminology, and social intelligence.

Thakur and Trikha (2004) analyzed content of post graduate theses of the GB Pant University of Agriculture and Technology, Pantnagara, India in development communication to find out the pattern of post-graduate research studies, the research design, the tools and the techniques used, the geographical distribution and the contents of 26 post-graduate theses. The theses were categorized into 14 areas of research like educational technology, development journalism etc. Descriptive research design was used. Effective table of contents and standard format were used by the thesis writers. All the theses had review presentations in chronological order and bibliography in alphabetical order.

1.4 Objectives of the Study

- a) To increase motivation for learning
- b) To determine the yearly distribution of theses submitted to the Universities of West Bengal in Botany from the year 1990-2020
- c) To determine the distribution according to the research subtopics in the subject of Botany.

- d) To know the methodological procedures of the theses of Botany
- e) To determine the average number of references per thesis
- f) To determine most frequently used keywords in research
- g) To calculate the distribution of studies regarding total page number
- h) To find out structure of table of content of thesis in botany
- I) To study the reference management styles used by the doctoral thesis in Botany
- j) To suggest which information include for contents of thesis in Botany

1.7 Scope and Limitations of the Study

The study is limited to the period of 20 years i.e. (2000-2020) which includes 6 universities of West Bengal i.e. The University of Burdwan, University of Calcutta, University of Kalyani, University of North Bengal, Vidyasagar University and Visva Bharti University which provide Botany as a subject of study in their syllabus have been taken for the study.

The findings and generalizations is based on the selected Universities. Hence, it does not claim to be all inclusive and extensive. The researcher well aware of hence Limitations process to continue the research in the same universities in the days to come.

1.8 Research Methodology

According to P. V. Young, “Research methodology, is the systematic method of discovering new facts and verifying old facts, their sequence, inter-relationships, casual explanations and natural laws which govern them” (Kothari, 1990).

Since this study has been designed to analyze the content of the doctoral thesis of Botany in West Bengal, the use of survey method has been found suitable. The survey method is an acceptable device for collecting data or factual information on certain decided characteristics or items of a universe of population. Research methodology is a way of systematically solving the research problem. It may be understood as a science of studying how research is done scientifically.

Quantitative method and Descriptive research method are used in evaluating the doctoral thesis’s content analysis itself, is a technique of research used for the systematic objective and quantitative description of the content in the present study.

For the study of contents of thesis, thesis of Botany from the year 2000 to 2020 of Visva Bharati University, University of Calcutta, Burdwan University, North Bengal University, Kalyani University and Vidyasagar University will be under the study.

This research is based on the analysis of content pages of doctoral thesis of different universities of West Bengal which is analyzed by using various Bibliometric techniques.

1.9 Research Design

The study is divided into eight different chapters as follows –

- A. Introduction
- B. Review of Related Literatures
- C. Botany: Meaning, Emergence and Development of Research in India
- D. Content Analysis: An Overview
- E. Research Methodology
- F. Data Analysis and Interpretation
- G. Conclusion and Recommendation
- H. References

1.10 Proposed Research Plan

Sl. No.	Research Work	Duration of Work
1.	Review of literature	6 Months
2.	Detailed study of journals	6 Months
3.	Data collection	6 Months
4.	Analysis and interpretation of collected data	6 Months
5.	Writing of thesis	6 Months
6.	Submission	6 Months

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