Chapter I
Introduction

1.1.0 Chapter Preview:

This chapter is intended to lay down the brief introduction of content analysis and how it can be used for evaluating any kind of communication. This chapter describes the need and the significance of the study, in a wider sense. This chapter also explains in detail the objectives and delimitations showing the direction and pathway to this research attempt.

1.1.1 Introduction:

Any organised teaching-learning situation can be construed basically as consisting of a specific curriculum, which in turn, would include the syllabus, the instructional materials, and the transactional strategies. The ultimate efficacy of the learning situation would thus be dependent largely on the relevance of each of these components in the context of the learner and the learning outcomes. In the national context today, the significance of an appropriate curriculum becomes even more critical in view of the efforts towards universal primary education wherein the diversity of student’s needs will inevitably become still greater and so will the need to adapt educational approaches to match curriculum, instruction, and learner.

In the Indian situation, at the primary stage the textbook continues to be the most essential and in majority of cases the only aid in the hands of the teacher and the learner through which the given curriculum is transacted. This situation consequently places a heavy responsibility on the quality of the textbook for ensuring effective
teaching-learning interactions and outcomes. For any instructional material to be effective, it has to be necessarily planned keeping in view the requirements of the learners particularly with reference to their age, their educational and cultural background, their immediate environment as well as their proficiency in the language, which is the medium of instruction.

A large number of textbooks are being prepared in India every year, both at the central level and in the different states. Recent researches, however, have led to the speculation that the effectiveness of these textbooks is often restricted because of a lack of parity between the skill levels required by the textbooks and those available with the students. Often the distance between the home language and the grade language used in the textbooks also serves as a contributing factor. There is a dearth of research input or base to facilitate informed decisions regarding appropriateness and sequencing of content to match the linguistic competence of the target group. As a result, neither any state nor any central agency has specified any language content to be used in the textbook in linguistic terms. Norms of linguistic competence of our children are also not defined. The authors do not get any specific guidelines or training and are often not even familiar with the needs of the stage of education for which they are writing.

From the point of view of the quality of a textbook, its level of readability becomes a critical factor which could help or hamper the understanding or learning by the learner depending on the extent of match/mismatch between the linguistic competence demanded by the text and that available with the learner. This factor is critical not only in the language readers but also in the textbooks for other subject areas like Environmental Studies particularly in grades 3, 4 and 5 wherein higher level of conceptual understanding is required. To facilitate this understanding the readability of the text used must be ensured in these textbooks. However, often the level of textbooks of Environmental Studies is observed to be pitched even higher than the language readers that are in use for the same grade. There is an imperative need, therefore, for an in-depth empirical study of the existing textbooks in the above context in the Environmental Studies curricular areas.
1.2.0 An introduction to content analysis

Content analysis is a research tool used to determine the presence of certain words at concepts within texts or sets of texts. Researchers quantify and analyze the presence, meanings and relationships of such words and concepts, then make inferences about the messages within the texts, the writers and the culture and time of which these are a part. Texts can be defined broadly as books, essays, interviews, discussions, articles, documents or any occurrence of communicative language to conduct a content analysis on any such texts, the text is coded, broken down into manageable categories at a variety of levels, words, word sense, phrase, sentence or theme and then examined using one of content analysis basic methods, which is discussed in detail later on in this chapter.

1.2.1 Brief History of Content Analysis

Initially, content analysis was done manually or slow mainframe computers were used to analyze punch cards containing data punched in by human coders. Single study could employ thousands of these cards. Human error and time constraints made this method impractical for large texts. However, despite its impracticality content analysis was already an often-utilized research method by the 1940s. Although initially it was limited to studies that examined texts for the frequency of the occurrence of identified terms i.e. word counts, by the mid – 1950s researchers were already starting to consider the need for more sophisticated methods of analysis, focusing on concepts rather than simply words, on semantic relationships rather than just presence ( de sola pool 1959). While both traditions continue today, content analysis now is also utilized to explore mental models and their linguistic affective, cognitive, social, cultural and historical significance.

1.2.2 Types of Content Analysis

There are two general categories of content analysis:

(i) Conceptual analysis
(ii) Relational analysis

1http://writingcolostate.edu/guides/research/content/pop2a.cfm, a web site supported by Colorado State University
Conceptual analysis can be thought of as establishing the existence and frequency of concepts – most often represented by words or phrases – in a text. For instance, suppose you have a hunch that your favourite author often writes about hunger. With conceptual analysis one can easily determine that how many times word such as “hunger,” “hungry,” “famished” or starving appear in a story. In contrast, relational analysis goes one-step further by examining / analyzing the relationships among concepts in a text. For instance, in the above example, with the help of relational analysis, one can identify what other words or phrases appear next to “hunger” or “famished” and then determine what different meaning emerge because of these groupings.

(i) Conceptual Analysis

Traditionally, content analysis has most often been thought of in terms of conceptual analysis. In conceptual analysis, a concept is selected for examination and the analysis involves quantifying and tallying its presence. Conceptual analysis is also known as thematic analysis, the focus here is on finding at the occurrence of selected terms within a text or texts, although the term may be implicit as well as explicit, Explicit terms obviously are easy to identify while coding of implicit terms and deciding their level of implication is complicated by the need to base judgments on a somewhat subjective system. To attempt to limit the subjectivity as well as to limit problem of reliability and validity, coding of such implicit terms usually involves the use of either a specialized dictionary or contextual translation rules.

1.2.3 Methods of Conceptual Analysis

Conceptual analysis begins with identifying research questions and choosing a sample or samples. Once chosen, the text must be coded into manageable content categories. The process of coding is basically one of the selective reduction. By reducing text to categories consisting of a word, set of words or phrases, the researcher can focus on, and code for, specific words or patterns that are indicative of the research question.
An example of a conceptual analysis would be to examine several Dr. APJ Abdul Kalam’s speeches on vision 2020 and code them for the existence of certain words. In looking at these speeches, the research question might involve examining the number of positive words used to describe Kalam’s proposed plan and the number of negative words used to describe the current status of country. The researcher would be interested only in quantifying these words, not in examining how they are related, which is a function of functional analysis. In conceptual analysis, the researcher simply wants to examine, presence with respect to his/her question, i.e. is there a stronger presence of positive or negative words used with respect to vision 2020.

Once the research question has been established, the researcher must make his/her coding choices with respect to the eight category coding steps indicated by Carley (1992).

1.2.4 Steps for conducting conceptual analysis

Following steps are involved in coding a text or set of texts during conceptual analysis:

1. Decision about the level of analysis.
2. Decide how many concepts to code for.
3. Decide whether to code for existence or frequency of a concept.
4. Decide on how to distinguish among concept.
7. Text coding.
8. Analysis of results.

Step 1: Decision about the level of analysis

First, the researcher must decide upon the level of analysis. To continue with the example—speeches on vision 2020, the researcher must decide whether to code for a single word or for sets of words or phrases.

Step 2: Decide how many concepts to code for

The researcher must now decide how many different concepts are to be coded for. This step involves development of a pre-defined set of concepts / categories. The
researcher must decide whether or not to code for every single positive or negative word that appears, or only certain ones that the researcher determines as most relevant to vision 2020. With this pre-defined set of categories, the researcher has to determine how much flexibility he / she allows him / herself while coding. The question of whether the researcher codes only from this pre-defined set or allows him / herself to add relevant categories not included in the set as he / she finds them in the text, must be answered. Determining a certain number of set of categories allows a researcher to examine a text for very specific purpose, keeping him / her on task. Nevertheless, introducing a level of coding flexibility allows new, important material to be incorporated into the coding process that could have significant bearing on one’s result.

**Step 3: Decide whether to code for existence or frequency of a concept**

After a certain number and set of concepts are chosen for coding, the researcher must answer a key question: Is he / she going to code for existence on frequency? This is important because it changes the coding process. When coding for existence of any word say “Developed India”, that word would only be counted once, no matter how many times, it appears. This is a very basic coding process and gives the researcher a very limited perspective of the text. Nonetheless, the number of times “Developed India” appears in a text is more indicative of importance. For example, knowing that “Developed India” appeared 50 times compared to 15 appearances of “Developing India” might lead a researcher to interpret that Dr. Kalam has a vision for India to transform it into developed country which he is putting forward so that, country can have the makings of a developed country in real sense. Only knowledge of appearance without frequency of appearance will not allow the researcher to make any discussion, regardless of whether it is valid or not.

**Step 4: Decide on how to distinguish among concepts**

The researcher must decide on the level of generalization i.e. whether concepts are to be coded exactly as they appear, or if they can be recorded as the same even
when they appear in different forms. For example “expensive” might also appear as “expensiveness”. The researcher needs to determine, if the two words mean radically different or if they are similar enough that they can be coded as being same i.e. “expensive words”. In line with this, is the need to determine the level of implication one is going to allow. This entails more than subtle differences in tense or spelling, as with “expensive” and “expensiveness”. Determining the level of implication will allow the researcher to code not only for the word “expensive” but also for words that imply “expensive”. This could perhaps include technical words, Jargon or political euphemism, such as “economically challenging”, that the researcher decides not to merit a separate category, but is better represented under the category “expensive” due to its implicit meaning of “expensive”.

**Step 5: Development of rules for coding texts**

After taking the generalization of concepts into consideration, a researcher has to develop translation rules so that he / she can code exactly same what he / she wants to code for. Developing a set of rules, help the researcher to organize the coding process i.e. every time he / she is coding things throughout the text consistently in the same way.

If in one paragraph a researcher codes “economically challenging” as a separate category from “expensive” and in next paragraph he / she codes it under the category “expensive”, then the coding process is invalid and the Discussion drawn from such data will subsequently be invalid as well. Translation rule provides safeguard against such error and renders coding process a crucial level of consistency and coherence.

**Step 6: Treatment of “Irrelevant Information”**

The researcher must decide whether irrelevant information should be ignored as suggested by Weber in 1990 or coding scheme should be altered or reexamined.
Step 7: Texts Coding

Once the decision about irrelevant information is made, coding of texts begins. This is done either manually by going through text and noting down concept occurrences or by using various computer programmes. Coding with computer is one of contemporary conceptual analysis. By inputting one’s categories, content analysis programme easily automates the coding process and examines huge amount of data and a wider range of texts quickly and efficiently but automation is very dependent on the researcher’s preparation and category construction. When coding is done manually, a researcher can recognize errors for more easily. A computer is only a tool and can only code texts that are based on the information given to it. This problem is most apparent when coding for implicit information, where category preparation is essential for accurate coding.

Step 8: Analysis of results

Once coding is done, the researcher examines the data and draws the conclusions and generalizations whatever are possible. Before drawing conclusions and generalizations, one must decide what to do with the information in the text that is not coded. One option is either to delete or skip over unwanted material or to view all information as relevant and important and use it to re-examine, reassess and perhaps even to alter ones coding scheme. Furthermore, the conceptual analysis deals only with quantitative data so the level of discussions and generalizations are very limited. The researcher can only extrapolate as far as the data allows. However, it is possible to see trends that are indicative of much larger ideas. Using the example from step 3, if the concept “Developed India” appears 50 times compared to 15 appearances of “Developing India” then the researcher can pretty safely extrapolate that there does appear to be greater emphasis on the sorting of those challenges out due to which India is still developing, as opposed to the despair thoughts about India only. It must be kept in the mind that conceptual analysis which is extremely useful and effective for providing this type of information when done correctly, is limited by its focus and
the quantitative nature of its examination. To more fully explore the relationships that exist between these concepts, one must turn to relational analysis.

(ii) Relational Analysis

Relational analysis like conceptual analysis begins with the act of identifying concepts present in a given text or sets of texts. However, relational analysis seeks to go beyond presence by exploring the relationships between the concepts identified. Relational analysis is also termed as semantic analysis (Palmquist, Carley and Dale 1997). In other words, the focus of relational analysis is to look for semantic or meaningful relationships. Individual concepts are viewed as having no inherent meaning. Rather, meaning is a product of the relationships among concepts in a text. Carley (1992) asserts that concepts are “ideational kernels” these kernels can be thought of as symbols, which acquire meaning through their connections to other symbols. Relational analysis can be further subcategorized into following three:

(I) Affect Extraction

This approach provides an emotional evaluation of concept explicit in a text. It is problematic because emotion may vary across time and populations. Nevertheless, when extended it can be potent means of exploring the emotional or psychological state of the speaker and writer. Gottschalk (1995) provides an example of this type of analysis. By assigning identified concepts a numeric value on corresponding emotional or psychological scales that was statistically examined, Gottschalk claimed that the emotional or psychological state of the speaker or writer can be ascertained via their verbal behaviour.

(II) Proximity Analysis

This approach, on the other hand, is concerned with the co-occurrence of explicit concepts in the text. In this procedure, the text is defined as a string of words. A given length of words, called a window, is determined. The window is then scanned across a text to check for the co-occurrence of concepts. The result is the creation of a concept determined by the concept matrix. In other words, a matrix, or a group of
interrelated, co-occurring concepts, might suggest a certain overall meaning. The technique is problematic because the window records only explicit concepts and treats meaning as proximal co-occurrence. Other techniques such as clustering, grouping and scaling are also useful in proximity analysis.

(III) Cognitive mapping

This approach is one that allows for further analysis of the results from the two previous approaches. It attempts to take the above process one step further by representing these relationships visually for comparison. Whereas affective and proximal analysis function primarily within the preserved order of the text, cognitive mapping attempts to create a model of the overall meaning of the text. This can be represented as a graphic map that represents the relationship between concepts.

In this manner, cognitive mapping lends itself to the comparison of semantic connections across texts. This is known as map analysis, which allows for comparison to explore “how meanings and definitions shift across people and time” (Palmquist, Carley and Dale, 1997). Maps can depict a variety of different mental models (such as that of the text, the writer/speaker or the social group/period), according to the focus of researcher. This variety is indicative of the theoretical assumptions that support mapping: mental models are representations of the interrelated concepts that reflect conscious or subconscious perception of reality; language is the key to understand these models; and these models can be represented as networks (Carley, 1990). Given these assumptions, it is not surprising to see how closely this technique reflects the cognitive concerns of socio and psycholinguistics, and lends itself to the development of artificial intelligence models.

1.2.5 Theoretical Influences on Relational Analysis

This kind of analysis that researcher employs vary significantly according to their theoretical approach. There are two key following theoretical approaches that have influence on concept analysis.
(i) **Linguistic Approach**

Linguistic approaches to content analysis focus on analysis of texts on the level of a linguistic unit, typically single clause unit. One example of this type of research is Gottschalk (1975), who developed an automated procedure, which analyses each clause in a text and assigns it a numerical score on several emotional / psychological scales.

(ii) **Cognitive Science Approach**

This approach includes the creation of decision maps and mental models. Decision maps attempts to represent the relationships between ideas, beliefs, attitudes and information available to an author when making a decision within a text. These relationships can be represented as logical, inferential, causal, sequential and mathematical relationships. Typically, two of these links are compared in a single study, and are analysed as networks. For example, Heise (1987) used logical and sequential links to examine symbolic interaction. The methodology is thought of as a more generalized cognitive mapping technique than the more specific mental model approach.

Mental models are groups or networks of interrelated concepts that reflect conscious or subconscious perceptions of reality. Mental models are more specific approach to mapping because they can be numerically and graphically analysed. Such models relay heavily on the use of computers for analysis and mapping representation. Typically, studies based on this approach follow five general steps:

1. Identifying concepts.
2. Defining relationship type
3. Coding the text on the basis of step 1 & 2.
4. Coding the statements.
5. Graphically displaying and numerically analyzing the resulting maps.

To create the model, a researcher converts a text into a map of concepts and relations, the map is then analysed on the level of concepts and statements, where a
statement consists of two concepts and their relationship. Carley (1990) assert that this makes possible the comparison of a wide variety of maps, representing multiple sources, implicit and explicit information as well as socially shared cognitions.

1.2.6 Relational Analysis: Overview of Method

For relational analysis, it is important to decide which concept will be examined in the analysis. Studies have been conducted with as few as one and as many as 500 concept categories. Too many categories, obviously, may conceal the results and too few can lead to unreliable and potentially invalid conclusions. The process of relational analysis has achieved a high degree of computer automation but like most form of research is time taking. Relational analysis maintains a high degree of statistical rigor without losing the richness of detail apparent in even more qualitative methods.

1.2.7 Steps for conducting Relational Analysis

The following steps are used to code a text or set of texts during relational analysis:

1. Selection of problem.
2. Selection of sample or samples for analysis.
3. Determination of types of relationships.
4. Categorization of texts and codification of words.
5. Exploration of relationships between concepts.
6. Coding relationships.
7. Performing statistical analysis.

Step–1: Selection of Problem

The question is important because it provides a direction to study. Without a focused question, it is difficult to complete analysis because the concepts open to discussions are limitless.
Step-II: Selection of sample or samples for analysis

Once the problem has been identified, the researcher must select text for analysis. For relational content analysis, the primary consideration is how much information to preserve for analysis. One must be careful not only to limit the results by doing so, but the researcher must also take care to not to take on so much that the coding process becomes too heavy and extensive to supply worthwhile results.

Step-III: Determination of the types of relationship

Once, the sample has been selected for analysis, it is necessary to determine what type or types of relationship researcher wants to examine. There are different subcategories of relational analysis that can be used to examine the relationships in texts i.e.

1. Affect Extraction
2. Proximity Analysis
3. Cognitive Mapping

Once the subcategory of analysis is chosen, the selected text must be reviewed to determine the level of analysis. The researcher must decide whether to code for a single word, such as “perhaps”, or for set of words or phrases like “I may have forgotten”.

Step-IV: Categorisation of texts and codification of words

At the simplest level, a researcher can code merely for existence. This is not to say that simplicity of procedure leads to simplistic results. Many studies have successfully employed this strategy. For example Palmquist (1990) did not attempt to establish the relationships among concepts in the classroom he studied, however his study looked at the change in the presence of concepts over the course of the semester, comparing a map analysis from the beginning of the semester to one constructed at the end. On the other hand, the requirement of one’s specific research question may necessitate deeper level of coding to preserve greater details for analysis.
Step-V: Exploration of the relationships between concepts

Once words are coded, the text can be analyzed for the relationships among the concepts set forth. There are three concepts, which play a central role in exploring the relationships among concepts in context analysis.

(a) **Strength of Relationship**

It refers to the degree to which two or more concepts are related. These relationships are easiest to analyse, compare and plot graph when all relationships between concepts are considered to be equal. However, assigning strength to relationships retains a greater degree of the details found in the original text. Identifying strength of a relationship is key when determining whether or not words like unless, perhaps or may be are related to a particular section of text, phrase or idea.

(b) **Sign of a relationship**

It refers to whether or not the concepts are positively or negatively related. To illustrate the concept “decreasing concentration of CD4+ in human body is negatively related with “immunity” in the same sense as the concept “normal concentration of CD4+ in human body is positively related. The above example emphasizes “normal concentration of CD4+ as the negation of “decreasing concentration of CD4+” but could be coded as two separate categories, one positive and one negative. Use of sign coding for relationships may be to find out whether or not the words in question were used in opposition or in favour of the concept.

(c) **Direction of the Relationship**

It refers to the type of relationship exhibited by categories. Coding of such information can be useful in establishing the impact of new information in a decision making process. There are different kinds of directional relationship like “X implies Y”, “X occurs before Y” and “if X then Y” or simply the decision whether change in concept X brings “alteration” in concept Y or vice-versa.

Step-VI: Coding relationships

One of the main difference between conceptual analysis and relational analysis is that the relationships between concepts are coded. At this point, it is important to take special care of assigning value of the relationships in an effort to determine
whether the ambiguous words in Dr. APJ Abdul Kalam’s speech were just fillers or hold information about the statement he made.

**Step- VII: Performing Statistical Analysis**

This step involves conducting statistical analysis of the data coded during relational analysis. This involves exploring of differences in relationships among the identified variables.

**Step-VIII: Mapping of representations**

In addition to statistical analysis relational analysis often leads to representation of the concepts and their associations in the text in a graphical or map form.

Besides these two categories, there are three distinct approaches to qualitative content analysis namely

- (a) Conventional Content Analysis
- (b) Directed Content Analysis
- (c) Summative Content Analysis

All three approaches are used to interpret meaning from the content of text data.

**(a) Conventional Content Analysis**

Conventional content analysis is generally used with a study design whose aim is to describe a phenomenon. This type of design is usually appropriate when existing theory or research literature on a phenomenon is limited. Researchers avoid using preconceived categories (Kondracki & Wellmann, 2002), instead allowing the categories and names for categories to flow from the data. Researchers immerse themselves in the data to allow new insights to emerge (Kondracki & Wellmann, 2002). This approach is also described as inductive category development (Mayring, 2000). The advantage of the conventional approach to content analysis is gaining direct information from study participants without imposing preconceived categories. At most, the result of conventional content analysis is concept development or model building (Lindkvist, 1981).

One challenge of this type of analysis is failing to develop a complete understanding of the context, thus failing to identify key categories. Lincoln and Guba (1985) described this as credibility within the naturalistic paradigm of trustworthiness.
or internal validity within a paradigm of reliability & validity. Credibility can be established through activities such as peer debriefing, prolonged engagement, persistent observation and member checks (Lincoln & Guba, 1985, Manning, 1997).

(b) Directed Content Analysis

Sometimes, existing theory or prior research exists about a phenomenon that is incomplete or would benefit from further description. The researcher might choose to use a directed approach to content analysis. Levine – Donnerstein (1999) categorized this as deductive use of theory. The goal of a directed approach to content analysis is to validate or extend conceptually a theoretical framework of theory. It can provide predictions about the variables of interest or about the relationships among variables, thus helping to determine the initial coding scheme or relationships between codes. This has been referred to as deductive category application (Mayring, 2000).

Depending on the research question, coding can be done by two strategies. If the goal of research is to identify and categorize all instances of a particular phenomenon, then it might be helpful to read the transcript / text and highlight all text that on first impression appears to represent that particular phenomenon. The next step in analysis would be to code all highlighted passage using the predetermined codes. Any text that could not be categorized with initial coding scheme would be given a new code. The second strategy that can be used in directed content analysis is to begin coding immediately with the predetermined codes. Data that cannot be coded are identified and analysed later to determine if they represent a new category or a subcategory of an existing code. The choice of which of these approaches to use depends on the data and the researchers goals. If the researcher wants to be sure to capture all possible occurrences of a phenomenon, highlighting identified text without coding increases trustworthiness. If the researcher feels confident that initial coding will not bias the identification of relevant text then coding can begin immediately.

The main strength of directed approach to content analysis is that existing theory can be supported and extended. In addition, as research in an area grows, a directed approach makes explicit the reality that researchers are unlikely to be
working from the name perspective that is often viewed as the hallmark of naturalistic design.

(c) Summative Content Analysis

A study using a summative approach to qualitative content analysis begins with identifying and quantifying certain words or content in text with the purpose of understanding the contextual use of the words or content. This identification is an attempt not to infer meaning but, rather, to explore usage. Analyzing for the appearance of a particular word or content in textual material is referred to as manifest content analysis (Potter & Levine–Donnerstein, 1999). If the analysis ends at this point, the analysis would be quantitative, focusing on counting the frequency of specific words or content (Kondracki & Wellmann, 2002). A summative approach to qualitative content analysis goes beyond mere word counts to include latent content analysis. Latent content analysis refers to the process of discussion of content (Holsti, 1969). In this analysis, the focus is on discovering underlying meaning of the words or the content (Babbie, 1992, Catanzaro, 1988, Morse & Field, 1995).

A summative approach to qualitative content analysis has certain advantages. It is an unobtrusive and nonreactive way to study the phenomenon of interest (Babbie, 1992). It can provide basic insights into how words are actually used. However, the findings from this approach are limited by their inattention to the broader meanings present in data. As evidence of trustworthiness, this type of study relies on credibility. A mechanism to demonstrate credibility or internal consistency is to show that the textual evidence is consistent with the interpretation (Weber, 1990).

1.3.0 Need of the Study:

In the Indian situation, at the primary stage the textbook continues to be the most essential and in majority of cases the only aid in the hands of the teacher and the learner through which the given curriculum is transacted. This situation consequently places a heavy responsibility on the quality of the textbook for ensuring effective teaching-learning interactions and outcomes. For any instructional material to be effective, it has to be necessarily planned keeping in view the requirements of the
learners particularly with reference to their age, their educational and cultural background, their immediate environment as well as their proficiency in the language, which is the medium of instruction. Therefore, textbooks are also considered important in meeting objectives of education at different level. Particularly in the case of Environmental Education, the textbook should be designed in consonance with the age and grade of the students. They should not only contain suitable subject matter but also they should be supported by proper illustration and activities. Therefore, to find out the answer of the following questions, the present study has been undertaken.

1. What are the objectives of textbooks of Environmental Education?
2. What are the subject matters, illustrations, activities, and practice exercise included in the textbooks of Environmental Education?
3. What is the suitability/appropriateness of subject matters, activities, illustrations and activities with respect to the particular grade level of students?

However, many studies have been carried out in the field of Environmental Education and Environmental Awareness but none of them answers those questions particularly for the state of Rajasthan. Therefore, the following problem statement has been chosen for the study.

1.3.1 Statement of the Study:

The proposed study was carried out under the following title:

"A Content Analysis of Environmental Education textbooks of Primary stage in Schools of Rajasthan".

1.3.2 Explanation of the Terms:

The key terms used in this study might be functionally defined as follows:

i. **Content Analysis:**

Content analysis is a method of studying and analyzing communications specially diagrams, examples, activities and items of practice exercises in a systematic, objective and quantitative manner.
ii.  **Environmental Education:**

It is an integral part of education process, which is mainly concerned with development of values and an initiative of the learners and their involvement in action.

iii. **Environmental Education Textbook:**

“A book that contains and gives instruction in the main principles of Environmental Education”.

iv. **School:**

"A place or institution for teaching children, which is governed by RBSE."

v. **Rajasthan:**

"It is one of the states of NW India."

vi. **Primary Stage:**

“It is a stage that includes the first five grades i.e. 1st to 5th grade.”

1.4.0 **Assumption:**

It is assumed that the textbooks of Environmental Studies in schools of Rajasthan have been developed as per the prescribed national norms particularly on the basis of environmental-education nodal agency for school i.e. NCERT document "Environmental Education in School."

1.4.1 **Objectives of the Study:**

The scope of the study envisages the following objectives:

1. To find out the extent to which the themes and sub themes recommended by NCERT have been incorporated in textbooks of Environmental Studies of Primary stage especially Grade III to V.

2. To find out the suitability of the content matter, illustration, activities, and practice exercise of Environmental Studies textbooks of Primary stage.

3. To suggest measures for development of existing textbooks of Environmental Studies for Primary stage.
1.5.0 Significance of the Study:

Environmental problems are of global concern. Realizing its importance, Environmental Education has been introduced in schools from grade I to grade XII. The syllabus developed by NCERT has been approved by Supreme Court of India in their Judgment of IA No.1 in Writ Petition (Civil) No. 860/1991 dated 13th July 2004. Therefore, it is imperative to analyse the content of different textbooks of Environmental Studies so that it can be identified that dissemination of Environmental Education is being done in accordance with the syllabus prescribed by NCERT.

The findings of the study will provide base for the improvement of textbooks of Environmental Education of Primary stage in Schools of Rajasthan.

1.6.0 Delimitations of the Study:

There are limitations of every work, similarly this study was also delimited in many respect. These are as follows:

1. The study was delimited only to the State of Rajasthan.

2. The study was delimited only to textbook of Environmental Studies of lower primary stage (grade III to V) of schools in Rajasthan.

3. Only views of teachers teaching the textbook of environmental studies in lower primary stage of schools in Rajasthan are taken into consideration.

1.7.0 Format of the Report

The report is presented in five chapters. Each chapter deals with the following:

Chapter I Contains a general introduction as evident from the earlier pages and all the relevant sections of an introductory chapter.

Chapter II Presents the review of related literature and significant studies pertaining to the area under investigation.

Chapter III Deals with the design of the study, giving the method and sample selected, the tools and the techniques with which the data were
collected, the procedure employed for collecting data and the statistical
techniques applied for the analysis of the data.

**Chapter IV**  Presents the details of the analysis accompanied by a model plan of
action, the discussion of the results and the outcome of the study.

**Chapter V**  Summarizes the study in retrospect. It presents the summary of the
procedure, major findings, conclusions, implications of the study and
suggestions for further researches in this area. The report is supported
with Appendices pertaining to the study.
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