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## **SCIENTIFIC APPROACH TO TEACHING HISTORY- CONCEPT BASED TEACHING**

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### **Introduction:**

History is the most universal of the humanities which encompasses every sphere of life. Since the evolution of the human life, it has dealt with social, cultural, economical, political and moral or ethical aspects of his life. It is not merely a body of facts to be learned, but is a series of arguments & points of view to be debated on order to correct past mistake & enhance the quality of present. The study of the ideas, attitudes and actions of people in the past helps to sharpen a person's own sense of values. It offers moral lesson to the human kind to live peacefully in the society. It also helps to cultivate a more tolerant global outlook. It is not just politics & wars but encompasses virtually all aspects of human activity & behaviour. The arts & sciences, technology & economics, ideology & social attitudes are all part of history. Hence history undoubtedly is considered as the mother of all subjects. Every discipline has its root hidden in History. All these together make history an independent discipline worth studying. As a result, history has been given its due place as one of the core subjects in the school curriculum.

Scientific Approach is a body technique for investigating phenomena & acquiring new knowledge, as well as correcting & integrating previous knowledge. It is based on gathering observable, empirical, measurable evidences subject to the principles of reasoning. It is a systematic way of acquiring knowledge which is reflective in nature with the focus on the social problems where the students take a stand & rationalize it. The facts from the history subjects are used as an evidence for an inquiry & sees that moves from phase to phase. Students take major responsibility for the inquiry itself, & even carry it through the phases. This approach exposes the students to social problems which in turn lead them to decision making. The students are made to analyze the content matter in the light of the stand they take.

When such an approach is adapted in the methods of teaching, they become scientific methods. The Scientific Method is a process for experimentation that is used to answer questions & explore observations. Scientific method is based on the assumptions about the nature & man. Science also assumes that there is enough order, permanency & uniformity in the nature & the



behavior of the human kind which can change but not drastically. This assumption makes it possible to use scientific methods in social studies also, which can be termed as the disciplines of science. Bursleson & Steiner have stated the following basic requirements for using scientific method:

1. Science is characterized by public procedures, precise definitions & objective Data collection.
2. Finding must be able to be reproduced.
3. The approach to knowledge is systematic.
4. Purposes of explanation, understanding & prediction.

These requirements help in identifying that extent to which a discipline can be characterized as science so as to apply the scientific method. James Bank's has discussed these requirements in order to ascertain scientific nature of history. According to him, historians do identify problems studied, examples of evidence, general conclusions & they give a list of reference & sources. History can be considered scientific because historians use the scientific methods in modified form & give importance to objective description. When historian attempts to reconstruct the past, they experience unique research problem & to resolve them. They follow the steps that any scientific method follows. The teachers should help students to study history from the perspective of these historians in order to reconstruct the past.

Hence it is essential for the teacher for the teacher to teach concepts & generalizations related to the product & process of History. The concepts which can be used for the students to experiment & explore the facts & events occurred in the past in order to establish & reconfirm the truth behind. They take up the role of the Historians to study the data in the light of Hypotheses formulated in the form of Generalization to accept or reject them. This can be done if the teacher uses the scientific methods viz. Concept based teaching & Generalization based teaching in the classrooms.

### **3. CONCEPTS**

The history curriculum provides many concepts that are very important for the students to understand in its right perspective in order to make the subject matter more meaningful. Learning to use concepts is a vital part of our thinking processes. This also makes learning new topics with similar concepts easier.

According to James Banks , Concept is an abstract word or phrase that is useful for classifying or categorizing a group of things, ideas or event. It is an abstract or general idea inferred or derived from specific instances. Concepts are always represented by one or two nouns



which are abstract, timeless and broad in nature and exist in continuum. For example, Family – Society-Nation or Fight-Revolt-Revolution. Concepts can be classified into three categories.

#### **A. Definition of the term concept:**

“Concept is an abstract word or phrase that is useful for classifying or categorizing a group of things, ideas or events”. -**James Babks**

“it is an abstract or general idea inferred or derived from specific instances.”

-(**oxford dictionary**)

“Words that label or name a rroup of common objects are called as concepts.”

#### **B. Nature of concepts:**

- Concepts are always represented by one or two nouns.
- Concepts are the organization of ideas.
- They are abstract, timeless and broad in nature.
- They exist in continuum, e.g. Family-society-nation-fight-revolt- revolution.
- Examples of concepts share common attributed.

#### **C. Types of Concepts**

Concepts can be classified into three categories:

##### **1. Conjunctive concepts:**

The presence of two or more attributed make conjuctive concepts. They are combined in additive manner, i.e., Cold war, United Nations.

##### **2. Disjunctive Concepts:**

Such concepts involve an ‘either-or’ decision. Here either of two sets of defining characters may be present, i.e., Citizen can be anyone who is born in the country or has acquired the nationality due to settlement of occupation or marriage etc.

##### **3. Relational concepts:**

Such concepts define a particular association between attributed or distinguishing characteristics, i.e., Century, parents etc. Such concepts (ideas) are more important and universal than others. Lynn Erickson calls such concepts, “macro concepts.” i.e. ‘change’ is a macro concept. These special concepts serve to focus the study of topics. Looking at topic like Migration through the lens of concept , change provides students opportunities to find similarities and differences, to categorize, and to formulate a generalization(big ideas)such as, ‘migrating cultured create change. This is more valuable than just memorization of facts.



#### **4. CONCEPT BASED TEACHING METHOD**

We live and teach in a changing world. The direct instruction method that was effective earlier does not work well with today's students, owing perhaps to the many distractions that social change has brought to their growth in minds. Add to this the fact, all that has happened in the world in the last years, there is so much more to learn. Further, developments are coming so quickly that learned knowledge is itself becoming obsolete practically before it can be applied. Higher order thinking skills are essential to face the demands of rapid change. Concept-based curriculum, stresses on these things skills. Whereas traditional curriculum requires students to 'cover' topics, memorize facts, and restate them for evaluation purposes, the concept-based method stresses identifying and thinking through concepts and 'big ideas'.

David Ausubel provides ample research and rationale for basing classroom teaching and learning on conceptual structures. He proposes that classroom reception learning that is organized and sequenced according to conceptual structures, generated long run acquisition of stable and usable bodies of knowledge (and of intellectual skills) and the development of the ability of think systematically, independently, and critically in particular fields of inquiry.

In the concept based teaching, teachers use concepts as a lens to focus on a topic. For example, instead of teaching facts about dinosaurs, they might focus on dinosaurs according to the concept of extinction- what it means to adapt or not to adapt to the world around it and what happens when a living thing isn't well-suited to its environment. Thus, the concept based teaching can be defined as 'a teaching-learning situation where the concepts are at the focus and the content is taught in relation with these concepts'.

Concept Based Teaching is a way of organizing lessons that stresses the concepts and big ideas that stand behind the topics discussed in the class. Concept-Based Teaching answers the question, 'Why do we have to learn this?' They are always represented by one or two nouns. Examples of concepts share common attributes. For instance, the American Revolution is a Social Studies topic, where revolution is a concept that turns up in many content areas. Big ideas are generalizations that show the relationships between concepts, and are stated in the present tense.

Concepts can be taught through different techniques as follows.

#### **Concept Attainment Model**

This model of teaching provides students with the tool to characterize attributes of items and distinguish Exemplars (Set of data or group of terms) with non-Exemplars. This model allows the teacher to analyze the thinking process of the students.



Bruner and his colleagues studied the thinking process called 'Categorizing'. According to them, categorizing activity has two components, the act of concept formation and the act of concept attainment. Later is the first step towards the former.

*Concept attainment model consists of following phases:*

#### **Presentation of data and identification of concepts:**

Teacher presents labeled examples. Students compare attributed in positive and negative examples. Students generate and test hypotheses and state a definition according to the essential attributes.

#### **Testing attainment of the concept:**

Students identify additional unlabelled examples as yes or no. Teacher confirms hypothesis, names concept and restated definition according to the essential attributes. Students generate examples.

#### **Analysis of thinking strategy:**

Students describe thoughts and discuss the role of hypothesis and attributed. Thus concept attainment model provides practice in inductive reasoning and opportunities for altering and improving student's concept building strategies.

- **Concept Mapping:**

A concept map is a two-dimensional, hierarchical node-link diagram that depicts the structure of knowledge as viewed by the student. It is a technique to visualize the relationship between concepts and related information. The map is composed of concept labels, each enclosed in a box or oval; a series of labeled linking lines, and an inclusive, general-to-specific organization that gain insight into the way students view a scientific topic. It is a graphical representation of the concepts. The relationship is articulated in linking phrases. E.g. gives rise to, results in, contributes to etc.

#### **Characteristics of concept mapping:**

1. It is a graphical representation of the concepts.
2. It is an organized structure of the knowledge woven around the general and specific concepts.
3. It depicts the relationship between concepts.
4. The relationship is articulated in linking phrases. E.g. gives rise to results in, contributes to etc.





**Procedure:**

- Identification of the concepts
- Establishing the relationship with the related content
- Preparing the link phrases
- Representing concept mapping graphically

**Advantages:**

- It helps in a meaningful construction of knowledge.
- It results in better understanding of the content.
- It helps in thinking creatively.
- It helps in developing higher level thinking skills and strategies.
- It helps in formulating generalizations.
- It gives the holistic view to the topic.

**Concept based teaching through regular classroom teaching strategy.**

The teacher can teach concepts by using either deductive or inductive approach by focusing on the main concepts and relating it with the content by using questioning, discussion, explanation techniques. Students observe examples, pictures, and situation, identify similarities between the attributed, verbalize the common characteristics of the items in a group, label the concept, state different relationships with the content, find the similarities in different similar situation and form generalization relating two or more concepts.

When teachers base their instruction on concepts, they can expect their students to learn more than just fact. During a concept-based unit of study, students are given many examples of concept. Through these examples of concepts from a topic, students notice common elements. Discussion, guided by carefully planned and also spontaneous question helps students form generalizations. This system enables teachers to engage the intellect and emotions of their students and increases their motivation for learning. It helps students to formulate the chosen big ideas for themselves. This ability helps in achieving genuine understanding. Such meaningful understanding helps in creating the bridge between what students know and what they can learn. The higher level thinking ability is developed. The norms of inquiry call for free and open discussion which results in developing social and democratic values.

Based on the aforesaid discussion, the procedure of CBT method is as follows;

**5. PROCEDURE OF CONCEPT BASED TEACHING METHOD:**

The teacher can teach by focusing on the main concepts and relating it with the content by using questioning, discussion, explanation techniques. The concept mapping or Concept attainment Model can be used at any stage or throughout the procedure as per the strategy determined by the teacher.



- **Identification of the main and sub concepts.**

The concepts to be focused are first identified through content analysis. The attributed in the concept are analyzed and the content matter is organized at the periphery of the concepts.

- **Clarification of the concept by observing examples, pictures, situation.**

Students observe the various illustrations presented to understand the essential attributes of the concept well. They identify the similarities between the attributes & verbalize the common characteristics to define the concept. This clarification can be done by using Concept attainment model of teaching or Concept mapping technique or any appropriate strategy of concept teaching.

- **Stating different relationships with the content.**

The content (or the historical facts) is studied in relationship with the concept & its attributes. The sub-concepts too are clarified in the light of main concept. This way study of the content becomes easy due to the better understanding of the concept.

- **Finding the similarities in different similar situations**

The attainment understanding of the concept is applied in the new similar situation. e.g. After the concept 'Revolution' is clearly understood, students can identify the similar historical event where the essential attributes can be found out. Even the hypothetical situations can be presented to test the students understanding about the concept.

- **Forming generalization relating two or more concepts.**

After learning about the concepts & the related sub-concepts & the facts the content matter can be summarized in the form of a statement that shows the relationship between these concepts or related terms which would hold true & can be verified I different similar situations at any point of time. In this way, when teachers base their instruction on concepts, they can except their students to learn more than just facts. During a concept based unit of study, students notice common elements. Discussion, guided by carefully planned & also spontaneous questions, helps students from generalizations.

## **6. ADVANTAGES OF CONCEPT BASED TEACHING**

- This system enables teachers to engage the intellect & emotions of their students & increases their motivation for learning.





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- It helps students to formulate the chosen big ideas for themselves. This ability helps in achieving genuine understanding.
- Such meaningful understanding helps in creating the bridge between what students know & what they can learn.
- The higher level thinking ability is developed which helps them to.....
  - Understanding rather than memorize.
  - Remember ideas & facts longer because they are more meaningful.
  - Make connections between different disciplines, periods & historical events.
  - Relate ideas to their own lives.
  - Build networks of meaning for effectively dealing with future knowledge.
  - The norms of inquiry call for free & open discussion which results in developing social & democratic values.

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