



CONTENT-CUM-METHODOLOGY & PEDAGOGICAL ANALYSIS OF TEACHING UNITS

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Abstract: The term content-cum-methodology was widely used for emphasizing the acquisition of expertise in both subject matter and the methods of teaching. Few teacher training colleges emphasized only the methodology part ignoring the content aspect, because the teacher trainees were already mastered in the content in either in their under graduation or post-graduation. National Curriculum Framework, 2005 emphasized on the pedagogical aspects with a focus on learner / child rather than on the subject acquisition. However, in either case teachers must analyze the content and integrate it with appropriate strategies. Hence, author discussed the features and steps of content-cum-methodology besides, the concept of pedagogy and pedagogical analysis of teaching units.

Index words: Content-cum-methodology; Pedagogical Content Knowledge; Knowledge representations; Content enrichment; Pedagogical analysis.

I. INTRODUCTION

Teachers exhibit diverse teaching behaviour based on their perspective of what constitutes teaching and what is the role of teacher and learner in the teaching-learning process. Few teachers give adequate freedom for learners to express their ideas of the concept s/he is dealing in the classroom while others who are authoritative emphasize their point of view and expect learners to be passive recipients of knowledge.

Beginning teachers are an exception to this trend. Because they are new to teaching and are not aware of thinking process, study methods, pre-teaching preparations and other steps while teaching, they allow learners to share their views about the concept they are dealing with.

Thus, mastery of one's subject does not make teaching effective. But, the considerations of learner, role of teacher contributes to effective teaching. Other aspects like subject matter, sources of knowledge, teaching objectives, pupil's background, teaching methods, examinations and so on make concept clear for the learners which the pre-service teachers can imbibe during teacher training and implement the same when they take to teaching as a profession. So, a teacher must be expert in content and methodology.

II. MEANING OF CONTENT-CUM-METHODOLOGY

The Teacher Education Curriculum: A Framework (NCTE, 1978) emphasizes the aspect of Content-cum-Methodology. Teacher's pre-teaching processing on subject-knowledge for teaching purposes is important. In daily life we come across the terms - Clerk-cum-typist or Clerk-cum-cashier. Cum means 'with'. In this respect, content-cum-methodology refers to both content and methodology. Thus, teacher must integrate content knowledge with teaching method. This gives rise to teaching effectiveness.

III. CONCEPT OF CONTENT-CUM-METHODOLOGY

Student teachers in a B.Ed. Program learn how to teach subject knowledge effectively. The emphasis here is on teaching of methods rather than content because the teacher trainees have already these concepts in their graduation / post-graduation. Further, there are three possibilities:

- i. Teacher trainee may lack adequate subject knowledge because s/he may not have studied the subject s/he teaches
- ii. Studied his/her subject, but memory losses of the subject knowledge may result in poor conceptual knowledge
- iii. Mastery of his /her subject knowledge alone may not help him to teach effectively.

So, subject knowledge must be considered in the context of different strategies or steps.

The learner, that is, the student teacher studies the subject in graduation / post-graduation. When this learner takes teaching profession, as a teacher s/he faces learners for teaching. Then, the thinking processes in these two roles is different. As a teacher s/he considers subject knowledge in the context of teaching. This aspect is stressed in NEP-2020. It emphasized teaching of methods; foundational literacy; and pedagogy in higher education.

IV. SIGNIFICANCE OF THE CONTENT-CUM-METHODOLOGY

Content-cum-methodology is significant because teacher considers subject knowledge in the context of teaching. This contributes to effective teaching as the learners get to understand the concepts very well because the teacher is an expert in content and methodological procedures. This teacher aims to give conceptual clarity by using various strategies.

V. FEATURES OF CONTENT-CUM-METHODOLOGY

The teacher with the expertise in subject knowledge and methodology practices meaningful integration of content and method in terms of observable skills. This develops deeper understanding of the concepts s/he is required to teach in the school (NCERT, 1978). In this context, Lee Shulman in 1986 conceived Pedagogical Content Knowledge (PCK). It is an amalgamation of content knowledge and teaching method. Besides this, textbooks now-a-days are incorporating content along with the relevant method required to teach that concept. So, teacher performs various activities based on the nature of subject knowledge, pupils' thinking process, their previous knowledge, and ways of learning.

The characteristic features of content-cum-methodology are:

- i. *Knowledge representations*: These are the aspects which the teacher transforms the subject matter into relevant teaching activities for pupil understanding. For instance, the illustrations, examples, pictures, explanations, and demonstrations belong to the category of knowledge representations. It indicates the purpose of teaching.
- ii. *Teaching material*: Selection of teaching learning material is dependent on the knowledge representations.
- iii. *Main teaching points*: The teaching activities revolve around the central idea of the concept.
- iv. *Procedure*: The strategies used for the teaching of concept are based on the knowledge representations. For example, if the teacher intends that the students develop the skill of preparation of a microslide, then s/he must demonstrate how to make thin sections of the specimen, clean with alcohol, stain with safranin / methyl orange, how to place it on the glass slide, and wash with glycerin and how to put the coverslip. The observation of the sequence of steps in the preparation of a microslide helps students to prepare a microslide on their own.
- v. *Modifications in teaching performance*: The understanding of content-cum-methodology helps teacher to modify his / her teaching performance. This is based on the pupil characteristics and capabilities. Performance of teacher differs with the pupils. Besides this, facing the challenging students improves the capabilities of the teacher.

VI. STEPS OF CONTENT-CUM-METHODOLOGY

The steps in the content-cum-methodology are dependent on the nature & structure of discipline. They are given below:

- i. *Discipline*: It is a branch of learning or instruction. For example, Sciences, Humanities, and Arts. It is characterized by the structure of a discipline - the central idea that runs across the discipline. The subject matter is the content in the form of ideas, and concepts. The structure of the discipline is consistent with concepts and methods. Later, the method or enquiry of knowledge representations - the illustrations, examples, and explanations is determined by the nature of content. Axioms / assumptions are based on the cause-effect relationship implied in the content. Thus, choosing the discipline and understanding its nature is the foremost step in content-cum-methodology.
- ii. *Curriculum, syllabus, and textbooks*: The curriculum is a detailed & clear teaching outline drafted according to the specified goals & objectives. The syllabus is the subject matter (or units) which help in creating learning experiences & activities. Sometimes, these are given in the textbooks which are authored / produced by subject experts for providing detailed information on lessons for engaging the learners.
- iii. *Content analysis*: Analysis of content proceeds involves identifying the teaching points. Generally, Davis technique (1999) is adopted for analyzing the content where a central idea of the lesson and its supportive concepts are considered to begin with for teaching the content. Then, the nature of teaching unit/ content in the form of facts, concepts, and generalizations are identified. Later, pupil's cognition helps teacher to choose between the procedural knowledge and declarative knowledge based on the objective of the lesson.
- iv. *Content enrichment*: The total in-depth and comprehensive understanding of teaching concepts is necessary for enrichment of content. It indicates the place of teaching unit in the overall structure of discipline in curriculum and the syllabus. It represents the relationship with other units and the different levels and subjects. This gives the importance, weightages assigned and the implementation of examination pattern.

VII. METHODOLOGY TO PEDAGOGY

The term 'Methodology' focusses on procedures, and it is the study of various methods in a teacher training college. Now, the focus shifts from methods to learner / child. Hence, the term methodology is replaced by 'Pedagogy' where the focus is on learner, strategies of teaching-learning, organizing learning experiences, knowledge about preconception of learners, and transacting the concepts to diverse groups of learners relating with their preconception. Hence, now-a-days a teacher must take up pedagogical analysis of the content.

VIII. PEDAGOGICAL ANALYSIS OF TEACHING UNITS

This component includes the content, pedagogy, integration of method and content, knowledge representations, and evaluation procedure.

- i. *Content*: It is in the form of ideas, facts, concepts, principles, laws and generalizations. It is the subject matter for understanding / medium / vehicle to learn the processes or objectives such as conceptual understanding, application and creating knowledge besides 21 century skills including scientific skills.

- ii. *Pedagogy*: This involves the pupil's awareness of the objectives, classroom activities, sequence, previous knowledge, justification & evidence to support the content, technical terms, interrelationships of teaching points, pupil evaluation, opportunities to pupils for expressing their views, motivation to pupils, curiosity, and value transmission.
- iii. *Integration of teaching method and content*: The determination of the procedure to be adopted depends on the subject matter and the purpose of the lesson.
- iv. *Many teaching methods & techniques*: A wide variety of procedures and strategies are available for the teacher. Its usage depends on the nature of subject, nature of pupils and the expertise of the teacher. Teacher must be flexible in adopting to the varied situations of the classroom. Teacher may require a repertoire of skills to meet the challenges of teaching in the classroom and to address variety of issues – both subject matter, learners and himself / herself.
- v. *Knowledge representations*: It is in the form of skills, techniques, activities, and processes for transmitting knowledge to pupils. The teacher's responsibility is to clarify the content by engaging learners in worthwhile activities.
- vi. *Evaluation procedure*: It involves the assessment of learner and the teacher. The pupil is evaluated in terms of his / her participation, previous knowledge, and applying learning in daily life situations and whether teacher has achieved the objectives of the lesson. Then, evaluation of teacher is self-evaluation. Teacher assesses the structure of the subject, content enrichment, pupil considerations, teaching method, and knowledge representations for the content.

IX. CONCLUSION

The concept 'Content-cum-methodology' is no doubt very useful but what is more significant now-a-days is 'Pedagogy' as the focus is on the learner / child rather than on the subject matter. This is evident in the acquisition / mastery of subject matter but how to use it in daily life is missing, that is, the application or transfer of knowledge or skills from classroom to community is missing because until now and even now parents / teachers / community lay emphasis on acquisition of knowledge ignoring the skills of using this knowledge. Thus, teacher education institutions now focus their energies on pedagogy and pedagogical analysis of content to realise the education goals, especially the sustainable development goals.

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