APPENDIX - C

OPINIONNAIRE No. 2
Dear Sir/Madam,

I am working on a research project intended to identify the Skills* which are specific to the teaching of biology at secondary school level. On the following pages you will come across a list of 30 skills. Please read them carefully. After reading if you feel that some important skills which can make the teaching of biology effective have been left out of this list you may make a mention of these at the end. You are also requested to give their meaning or a brief explanation and assign them onward serial numbers. Write 'S' if you think the skill is specific to teaching of biology, write 'G' if you think the skill is needed on general and if you are undecided write 'U'.

If you think, the skill, though general, must be included in the list of skills specific to teaching of biology because of its high importance in the teaching of biology write 'S'.

Hoping for your kind co-operation in this regard,

Yours truly,

Guide
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* A teaching skill is a set of teaching behaviours which are especially effective in bringing desired changes in pupils.
1. **Skill of generalization:**
   (Generalization means the act or process of generalizing)

2. **Skill of stimulus variation:**
   (Securing and sustaining pupils' attention by changing voice, gestures, movements, interaction style and use of aids).

3. **Skill of closing the lesson**
   (Closure of lesson is said to be attained when major purposes, principles, and constructs of a lesson are judged to have been learnt).

4. **Skill of re-inforcing pupil participation:**
   (This skill involves teacher encouraging pupil's responses or any desirable behaviour using verbal statements like 'good', 'continue' etc. or non-verbal cues like smiling, nodding the head etc.).

5. **Skill of probing questions:**
   (Probing question means going deep into the pupil's response by asking subsequent questions).

6. **Skill of using divergent questions:**
   (Divergent questions are those the answer to which are not easily predictable and are more than one in number).

7. **Skill of using higher order questions:**
   (Higher order questions are defined as questions which cannot be answered from memory or simple sensory description).

8. **Skill of concept formation:**
   (Concept means a generalised idea of a class of objects).

9. **Skill of illustrating difficult concepts and principles with examples.**
10. **Skill of planned repetition through drill or review:**

(Planned repetition is a powerful technique for focussing and highlighting important points, and describing them from a different point of view).

11. **Skill of organising contents logically:**

(This means to organise the contents in a sequence based on the principles of logic).

12. **Skill of appropriate use of audio-visual aids in the lesson:**

(Audio-visual aids help to make learning more meaningful interesting and effective).

13. **Skill of demonstrating:**

(Demonstrating specimens, experiments, slides dissections effectively involving the students).

14. **Skill of introducing the lesson effectively:**

(The term introducing the lesson effectively refers to the establishment of cognitive report between pupils and teachers to obtain immediate involvement in the lesson).

15. **Skill of use of deliberate silence during the teaching for letting the students comprehend the concepts:**

(The rationale behind this skill is to have psychological motivation, expressiveness, giving chance to the students to speak and reduce the teacher talk in the lesson).

16. **Skill of adopting proper speed of teaching according to maturity level of students:**

(This means to keep in view the time at hand, syllabus to be covered, the level of mental activity of pupils and objectives of lesson to be taught).
17. **Skill of black-board writing**
   (This skill involves (i) legible writing (ii) neatness in writing (iii) appropriateness of written work on black-board).

18. **Skill of right use of evaluation technique:**
   (Evaluation technique means a technique used to assess the outcomes of instruction in terms of objectives).

19. **Skill of giving judicious assignments:**
   (An assignment is a task or a piece of work given by the teacher to an individual or to a class).

20. **Skill of using remedial measures:**
    (Remedial measures are measures meant to help students overcome deficiencies).

21. **Skill of proper use of class-room material:**
    (This refers to the use of class-room material like black-board, chalk, duster, charts - hanging on the wall etc.)

22. **Skill of class management:**
    (The management aspect of teaching consists of creating conditions within the class-room group as well as in the class-room environment which enable students to behave in socially approved ways and makes learning interesting, challenging and appealing).

23. **Skill of proceeding from simple to complex:**
    (This means to arrive at complex ideas by starting with simple ideas).

24. **Skill of drawing diagrams**
    (This means to draw diagrams correctly using proper colours and labelling correctly and in a proper way).
25. **Skill of proceeding from concrete to abstract:**
(Making the abstract ideas understandable to the pupil with the help of concrete ideas).

26. **Skill of proceeding deductively:**
(Proceeding from general to particular).

27. **Skill of using basic skills of biology practicals:**
(Basic skills like making slides, staining slides, using microscope, cutting transverse and longitudinal sections, preserving specimens etc. should be used).

28. **Skill of developing concepts inductively:**
Developing concepts inductively means forming concepts by the method of logical inductions).

29. **Skill of explaining:**
(In a class-room, an explanation is a set of inter-related statements made by the teacher related to a phenomenon, an idea etc. in order to bring about or increase understanding in pupils about it).

30. **Heuristic skill**
(It means skill of placing the students in the position of a discoverer by arousing curiosity, suggesting problems or activities, inspiring and postponing results till sufficient evidence is available.)