Appendix- II

Questionnaire

ICT Aided Constructivist practice indicators in the Science Class

I. As a Teacher Perceived form

Directions: Envision teaching a class in your area of Science. Please indicate the frequency of occurrences of the behaviors mentioned in the each statement given below by marking (√) towards the right side of each statement.

Questionnaire purpose: This questionnaire is about to collect the reflections of the envisioned teacher in the Science classroom. This is not a test; there are no right or wrong answers. Your answers may help for your Science Classes.

Name: **Date:**

Very Often =VO, Often =O, Sometimes=SM, Seldom= S, Never= N

Sr. No.	Statements	VO	O	SM	S	N
1	I encourage students' autonomy in the classroom.					
2	I use raw data sources as a interactive materials.					
3	When framing tasks, I use cognitive terminology, such as, classify, predict & create.					
4	I allow students responses to drive lessons, shift instructional strategies.					
5	I inquire about students understandings of the concept before sharing my understandings of those concepts.					
6	I encourage students to engage in dialogue with other students.					
7	I encourage students' enquiry by asking open-ended questions					
8	I seek elaboration of student's initial responses.					
9	I engage students in experiences that might create contradictions to their initial ideas.					
10	I allow wait time after posing questions.					
11	I provide time for students to construct relationships between concepts.					
12	I nurture students' natural curiosity through use of the learning resources from internet.					
13	I consider students points of view in class when we are discussing about the Science concepts.					
14	I always pose questions on emerging issues which are relevant to Science.					
15	In class, I build lessons around primary concepts of Science to big ideas					
16	I assess students learning in the context of continuous teaching-learning					
17	I try to connect the relationship between classroom ideas to the social events.					
18	I encourage students to participate in Science activities.					
19	I consider students' prior knowledge about any particular concept in Science.					

Sr. No.	Statements	VO	O	SM	S	N
20	I give opportunities to learn scientific ideas as much as possible					
21	I go to student's level of thinking during discussion on Science					
22	I post the discussions held in the class in the blogs about Science.					
23	I ask the students to give their experiences to any particular concept of Science before discussing.					
24	I ask the students not to disturb the class by asking confusing questions					
25	I don't give full freedom to students to discuss about Science.					
26	I give all support to students to learn concepts of Science					
27	I provide waste materials to prepare learning resources.					
28	I ask the students to think and analyze critically about any issue in Science.					
29	I try to convince the students about importance of Science for the human welfare.					
30	I motivate students to work hard and find some new things in Science.					
31	I interact with all students in class while discussing concepts of Science.					
32	I interact with students through virtual media.					
33	I ask the students to interact among themselves in discussing any Science topics through e-mail					
34	I value each and every student.					
35	I consider individual differences of all students in class.					
36	I adopt various activities and methods in Science according to students					
37	I respond to students queries immediately.					
38	I take feedback from the students after the completion of each session					
39	I will not be satisfied by one or two reactions to particular issue from the students.					

Sr. No.	Statements	VO	O	SM	S	N
40	I provide various situations, where in students can construct meaning better in Science					
41	To me Science means working with objects and materials in the classroom and laboratories					
42	Science deals with activities that affect living environment.					
43	In Science class I try to develop a conversation with students about the topic we are discussing.					
44	I believe it is important to present a lot of facts to students so that they know what they have to learn to succeed in the class					
45	I believe that the assessment in the class should be an opportunity for students to reveal their changed conceptual understanding of the content					
46	I set aside some teaching time so that the students can discuss with each other any difficulties that they encounter in the studying for this course.					
47	In this class I concentrate on covering the information that might be available from a text book.					
48	I encourage students to restructure their existing knowledge and find new ways to relate the concepts.					
49	In teaching sessions for this class, I use challenging examples to generate the debate.					
50	I think an important reason for the class sessions is to make sure that students have a good set of notes to use for studying to do well on tests.					
51	In this class, I provide opportunities for the students to discuss their changing understanding, views and opinions regarding the class content.					
52	In this class, I provide the students with only the information they will need to pass the formal assessments.					
53	I believe that I should know the answers to any questions that students ask during class sessions					
54	I believe that it is better for students to generate their own notes rather than merely copying mine from PowerPoint or teacher-provided handouts.					

II. As a Learner Perceived form

Envision you are a learner of Science. Please indicate the degree of frequency of occurrences of behaviors mentioned in the each statement below by marking (√) towards the right side of each statement.

Very Often =VO, Often =O, Sometimes=SM, Seldom= S, Never= N

Sr. No.	Statements	VO	O	SM	S	N
1	I prefer that my teacher provides opportunities to understand about Science rather than to read a Science book.					
2	I like it when I explain the results of my own experiment.					
3	Studying alone, I learn more than by studying in a group					
4	In Science classes, I would rather listen to the teacher than to do activities.					
5	I like to do experiments, which help me to understand and relate the theory and practice of Science.					
6	Taking tests helps me to know that what I have understood about Science concepts.					
7	I understand Science concepts better if I have to explain them in my own words					
8	I like working in small groups in Science activities					
9	I like the Science teacher to decide how we learn Science.					
10	I learn more from doing experiments than by listening to the teacher's explanations.					
11	I like to find out something without the teacher telling me how to do it through internet					
12	One of the best ways for me to understand Science is to discuss in the class					
13	I would learn more if I choose the Science topics which I studied.					
14	I would rather be tested by teacher than anyone else					

Sr. No.	Statements	VO	O	SM	S	N
15	I find it difficult to understand the Science without the teacher explanations.					
16	I would find out a scientific idea on my own, rather than have it explained by the teacher.					
17	While working in small groups, my classmates share that they know with me					
18	The best Science classes are those when we do experiments.					
19	Solving problems is one of the best ways for me to understand Science.					
20	I express my ideas more easily when I am in small groups.					
21	The teacher's answers to the questions asked in class by my classmates help me to understand Science.					
22	I would rather use computers to learn Science than listening to the teacher always					
23	Taking a test is not the only way of finding out if I have understood Science					
24	In Science classes, if I don't understand something, then I discuss through blogs					
25	I get worried and I leave it, if I cannot solve a problem in Science.					
26	I like learning about the latest discoveries and inventions in Science.					
27	I do not mind working hard in Science class as long as I learn something.					
28	I like to mix different chemicals to find out what happens in the Science lab					
29	I like to find out new ideas in Science.					
30	I like the teacher to praise my efforts in Science					
31	I try to lead in class discussions.					
32	I like discuss the scientific ideas through power point presentations					
33	I am interested in many scientific ideas that are not taught at the school.					

Sr. No.	Statements	VO	O	SM	S	N
34	I like it when the teacher gives detailed explanations.					
35	I am more interested in the grade I get than in the mistakes I made.					
36	I am interested in finding out the answers when solving scientific problems					
37	I try hard to please the teacher with my work.					
38	I would like to share my new ideas to social groups through social networking					
39	When I am working in small group, I do not care with whom I work.					
40	I bring new ideas for the discussions in the classroom.					
41	I set up own experiments or activities.					
42	I try Science experiments more than one time to check their results					
43	I discuss the research work that scientists do.					
44	I listen to discussions held in TV and radio related to Science.					
45	I refer Science articles from the web.					
46	I go to library or media centre to find the Science information.					
47	I like when visitors come to the class to talk about Science.					
48	I listen/watch podcasts and media clips for the Science work in class					
49	I like to go to fieldtrips on campus that relate to what we do in Science class					
50	I like to go fieldtrips off campus that relates to what we do in Science class					
51	If experiments do not appear to work as predicted, we discuss reasons why?					
52	I like to attend virtual field trips related to Science					
53	I like that the peer group decide what some of the Science lessons are about.					
54	I like to work in team when I do experiments.					
55	I like to try the activities that I design.					

Sr. No.	Statements	VO	O	SM	S	N
56	In the class I question in between to the teacher, when I get confused.					
57	I like to make predictions.					
58	I like to observe when experiment is going on					
59	I like to draw the inferences from my observations.					
60	I like to share and discuss my inferences and reasons through weblogs					
61	I like to write down my own information from a Science experiment.					
62	I like to discuss the results from experiments with the team					
63	In the classroom What I learn is relevant to my interest					
64	In class, I learn to think carefully about my understanding					
65	I like continuous evaluation of learning.					
66	I test hypothesis through experimentation.					
67	I try to control variable while doing lab activities					
68	I like the teacher to observe learners when they do activities					
69	I discuss the ideas of Science concepts by joining various online groups					
70	Watch and discuss Science multimedia presentations					
71	Prepare power point presentations on Science concepts					
72	I have social networking to discuss the Science issues					
73	I like to do concept maps regarding Science concepts					
74	I like to create blogs and discuss in blogs					
75	I work on internet and present the assignment through power point presentations					
76	I use rubrics for self assessment					
77	I prepare software for Science projects					
78	My new learning starts with problems about the world outside of the class					

Sr. No.	Statements	VO	O	SM	S	N
79	I learn how Science can be part of my out-of-school life					
80	I learn interesting things about the world outside the school.					
81	I like when, what I learn has nothing to do with my out-of-school life.					
82	I learn that Science cannot give perfect answers to problems.					
83	I learn that Science is influenced by people's values and opinions.					
84	In the classroom I can express myself like "Why do I have to learn this?					
85	I explain my ideas to other students in the class and virtually					
86	I ask the other students explain their ideas through e-mail					