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Problems faced by Science Teachers in Teaching Quality Science Education at Secondary Schools Level of Sonitpur District in Assam, India

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Abstract: *The Objective of the study is to find out Problems faced by Science Teachers in Teaching Quality Science Education at Secondary School Level of Sonitpur District in Assam, India. Descriptive Survey Method was adopted and 45 Science Secondary Schools were used as sample where Questionnaire, Interview and Observation Method were used as tools for study. The data were analyzed in Percentage Method and Pie Diagram. The findings of study are under three categories – (a). Lack of study Environment at Institutions: 66.8%, 85.3%, 64.9%, 55.8% and 57.2% Schools found lack of Science Laboratory, Scientific Equipment in the Science Laboratories, Physical Condition of Classroom, trained Teachers and Seminars or Workshops on Science Subject. (b) Lack of study Environment at Home: 47.3% and 79.7% Schools found poor Family condition of Students and lack of Scientific Attitude of Parents. (c). Students Psychological Issues: 65.8% and 89.9% Students lack of attention in study and interest. The Government should increase the Annual Budget allocated to Education and ensure more Funds are utilized for development of Science Education across the State or Country.*

Key Words: *Science Teachers, Science Education, Secondary Schools, Sonitpur District, Assam.*

1. INTRODUCTION:

Education plays a Pivotal role in all of our lives and paves the way for all of us to reach our highest potential. Education is the medium that gives us the Skills, Techniques, Information and Knowledge to know, understand and respect the Duties we have towards our Society, Families and the Nation. Therefore, the Magnitude of the importance of Education in life is huge as well as multifold. The importance of Education in life is that it helps everyone develop a good perspective of looking at the World and our Society. Education helps us in getting new ideas and exploring new Ideas. Students are naturally curious, which makes science an ideal subject for them to learn. Science allows Students to explore their World and discover new Things. It is also an active Subject, containing Activities such as Hands-on Labs and Experiments. This makes Science well-suited to active younger Children. Science is an important part of the foundation for education for all children. While most feel that Science in Education is a necessity, they tend to use it as a Tool for reaching a specific target or Personal Mark, after which there is no further need to seek greater Education. Nonetheless, the importance of Education in Society is indispensable and cohering, which is why Society and Knowledge cannot be ever separated into Two distinct entities. To prosper in this Modern age of **Innovation** requires the capacity to grasp the essentials of diverse Problems, to recognize meaningful Patterns, to retrieve and apply relevant Knowledge. Science Education has the potential for helping the Development of the required abilities and understanding by focusing on developing powerful Ideas of Science and Ideas about the nature of Scientific Activity and its Applications**.** Phillips (1973) stated that Science Education or indeed all Education must develop in Students both an awareness of the Problems facing the Society and the Capacity to contribute towards their Solution. The number of Researchers in Science is also substantially low and Science Education may take responsibility to encourage and increase the Researchers in our Country. Science Education should enhance Learners' curiosity wonder and questioning, building on their natural inclination to seek meaning and understanding of the world around. Scientific inquiry should be introduced and encountered by School Students as an Activity that can be carried out by everyone including themselves. They should have personal experiences of finding out about and of making connections between new and previous experiences that not only bring excitement and satisfaction but also the realization that they can add to their knowledge through active inquiry.Both the Process and Product of Scientific Activity can evoke a positive emotional response which motivates further learning. The National Council of Educational Research and Training (NCERT) stated that the Objective of Science Teaching at the Secondary Level is to make Children understand the Nature of Science, its processes, Methods and Scope so that they can use the

Scientific Method to solve their Problems and develop a Scientific attitude. School education can broadly be divided into two stages namely primary education and secondary education. Secondary Education is an important stage of Education and normally takes place after the completion of Primary Education. It prepares Children between the Teenage Years of 14 to 18 for entry to Higher Education or the World of Work. Bajah (1982) recommended that teachers of science need good training to enable them meet a better requirement and enough academic information in a variety of the basic science subject while Dahar, Dahar, Dahar and Faize, (2011) and Omorogbe & Ewansiha, (2013) are of the opinions that training and retraining of science teachers should be given greater emphasis and implementation. Such training should take cognizance of effective teaching strategies, acquisition of adequate concept of the nature of science and adequate knowledge base/ content for effective science teaching. However if teachers are properly trained, it is expected that they will be effective. Shairose Irfan Jessan (2015) study found that the challenges in adopting this approach for Pakistan lie in four areas that will completely need to be revamped according to Science Technology Society (STS) approach. These areas include: the examination system; science text-books; science teacher education programs; and available resources and school facilities. Ajemba Harold Emeka et al (2021) study concluded that inadequate funding, teaching of large classes, poor training and retraining programme, inadequate laboratories, shortage of instructional materials, poor motivation, unconducive working environment and inadequate infrastructural facilities, ineffective supervision, poor curriculum development, lack of Candidates' interest and insecurity problems are the problems currently faced by Science Teachers in Nigerian Public Secondary Schools.

1.1. NEED OF THE STUDY:

Secondary Education is that the most Vital stage within the Academic Hierarchy because it prepares the Scholars for Instruction and therefore the World of Labor. This respective study throws light into the future of the Secondary Schools in Sonitpur District of Assam which mainly depends upon the role of Teachers and their effectiveness on teaching. Another important area of knowledge of Science Teachers is to identify their Students' abilities and interests, which could help the Students in learning the difficult scientific concepts and make Science a more fascinating Subject (not so boring). Our Secondary Program in Science Education provides prospective Teachers a wide range of Opportunities to examine the connections between teaching and learning Science. Infrastructure plays an important role in any system of Education. Every year the Government of Assam spends a heavy amount to develop the Physical Conditions of Schools. The Condition of Science Laboratory of the Secondary Schools of Sonitpur District are very poor. Though the Govt. of Assam provided a heavy amount of funds, still not all sample Schools got funds. Only very few Schools have Science Laboratory facilities and up-to-date equipment in the Laboratory. Moreover, there are no Laboratory Assistants, Demonstrators for Science Practical and Laboratory Attendant for Laboratory. Science Teachers themselves do the work of Laboratory Assistants and Demonstrators to run Practical Classes. The Government has not appointed Laboratory Assistant and Demonstrator for Science teaching at the Secondary Level. Thus, the required facilities are absent in Secondary Schools and hence it hampers the Science Education in the Schools.

1.2. OBJECTIVE: To find out Problems faced by Science Teachers in Teaching Quality Science Education at Secondary School Level of Sonitpur District in Assam,India.

1.3. DELIMITATION: 45 Science Secondary Schools of Sonitpur District, Assam

2. METHODOLOGY:

Descriptive Survey Method was adopted. 45 Science Secondary Schools were used as sample where Questionnaire, Interview and Observation Method were used as tools for study. The data were analyzed in percentage Method and Pie Diagram.

3. RESULTS AND DISCUSSIONS:

Table 1.

Sl. No	Lack of study Environment at Institutions	Percentages (%)
1	Lack of Science Laboratory	66.8
2	Lack of Laboratory Equipment	85.3
3	Lack of Physical condition of Classroom	64.9
4	Lack of trained Teacher	55.8
5	Lack of Seminars and Workshops on Science Subject	57.2

Table no.1 reveals that 66.8% Schools found lack of Science Laboratory whereas 85.3% Schools reported lack of scientific equipment in the science laboratories and 64.9% lack of Physical condition of Classroom. 55.8% Schools found lack of trained Teachers and 57.2% Schools found lack of Seminars and Workshops on Science Subject.

Table 2.

Sl. No	Lack of study Environment at Home	Percentages (%)
1	Poor Family condition of Students	47.3
2	Lack of Scientific Attitude of Parents	79.7

Table no.2 reveals that 47.3% Schools found poor Family condition of Students whereas 79.7% Schools reported lack of Scientific Attitude of Parents.

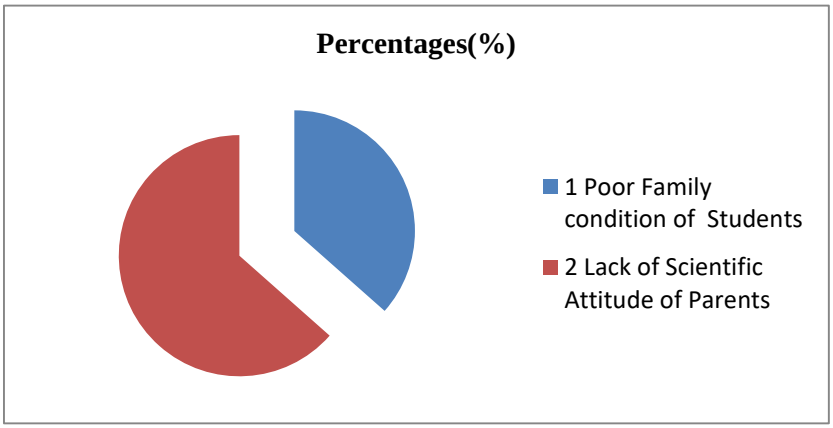

Figure i. Pie Chart showing lack of study Environment at Home.

Table 3.

Sl. No	Students Psychological Issues	Percentages(%)
1	Lack of Attention	65.8
2	Lack of Interest	89.9

Table no 3 reveals that 65.8% Students lack of attention in study whereas 89.9% lack of interest.

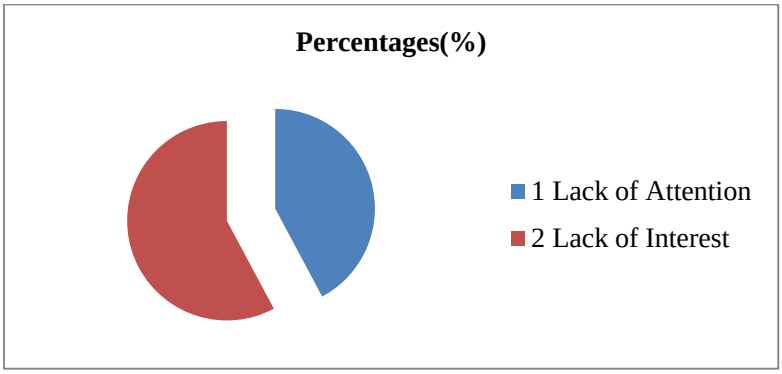

Figure 2: Pie chart showing Students Psychological issues.

4. SUGGESTIONS:

1. A good and congenial Environment plays a great role in the overall Development of Science Education in the Secondary Schools in Sonitpur District of Assam.
2. Science Education requires Human Resources i.e. qualified Science Teachers, Laboratory Assistants, Demonstrators, Laboratory Attendants to carry out Science Education effectively.
3. Infrastructure and Laboratory facilities need to be improved immediately as science cannot be taught as a theoretical Subject.

4. Directorate of Secondary Education (DSE) and other Govt. funding Agencies and Schemes has raised funds for development of Science Laboratories and Equipments.
5. Head of the Institution should take utmost care for raising funds so as to make Science Education effective.
6. To make Science Teaching more interesting sufficient Teaching Aids and Modern Technological Equipments should be provided.
7. Proper up-to-date smart classroom facilities, Discussion cum Demonstration Method, Project Method, Heuristic Method, or any other Innovative Methods can be used to make Science Learning effective and interesting for the upcoming generation.
8. To make the Students and Parents aware of Science Education Parents Teachers Meet should be organized by the Head of the Institution so as to bring into light the importance and value of Science in day to day life.
9. The Science Teachers, Laboratory Assistants, Demonstrators, Laboratory Attendant should be well trained so that they can impart proper knowledge both theoretically and practically to the learners and make study more effective and interesting.
10. Time to Time Seminar and Workshop should be organized to develop personality both the Teachers and Students.
11. Co-curricular activities should be organized in School which supplement the Academic curriculum and help build transferable skills like problem-solving, reasoning, critical thinking, creative thinking, communication and collaborative abilities for Students.
12. A well set Library for the Students with good Books, Journals, Encyclopedias and Magazines in order to keep the upcoming generation up-to-date and make study fruitful. Therefore, the School authority should provide proper facility to the learners so as to bring the interest and creativity in the Subjects.

5. CONCLUSION:

The Government should increase the Annual Budget allocated to Education and ensure more Funds are utilized for Science Education across the State or Country. They should employ more Professional Science Teachers and deploy them to the Secondary schools. This will help to reduce the high Teacher-Students ratio in Science classes. The Government should ensure that Science Teachers are constantly trained and retrained. This will help to improve the quality of Science Education in Secondary Schools. Proper training of Teacher may strengthen the causal relationship between the various qualities of Teachers and Academic Achievement. The Government should provide adequate Laboratories in all Secondary Schools. This will help to improve the quality of Teaching and Learning of Science Education. Schools need to employ qualified Science Teachers that have a lot to offer in terms of Practical and Theoretical aspect of teaching and not half baked teachers. In this paper, problems facing by Science Secondary School Teachers in Sonitpur District, Assam were discussed and measures to address the various problems identified were suggested.

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