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A STUDY OF PROBLEMS FACED BY CLASS 8th STUDENTS IN ACQUIRING PRACTICAL SKILLS OF SCIENCE SUBJECT THROUGH ONLINE LEARNING

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ABSTRACT

In the changing times, along with traditional education, skill based education has gained unique importance to achieve holistic development of students and to make their future easier. Development of innovative skills is essential for growth of jobs and entrepreneurship through education. Needless to say, the success of education lies in this. To develop skills means what exactly to do, teachers focus on encouraging them to understand a concept by themselves by giving them group discussions, demonstrations and sometimes project work through different means. Through practice, students acquire new skills and their creativity is boosted. A developing country like India lacks trained quality, skilled resources with educational qualifications and knowledge and skills to face the changing times and tough technological challenges.

INTRODUCTION

After an epidemic like Corona, huge changes were made and accepted in the education sector. Inevitability is one of the reasons for this, but recently there has been an emphasis on online education. Subjects like language, history, geography can be judged through analysis. Difficulties are certain for these subjects too but in the case of subjects like mathematics, geometry and science there are many difficulties as demonstration, experiment, subtleties are important. In the present place, when we took some notes regarding the subject of science for the students of 8th standard in secondary school, it was noticed that science is a systematic and ancient effort of man to know the gross world and nature around him.

IMPORTANCE OF SCIENCE SUBHECT IN SCHOOL EDUCATION

Science and technology have a special importance in the modern world and they have covered almost all areas of human life. The basic primary objectives of science education are to inculcate a scientific attitude in the individual, to cultivate a scientific approach as well as a comprehensive personal, social, cultural etc. in nature and human affairs. Scientific understanding and treatment of events etc. yes Looking at life's affairs from a scientific point of view means adopting an inquisitive and medical attitude, an objective way of thinking and a rational rationalist perspective. Tendencies like superstition, rudeness, traditionalism, have no place here. To achieve science education by knowing the working methods of science and how to use it to solve personal and social problems in life. Science is a subject covered in higher education from class 5th to higher. In this study along with principles, theory and theory, direct observations, experiments and demonstrations also have a very important place. Students studying in class 8th have to study Chemistry, Physics, Biology mainly. In the science which is multidisciplinary, it is necessary to understand the knowledge of nature and the surrounding area from general science along with plant science at the level of education.

Children nowadays are growing up in a more scientifically and technologically sophisticated society, making scientific literacy more important than ever. When teaching the nature of science and encouraging the application of scientific practices, science education provides a fertile ground for the development of a wide range of 21st-century abilities, including critical thinking, problem solving, and information literacy. The influence of scientific knowledge is ubiquitous. Taking the bus to school is only one example of scientific method-based technology that students encounter every day. The school bus is an example of the use of various scientific and technological disciplines. Civil engineers and urban planners meticulously map out the networks of roadways, lighting, walkways, and other infrastructure. The student's smartphone is a marvel of 21st-century computing technology.

1) Knowledge: Introducing pupils to scientific concepts and principles might help them develop a deeper appreciation for the world around them. Children can learn a lot from science about the world. Everything from the human body to transportation

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techniques may have its inner workings and rationale explained by scientific inquiry. This information will help you grasp novel ideas, make smart choices, and explore new areas of interest. Furthermore, children and teens may improve their knowledge and retention of information since science can give tactile or tangible verification of many things we see on TV and in books.

2) Problem Solving Skills: Science education may help cultivate a healthy skepticism in young minds. The curiosity sparked by scientific study helps pupils apply what they learn and generate new questions based on their observations. Inspiring and engaging, science piques the curiosity of many pupils, leading them to explore related fields. It's wonderful that scientific inquiry may inspire hope in young minds and motivate them to work for a better society. The capacity to reason and find solutions is a skill taught by the sciences. Almost everything you see was made possible because curious people applied their scientific acumen to a problem.

3) Technology: Discovering the fundamentals of how things function is something that may be learned via scientific studies. This encourages kids to think creatively, which may lead to the development of new technologies in the future. To inspect items and recognize their distinctions, it helps to understand how telescopes, microscopes, and other laboratory instruments function. Having even a cursory familiarity with technology might be helpful when troubleshooting household electronics.

4) Boost Critical Thinking: The scientific method provides students with a systematic framework for learning new material and establishing meaningful links between theory and experiment. In science, ideas are followed by experiments that demonstrate the notion via the use of scientific methods and analysis. The benefits of making this theoretical-methodological link may be seen in many different contexts and fields of study.

Science is like gas for a stove; it ignites young brains and propels them to their full potential. Solving problems and choosing courses of action based on careful consideration of the available data. Students should place a high priority on developing their abilities to think critically and solve problems. They're crucial for making the kind of educated choices that pay both academically and in the real world.

5) Holds the Key to Future: The idea that "the present is the key to the future" assumes that we are well-versed in the here-and-now to the point that we can extrapolate our knowledge into the future. Education in the sciences is essential for the next generation's future-readiness. The drop in smoking rates, for instance, has been attributed in part to treatments based on science that have been implemented in schools.

6) The Importance of Science in Early Education: When kids start school, they already have a very solid idea of what they think about the sciences. If kids have a bad view of science, it may be difficult to interest them in the subject when they become older. Getting young pupils interested in the sciences at an early age via interesting content and experiences encourages them to continue their education in the field. Due to its practical application and the transferable nature of the problem-solving and critical-thinking abilities it fosters, science ranks high on the list of essential school courses. These are transferable abilities that help students throughout their lives, from ideation to decision-making to comprehending the research that informs public policy. Science education equips students with the technical literacy, critical thinking, and problem-solving abilities necessary for academic and professional success.

7) The Importance of Teaching Science to Children: Learning science is essential, just like learning arithmetic or studying history. Today's education discussions center on the growing emphasis on science, technology, engineering, and math (STEM) classes. Science may be a challenging topic to teach for a number of reasons, including the sheer volume of content and the inherent challenge of getting pupils to persevere through it all. Teachers, however, should focus on the significance of scientific education. Merely learning definitions and terms is not enough to succeed in life. Edify World School emphasizes areas of science where students interact with a variety of individuals, learn to be patient and persistent, develop a healthy dose of scepticism, get insight into the world beyond their own, and realize that they have the power to contribute to the solution of global issues. What follows are some of the most vital benefits that science can provide to kids.

8) Natural Science: Science elucidates the workings of the planet and teaches us how to most use its bounty. The depletion of these supplies, their effects on living beings, and the need of their conservation are all topics covered by scientific inquiry. Knowledge of animals is gained, as is an understanding of the effects of environmental and resource shifts. Learning early on how to reduce one's impact on the environment may have lasting benefits. Knowledge of how to prepare for and survive natural catastrophes is another vital component of science.

CHALLENGES IN ACQUIRING PRACTICAL SKILLS OF SCIENCE SUBJECT THROUGH ONLINE LEARNING

In the school curriculum, the basic knowledge of these subjects is generally followed by observing the experiments performed by the teachers in the classroom, and by doing the experiments themselves, the observations and conclusions are followed, but due to the online classroom, it became impossible to experiment, observe, and record changes in this way. The students do not understand the process and the results obtained by chemicals.

Just as the concept of chalk and fruit is considered important at the school level, demonstrations are an important part of science. Analysis alone makes it difficult to understand experiments.

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Demonstrations enhance students' skills. In actual online education, secondary level students have to face many problems while demonstrating. When we consider both urban and rural students, some conclusions come to our hands which can be considered on the basis of some following points.

1. Inadequate facilities: While science is taught through online education in rural and tribal areas, children miss out on demonstrations and acquire skills as they do not have access to similar gadgets like mobiles or tablets. Also, the required internet facility is not available to them.

2. Lack of trained teachers: This problem is faced not only in rural but also in urban areas. Often teachers do not realize how to teach science based on daily life experiences. They seem to be teaching science in a very complicated and complicated manner. This directly affects the student. They find the subject difficult and lose interest in understanding science.

3. Textbook Language: Considering this issue, it appears that many students find the language in class VIII science textbooks complicated. Difficult book language as well as difficulty level of terminology helps to overcome this problem by teachers in classroom hours, but in online classroom this problem of students is ignored. It is not considered whether the language and knowledge is being understood or not. Teachers are eager to advance the curriculum, assuming that students are getting all the understanding.

4. Inadequate resources: While learning a subject like chemistry, observations can be recorded through actual experiments. Care and conclusions are important when using them. That skill can be acquired through practice. But when such a subject is taught in online learning without the use of chemicals or labs for hands-on experiments, students fail to acquire the skills.

5. Lack of feedback: While learning science subjects in the real classroom, the teacher is constantly interacting with the students and they are checking and giving feedback to the students on what they have understood. If the expected response is not received, the teacher emphasizes on explaining the same concept in simple language. In this way the process is two-way. Student participation is important in this. But since there is a one-way education in online education, there are obviously difficulties in acquiring the skills of the students.

6. Lack of creative participation of students: Student participation and student action are considered as important or major part while learning science subjects. This method is called student-centered teaching method and it is the same method that is intersected by online learning. Experimenting, observing, gathering information, making notes are the means by which students acquire knowledge independently. Online education does not seem to achieve this. This comes up as a problem.

In short, the field of science and technology is progressing rapidly day by day. Its facilities for education are expanding in the future. For this, it is necessary to know the problems of students at the school level and implement some solution plans for them.

MEASURING SUGGESTIONS

1. Recruiting trained teachers or conducting activities at various levels to train teachers.
2. To provide facilities to the students of rural and tribal areas.
3. Creating up-to-date laboratories and imparting education to students through it.
4. To make an effort to involve the students in hands-on demonstrations to enhance their creativity.
5. Preparation of action program of components to be taught according to student teaching method.
6. Science subject for Class VIII students should be taught in a teacher-centered and student-centered manner with emphasis on innovation and creativity to enhance their interest. In this way, students can be attracted to science by making certain changes and measures.

CONCLUSION

Creativity is essential for the progress of a country. Enhancing creativity in science among students will lead to scientists and new discoveries. For this, there is a need to increase creativity in science by creating interest in science among the students and motivating them to acquire more information about science. For that, it is necessary to teach by asking the students to take maximum action. It is necessary to develop in the student the ability of observation, skill of experimentation, art of presentation of ideas. Therefore, it is necessary to understand the difficulties in acquiring skills while taking online education and learning the subject of science, solve them and implement a solution plan to create creative students at the school level. This will also achieve the purpose of developing the courage to think for oneself without depending on the thoughts of others. The intention to improve thinking ability makes sense here.

In India in 1953 it was recommended that 'secondary education subjects should be taught as compulsory subjects. Science was included in the curriculum as per the recommendations made by various commissions. Due to which the intellectual depth of the children who are taking secondary education, they are able to understand the principles, concepts, etc. Apart from understanding the subject, handling the equipment, doing the experiment itself etc. Things were prioritized. This can be hindered by online education. In the new National Education Policy, the aim is to develop the skills and strengths of the students with emphasis on these aspects. In short, the challenge is to create a generation that can contribute to national progress through these media.

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