

IMPACT OF VIRTUAL LABORATORIES IN TEACHING SCIENCE

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The unforgettable experience we had throughout the pandemic, inspired people from all walks of life to work even harder and longer hours to break out of this terrible situation. Even if nearly, everything has returned to normal, we must still exercise caution and follow safety protocols. Most importantly, we must strengthen our immune systems to fend off infections.

In addition, the modern educational landscape presents obstacles for parents, students, and mentors, such as how to adjust to the face-to-face system for the current school year. Even though the COVID-19 virus is no longer a big problem because of vaccines, it can be challenging for teachers to meet the needs of every student, particularly when it comes to teaching science courses.

Furthermore, the ability to use technology well enhances the techniques of instruction that science teachers employ in the classroom by creating virtual labs. Virtual laboratories can be helpful tools, such as when doing science experiments since they allow students to gain practical experience in a simulated environment. Thus, the impact of virtual laboratories depends on the kind of simulation and experiment design. Another advantage of virtual laboratories is that they're always open, so students may work at their own pace and repeat experiments as needed. This technology could be very beneficial for students who need more practice and for those who do not have access to normal laboratory equipment. The newest technologies are used through virtual laboratories to protect students from potential hazards.

Nevertheless, virtual laboratories do have some drawbacks. Virtual experiments might not offer the same level of realism as actual trials, which is one of its limitations. For example, students conducting experiments in physical laboratories may receive more tactile or Kinesthetic input than in a virtual lab.

Virtual labs can, therefore, be a useful tool for teaching science, but they should be utilized in addition to other instructional methods like lectures and practical lab experiences. It depends on how they are constructed and what the laboratory goals are. Hence, the effectiveness of the virtual lab is crucial, and it should be created to offer students realistic and interesting learning experiences.

References:

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