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Original Research Article

WEB ENHANCED LEARNING: KEY TO SUSTAINABLE DEVELOPMENT

** Dr. Sarita Verma & ** Ramandeep Rawal*

**Assistant Professor, School of Education, Sharda University, Greater Noida.*

*** Student, B.A.B. Ed. Integrated, School of Education, Sharda University.*

Abstract:

This essay focuses on web aided learning, commonly referred to as "hybrid learning," whose application in the context of contemporary schools has gained international recognition. When the world was barred from making physical contact due to the pandemic, digital learning, or e-Learning, was crucial in bridging the distance between classrooms and students. In emerging nations like India, where digital learning was not previously valued above conventional learning, this actually sparked a digital revolution. This paper depicts various strategies for encouraging web-enhanced learning among teachers and students as well as some problems related to this type of learning. Web-enhanced learning may help with sustainable development, including its social, economic, and environmental facets, and it can also help safeguard the world's natural resources so that they can be used to meet the requirements of both the present and the generations to come.

Introduction:

As computers and other technological equipment became more common in the last few decades, schools, universities, and higher education institutions began to use them to provide students with digital study resources. The web-enhanced form of learning combines traditional classroom instruction with digital learning. A learner is encouraged to interact, develop, and comprehend topics using both online and offline modes through hybrid learning.

Unquestionably, it is a student-centered strategy because it encourages flexibility, allowing the learner to select whether they want to take lessons the traditional way or online. In the event that a student becomes unwell, for instance, he or she may not be able to attend offline classes; in this case, the web enhanced mode can assist the student in continuing the classes online. By removing impediments to education including distance, the environment, and health concerns, such a style of learning, if supported by numerous local and international institutions, can enhance the rate of enrollment in education.

Traditional education has the advantage of being highly participatory, and students can participate actively in class discussions. As many authors have previously stated, teacher-student interaction is essential for students because it enables them to ask questions, clarify their doubts, and provide feedback on how the teacher can adapt their teaching style for particular students in the classroom based on their learning preferences.

On the other hand, despite the fact that offline classes facilitate teacher-student interaction more, there are some

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concepts, particularly those related to science, that can only be easily understood with the aid of visualisation, one of the many other learning styles (auditory, read/write, and kinaesthetic).

Through digital depiction, such as 3-D models and VR, certain scientific concepts and phrases can be better understood (Virtual Reality). Thus, web-enhanced learning combines both the digital and conventional teaching methods used by teachers.

Benefits of Web Enhanced Education:

- Innovative: The web augmented style of learning is really cutting edge because it makes use of technology to teach students. In contrast to conventional 2-D illustrations, students can understand technical and scientific ideas through animations, VR, and 3-D presentations.
- Flexible: The main characteristic of web-enhanced learning is flexibility. It gives the students the choice of whether to take a traditional class or an online class in order to maximize their learning potential.
- Distance Learning: Web-enhanced learning can assist students who encounter a variety of travel or distance-related challenges in resolving these concerns and advancing their education.

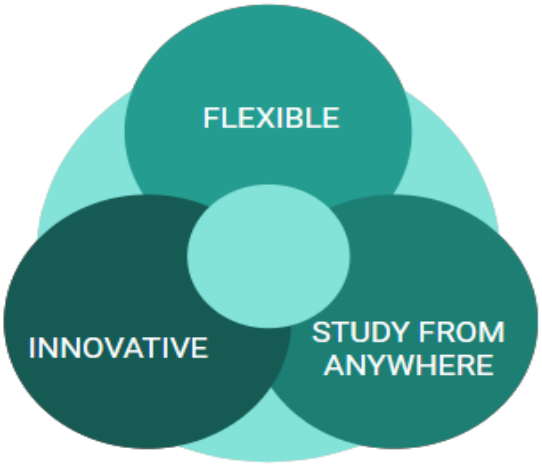

Figure 1: Benefits of Web Enhanced learning

Models:

There are various different models of web enhanced learning. The following are few of them -

- Face-to-face driver: In this paradigm, teachers instruct students digitally through online classes.
- Rotation - In this model, the schedule is already prepared, and the student chooses through an online study calendar and synchronous teacher communication.
- Flex: In this model, teachers actively engage with students to support and aid them in their academic pursuits while the majority of the material is delivered to students via digital media.
- Labs—the instructions and classes are significant in this media digitally, but they are located in a set place. So a student has the option of traditional or online learning.
- The self-blending methodology allows students to choose between traditional and web-enhanced classes.

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- Online driver - There are courses available for enrollment in which the entire curriculum is delivered online and the schedule for teacher-student contact is mapped out in advance.

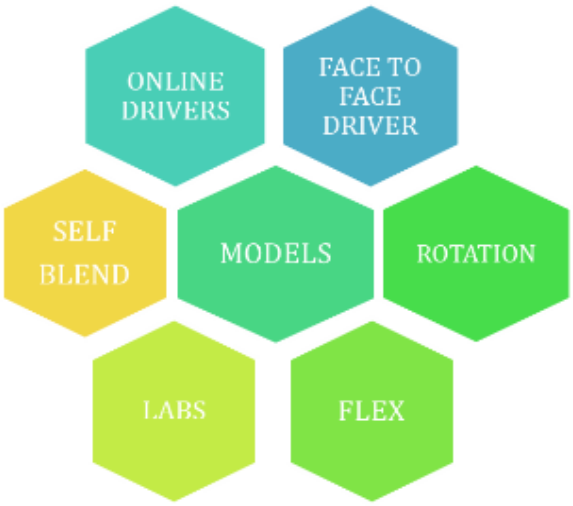

Figure 2: Models of web enhanced learning.

21st Century Literacies:

According to the National Council of Teachers of English, "21st century literacies" is a term used to define the social character of learning that is supported by the capacity to cooperate while using digital technology in learning. These literacies are defined as the abilities that students will require for the society in which they will work, such as effective communication and teamwork skills, technological know-how, capacity for original and creative thought, and problem-solving abilities. We can develop a workforce with these skillsets for a changing, interconnected society.

According to NCTE the successful participants in 21st century global society must be able to:

- Be tech aware and proficient with a variety of electronic tools.
- Create purposeful cross-cultural connections and interactions with people so they may work together to solve challenges and improve their ability to think independently.
- Create and distribute information for international communities to serve a range of needs.
- Create, examine, criticize, and assess multimedia writings while managing the analysis, synthesis, and many simultaneous information streams.
- Attend to the ethical obligations that these complicated contexts demand of you.

The students who have taken web-enhanced lessons were the subjects of a questionnaire survey. With a few individuals pursuing postgraduate and doctoral degrees, this poll primarily includes undergraduate students. The survey focuses on their web-enhanced learning experiences and specific problems with online learning.

This survey's main goal was to learn more about students' overall experiences with web-enhanced learning and their comfort level with digital and technical tools. These students' opinions could be incredibly valuable in

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identifying different methods to strengthen our knowledge of digital learning and better prepare us to improve digital learning tools in the future.

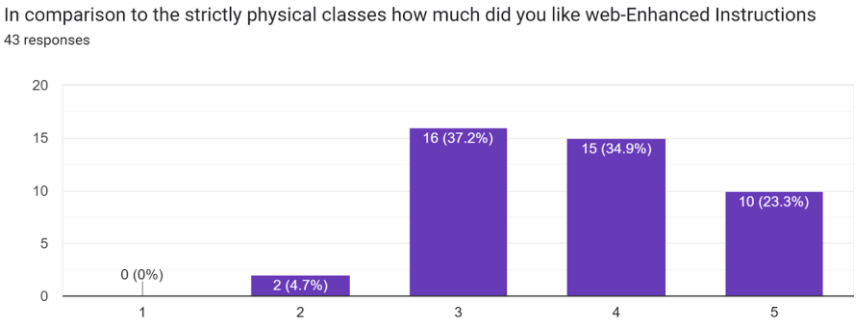

Figure 3: How much do the students like web-enhanced learning

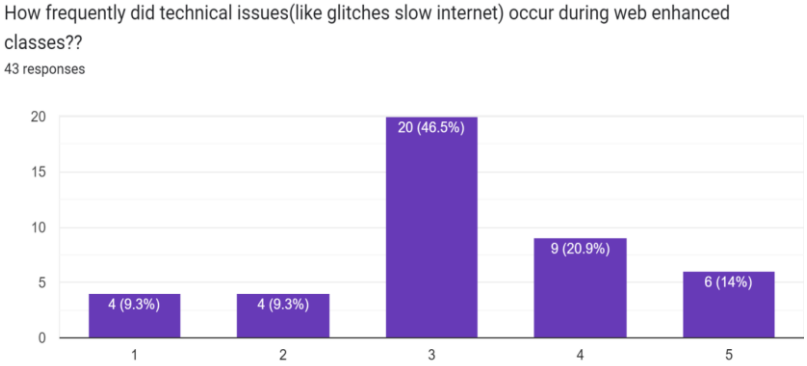

Figure 4: Occurrence of glitches during digital learning.

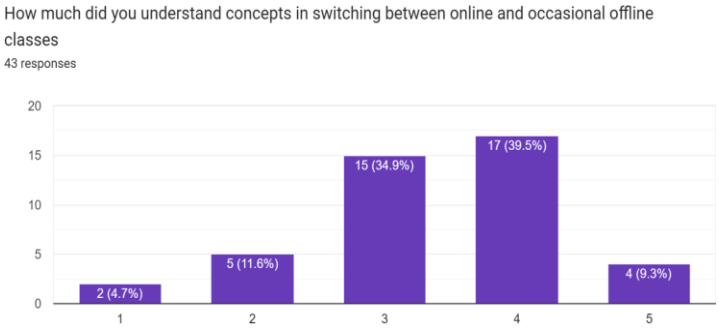

Figure 5: How much concepts do students understand in web enhanced learning

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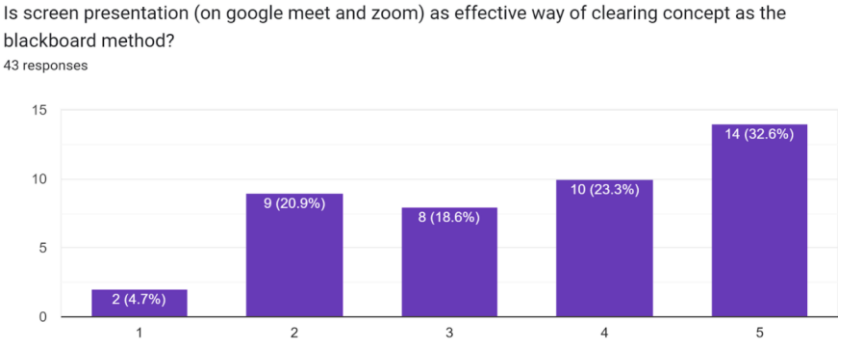

Figure 6: Comparison of digital and blackboard method of teaching

Findings:

According to the survey's findings, the majority of students (around 60%) prefer web-enhanced lessons to those that are entirely traditional. Additionally, about 73% of students acknowledged that given the choice in the future, they would choose web-enhanced instructions. In comparison to the traditional blackboard presentation, 55% of students thought digital/screen presentations on a variety of platforms, like Google Meet and Zoom, were more effective at explaining concepts. 52% of students concur that web-enhanced learning gives them greater flexibility and allows them to develop their own patterns of conceptual learning. However, a sizable portion of the students also voiced their dissatisfaction with the lack of teacher-student engagement and the bad internet access.

Recommendations for Teachers/Instructors:

- The government offers a variety of digital training courses that educators can enroll in for diplomas, such as the training portal run by the CBSE.
- Students' academic records, assignments, and study materials can be uploaded via apps and software like Google Classroom.
- The teachers might give the pupils instructions on how to pick out material from numerous websites on the internet that is pertinent to their studies.
- Teachers can use digital mode rather than traditional mode to explain 3-D modulations and virtual representations of many phenomena relating to science and technology.
- The usage of digital learning can aid educators in encouraging students' critical thinking rather than memorization.

A web enhanced learning environment is a learning environment where online learning resources are used to supplement traditional classroom instruction. On-campus learning predominates in these programmes by a wide margin compared to online learning. In these programmes, the typical percentage of online education is 20 percent or less. Many psychology programmes provide web-enhanced learning plans to students who might want more flexibility than is typically provided in a classroom setting. The amount of time students spend in a

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classroom is slightly decreased by allowing them to complete some of their work online. Students can also use the numerous cutting-edge technologies that are accessible online.

Conclusion:

The World Wide Web (WWW), which is expanding quickly and is growing more and more popular, is the most significant medium for gathering, exchanging, and disseminating information. Both teachers and students can benefit from using this significant material in their instruction and learning processes. Schools that understand that the web is a helpful tool for students and instructors demand it more. Teachers should understand how to use the internet to improve their classroom instruction in addition to considering the needs of the students. Successful technology integration in the classroom appears to require the teacher's motivation, expertise, and access to digital resources.

Because effective technology integration in a classroom setting appears to require the teacher's motivation, expertise, and access to digital resources.

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