

Immersive Blended Learning Requires Innovative Methods of instructions and technological tools capacities

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Abstract:-

A modern approach to education called immersive blended learning seamlessly combines in-person interactions with online resources to improve the learning process. This approach necessitates using cutting-edge teaching strategies and making the most of available technology. This abstract discusses the crucial role of innovative teaching strategies and cutting-edge technology in producing good learning outcomes and offers an outline of the major elements that make immersive blended learning effective.

To provide a dynamic and interesting educational experience, traditional classroom settings and virtual learning environments are merged into immersive blended learning. Students' active participation and critical thinking are encouraged through the implementation of cutting-edge teaching strategies like project-based learning and group projects. These methods encourage greater comprehension, long-term memory, and a sense of control over the learning process.

A key factor in enabling immersive blended learning is the incorporation of technological tools. Virtual reality, augmented reality, artificial intelligence (AI), and advanced learning management systems (LMS) are some of the essential elements that enable interactive and personalized learning experiences. Learning management systems (LMS) platforms provide easy access to examinations, course materials, and progress tracking, allowing students to pace their studies according to their unique requirements and preferences. Through the use of immersive and augmented reality (VR and AR) technologies, students can study difficult ideas in interesting and realistic contexts.

Keywords: - blended learning, immersive learning, Innovative pedagogical principles · Technological learning tools capabilities ·

Introduction:-

Blended learning is widely recognized as a combination of in-person classroom learning and online learning. The rising use of blended learning environments in higher education has been an emerging trend in the twenty-first century due to the ever-changing world of technology and the necessity to guide twenty-first-century learners to approach learning, (1). Numerous studies have discovered that blended learning can assist students in achieving higher levels of academic success, (2). Technology is utilized to accommodate diverse learning styles or needs, engage students, and promote learning goals and values in blended learning. Nonetheless, despite the continual advancement of blended learning research, they have not yet provided significant

information on supporting the building of an immersive mixed-learning environment, which is considered a major challenge. Before deciding what modifications may be made to create a new immersive blended learning environment, a thorough grasp of pedagogical practice is required. Perhaps the most important aspect is a pedagogical strategy that is adaptable to learners' individual requirements and learning circumstances, (3).

This pedagogical component, however, is frequently laden with difficulties due to the intricate chain of relationships required to generate usable knowledge, (4). Furthermore, several important aspects of innovative learning pedagogy, such as new methods of interaction between 'instructor-student- resource' in learning and teaching practice, are frequently overlooked in discussions about immersive blended learning environments, (5). As a result, understanding the complicated interaction relationship in innovative learning methodology is critical to producing an effective immersive blended learning experience. Education and Information Technologies. It should be noted that the use of digital technology in and of itself may not be capable of improving learning outcomes and should not be employed for the sake of course repositories. Given this, there is a need to consider the many forms of technology learning tools and extract the capabilities to construct a flexible immersive blended learning method that will contribute to a better learning experience and make education more accessible. Yet, such technology capabilities to support the immersive learning experience have not been clearly stated in existing blended learning models. We can see from the preceding discussion that these two factors, namely creative pedagogical concepts and technology capabilities, should be examined together to create compelling immersive learning environments in which strong learning can occur.

As a result, the focus of this systematic literature is threefold:

- Determine the pedagogical, pedagogical, and cybergoth concepts that are relevant for an immersive blended learning environment;
- Determine the capabilities of technological learning tools that are suited for use in an immersive blended learning environment; and
- To explain how the concepts of pedagogy, pedagogy, and cybergoth can be mapped with the capabilities of technological learning tools to properly design an immersive blended learning environment.

Face-book, blogs, and LMS are the three types of technology learning tools chosen to be evaluated for their potential in providing an immersive blended learning environment. Numerous studies have discovered that blended learning can assist students in achieving higher levels of academic success, (6). Similarly, blogs are frequently utilized to facilitate active student participation, (7), whilst LMS is a common discussion medium for students, (8). These three technical tools can also help the learning community complete a task, solve a

problem, create a product, and share their ideas, (9). In summary, the techno-pedagogy mapping can serve as a starting point for educational stakeholders such as curriculum designers and faculty administrators to gain a better grasp of how to construct preferred immersive blended learning experiences with greater confidence and competence. In terms of definition, pedagogical Education and Information Technologies and technical elements are intertwined to address the explicit relationship of how technology instruments might aid and support instructional features. This mapping is appropriate for classroom instruction and learning.

If the following requirements/criteria are met:

- A. Any teaching and learning environment that uses online/virtual/remote/distance learning and necessitates the use of technological learning instruments. Web 2.0 tools are used to create technical
- B. Tools- As a result of the revealed capabilities, this mapping may not be acceptable for the classroom withan application of augmented and virtual reality.
- C. Any teaching and learning environment that incorporates both independent and/or collaborative learning approaches, as long as the responsibility of students' autonomy and collaboration is considered.
- D. Any teaching and learning pedagogical setting that aligns with the basic concepts of innovative pedagogies, namely Heutagogy, Peeragogy, and Cybergogy; and any teaching and learning components that takes into account immersive learning aspects.

Immersive learning qualities in this scenario include (1) a real-life-like setting, (2) a learning approach that focuses on the learning experience, and (3) being supported by appropriate Web 2.0 technology tools.

The objective of the Study:-

- The Goal of Interpretation Immersive blended learning is a learning experience that mixes traditional classroom education with digital technologies and interactive activities to engage students and improve their learning experience. This approach necessitates novel instructional approaches that go beyond the typical lecture format and involve interactive components such as virtual reality, and simulations. It also necessitates technology tools to support these novel approaches and improve student learning.
- Interpretation's ultimate purpose Immersive blended learning is intended to assist students in developing the skills and knowledge required to flourish in the digital age. Students are better able to absorb and retain the material, as well as apply what they have learned when the learning experience is more engaging and participatory. This technique also promotes critical thinking, teamwork, and creativity, all of which are necessary for

success in today's workforce.

- Furthermore, the Interpretation of Immersive mixed learning gives a more tailored learning experience that may respond to individual students' specific requirements and learning styles. This method can assist students who struggle with typical classroom education in remaining interested and motivated, resulting in improved academic achievement. Overall, the goal of Interpretation Immersive mixed learning is to provide a dynamic and effective learning environment that equips students for 21st-century success.

Importance of Study:-

The importance of studying Interpretation Immersive blended learning lies in its potential to transform the way we approach education and prepare students for success in the digital age. Here are a few reasons why this topic is important:

Enhancing Learning Outcomes: Interpretation Immersive blended learning has been shown to improve learning outcomes by providing a more engaging and interactive learning experience. When students are more engaged and motivated, they are more likely to understand and retain the material, as well as

apply it in real-world situations. **Personalized Learning:** Interpretation Immersive blended learning allows for a more personalized learning experience that caters to the unique needs and learning styles of individual students. This approach can help students who may struggle with traditional classroom instruction to stay engaged and motivated, leading to improved academic outcomes.

Preparation for the Digital Age: In today's digital world, students must develop the skills and knowledge necessary to succeed in the workforce. Interpretation Immersive blended learning helps to prepare students for success in the digital age by teaching them to use technology effectively and creatively. **Innovation in Education:** Interpretation Immersive blended learning requires innovative methods of instruction and technological tools capacities. This approach challenges educators to think outside the box and develop new ways of engaging students and facilitating learning. **Access to Education:** Interpretation Immersive blended learning can provide access to education for students who may not have had it otherwise. With the right technological tools, students can learn anywhere in the world and at any time, making education more accessible and inclusive.

In conclusion, studying the Interpretation of Immersive blended learning is important because it has the potential to transform the way we approach education, improve learning outcomes, personalize learning, prepare students for the digital age, foster innovation in education, and provide access to education for all students.

Scope of the Study:-

The data is taken from the students hence only their opinion is taken into consideration. The said data is from one perspective i.e. from the students' side the same can be taken from faculty members and their opinion may differ from students.

Methodology:-

The questionnaire was designed, and it includes a variety of multiple-choice questions as well as a Likert scale. The poll was run through the Google Forms platform, which required participants to be logged in to an e-mail account; multiple entries from a single account were not accepted. The questionnaire was sent via social media platforms, e-mail, and traditional messaging methods. The Google form came with clear instructions to ensure that the respondent was a student.

Literature review

Blended learning is the most extensively employed style of instruction in educational institutions due to its apparent efficacy in providing flexible, timely, and ongoing learning.

- (10) Students' perceptions of the commerce program's digital assessment system. Computer-based evaluation is becoming more popular for a variety of reasons. Examples include educational enrollment tests, military training exams, and professional organization certification exams. Although the usage of computer-based examinations is increasing, research on students' perceptions of online evaluation in general and specific domains of online evaluation systems is lacking. Such research would provide accurate information on which components of online assessment systems are critical, or which components of the systems should be developed or updated to achieve better outcomes.
- (11) Research paper on the influence of new education policy in the context of national education in 2019. 495-502 in Education, 11. Seminars and conferences bridge the gap between industry and institutions. E-commerce is now widely recognized as one of the most important aspects of modern business. Business-to-business (B2B), business-to-consumer (B2C), business-to-government (B2G), and intra-organizational e-commerce are the four categories of e-commerce. Despite substantial advancements at all levels of education, a comprehensive perspective has remained elusive. This holistic approach is recognized in the New Education Policy (2019).

- Blended learning accounts for 30 to 79% of online material delivery, according to the Sloan Consortium. Several individual and combination models of online learning with traditional face-to-face education, such as flex, self-blend, flipped, and rotation, have been used in several types of research to date. Some of these models are better than others, and designing a flawless model is nearly difficult (12).
- (13) Stated that the rotation model is effective for learning English because it allows for the improvement of the learning process despite class time constraints and differences in students' levels of training, motivation to study a foreign language, and information and communication technology competence.
- (14) For example, purposefully blended the station rotation and flipped models to adapt to the transitional digital tertiary environment and the challenges associated with necessary pedagogical reform. Because blended learning implementations vary, there appears to be some anxiety among students and teachers about the incorporation of technology into learning and instruction. Blended learning, for example. Encourages students to develop self-regulation skills and technological competency to control their learning at their own pace with minimal instructor facilitation.
- Meanwhile, instructors must be capable of effectively integrating and integrating both online resources and various pedagogies into course design to boost student engagement and performance, (15).
- It has also been found that when learning technologies are introduced, the focus of blended learning is generally on technology deployment, (16).
- (17) Also stated that technology and pedagogy are the two essential components in creating a proper blended learning environment. While the benefits of technological tools and pedagogies are obvious in optimizing blended learning
- (18), little, if any, The foundational ideas of 21st-century pedagogy and the potential of technology in learning and instruction have been linked in research on blended learning. Existing blended learning models also place little attention on what constitutes immersion, making it difficult for instructors to build instructions that enrich and contextualize deep learning experiences for twenty-first-century students using a mixed learning strategy.
- (26) Mentioned in their research paper according to a study that was printed in the Journal of Youth and Adolescence, according to a study published in the Journal of Youth and Adolescence. The study found that children who used social media experienced lower levels of hopelessness and anxiety.

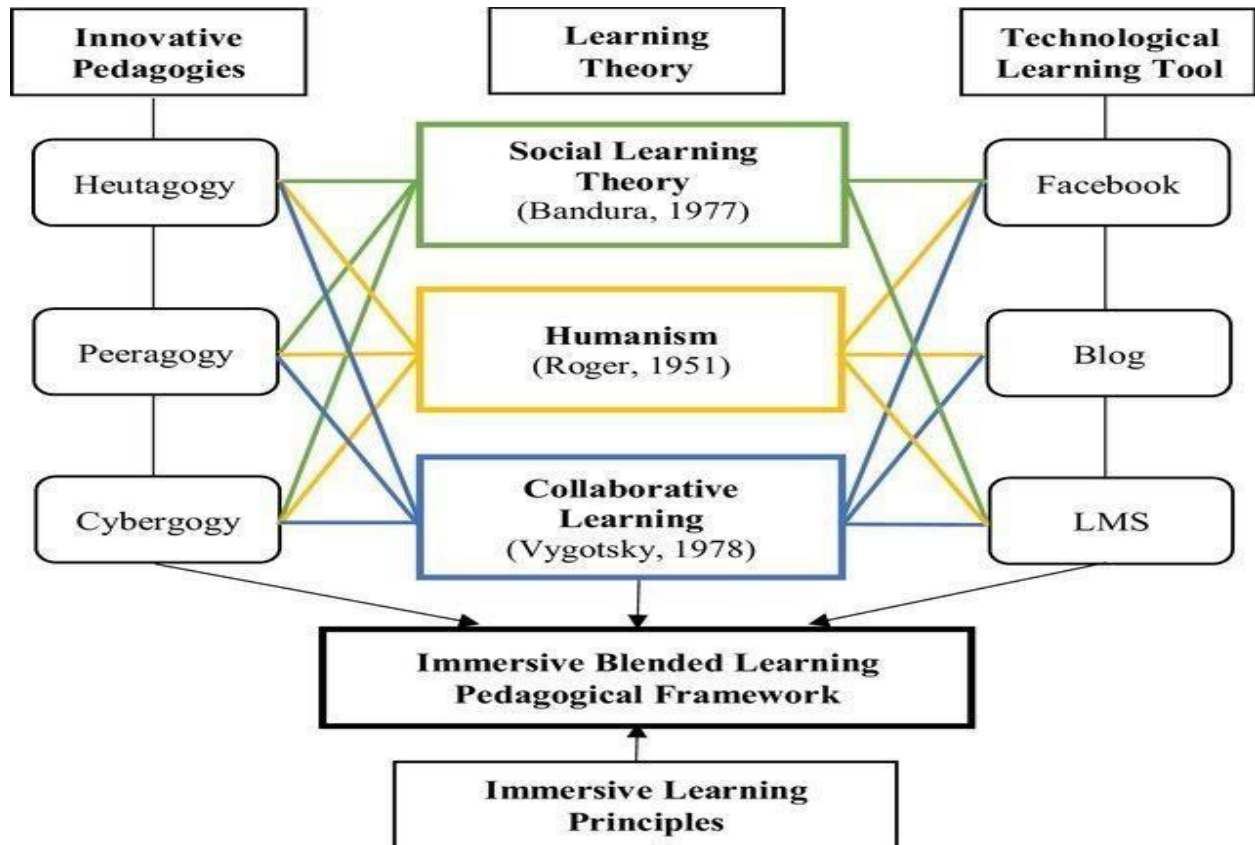


Figure 1 Immersive Blended Learning (27)

Innovative Pedagogies in Education 4.0:

Innovative pedagogies include heutagogy, peeragogy, and cybergogy, as defined in the Framing Malaysian Higher Education 4.0: Future-Proof Talents, (19). Heutagogy is a student-centred learning and teaching technique in which students independently select their learning (20). This method was developed in response to the argument that learning is mostly dependent on instructors, whereas learning can occur independently in dynamic and complex forms, (21). Pedagogical practices have previously been used in a variety of disciplines, including social science, (22).

This theory also states that the cognitive element mediates students' learning processes. It is emphasized in pedagogical learning that students are accountable for discovering knowledge using their strategy, which involves their cognitive abilities in organizing their learning journey, (23). It is similar to pedagogical learning in which students actively produce knowledge among themselves in an interactive community that would shift their perspective behaviorally or cognitively during the learning, (24). (25) Stated that students' learning will be affected by cognitive, social, and emotional factors that are interrelated with each other.

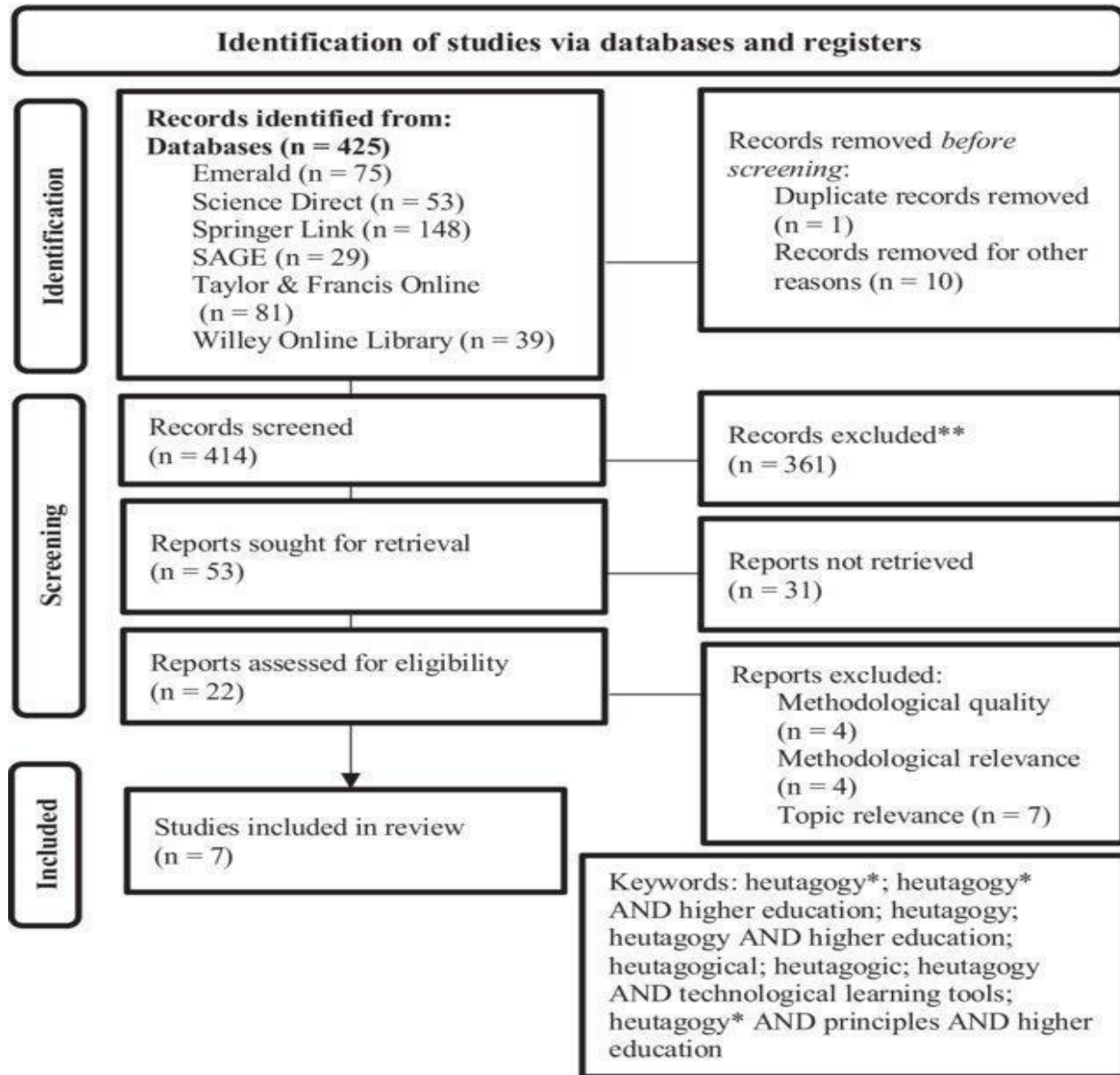


Figure 2 Identification of Studies via data base and registers (28)

Data Analysis:-

For this research, the data has been taken from 56 respondents

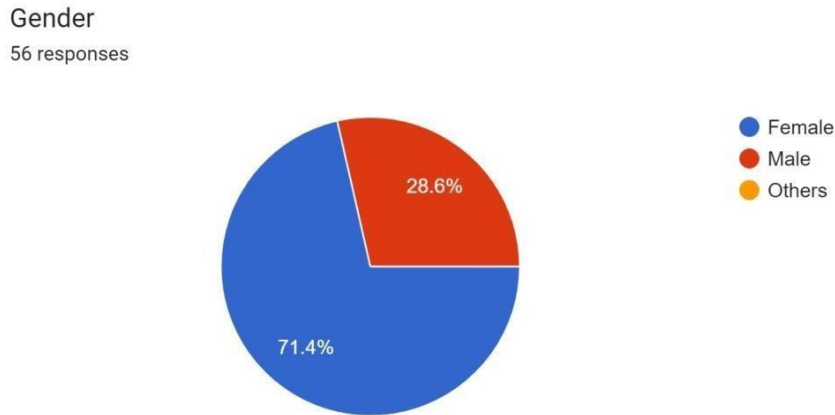


Figure 3 Gender of Respondents

Interpretation: - 71 % are females and 29% are a male who are the respondents.

Do you think online teaching is an effective way of teaching in this pandemic situation
56 responses

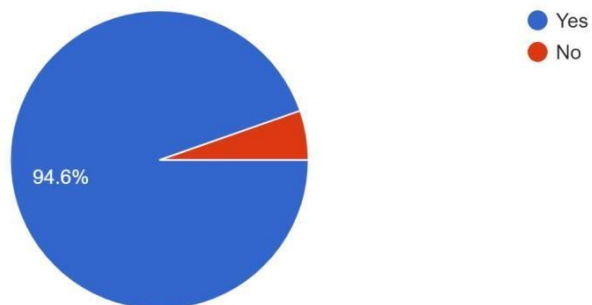


Figure 4 Effectiveness of Teaching

Interpretation: - 95 % of respondents feel that online teaching is an effective way of teaching

Were the activities carried out smoothly while keeping the students engaged during online teaching

56 responses

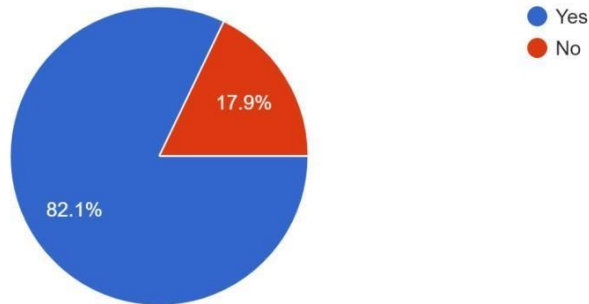


Figure 5 Smoothness of activities to engage students

Interpretation: - 82 % of respondents feel that the activities are carried out smoothly while keeping engaged during online teaching.

Which is a preferable application according to you for online teaching .

56 responses

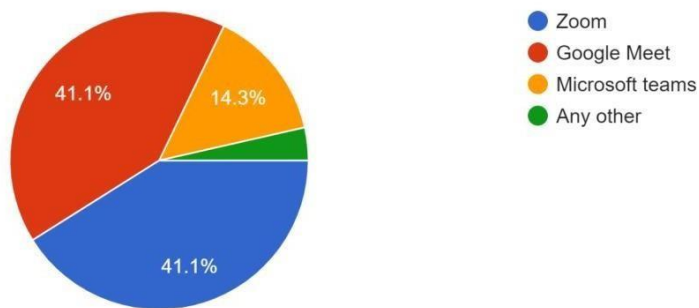


Figure 6 Preferable App for online teaching

Interpretation: - 82 % of respondents feel that the activities are carried out smoothly while keeping engaged during online teaching.

What tools were used to clear the concepts of students during the online mode of teaching.

56 responses

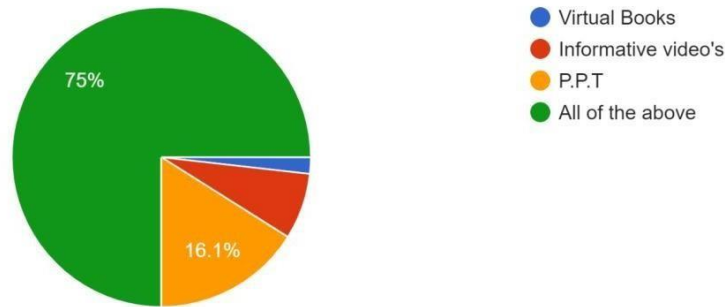


Figure 7 Tools used to clear concepts

Interpretation: - 75 % of respondents feel that tools like virtual books, informative videos and PPT are used for clearing the various concepts of the students.

Did you use any kind of specific software to clear the concepts of the students if Yes -

56 responses

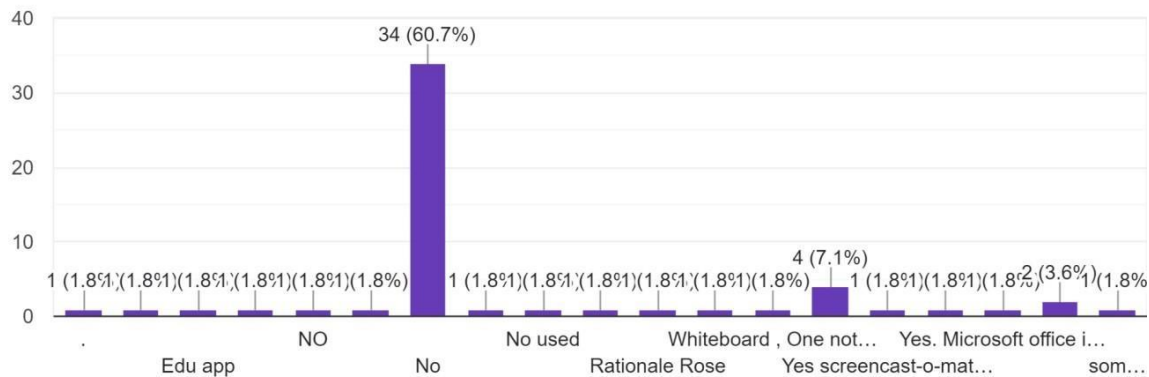


Figure 8 Use of Software to clear concepts

Interpretation: - platforms like Google Meet; zoom, Microsoft Office, and many more are used as software for students for online learning

Have you used these application before the pandemic as a mode of teaching
56 responses

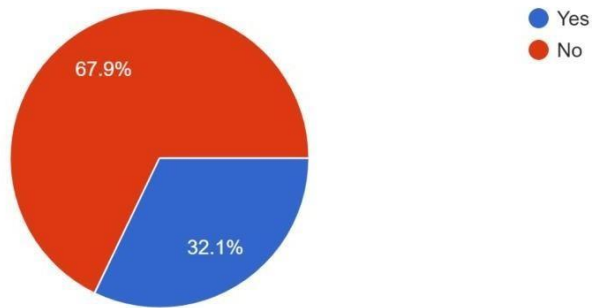


Figure 9 Whether apps were used before pandemic

Interpretation: - 68 % of respondents haven't used any kind of online learning application.

Was it flexible to switch from traditional mode to digital mode of teaching
56 responses

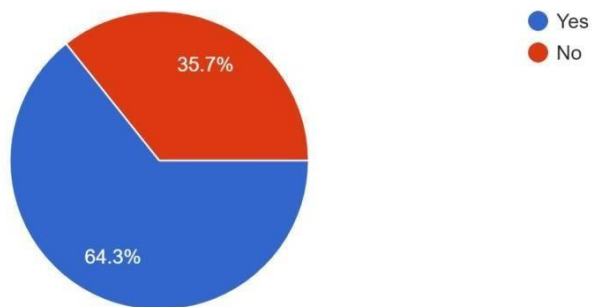


Figure 10 Flexibility in switching to digital mode

Interpretation: - 68 % of respondents haven't used any kind of online learning application.

Did the usage of these modern techniques help you to reduce the burden on you
56 responses

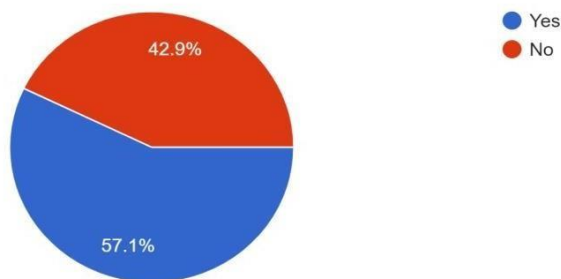


Figure 11 Usefulness of Modern Techniques

Interpretation: - 68 % of respondents haven't used any kind of online learning application.

After the pandemic situation do you think that the teaching - learning method will switch back to traditional mode of teaching

56 responses

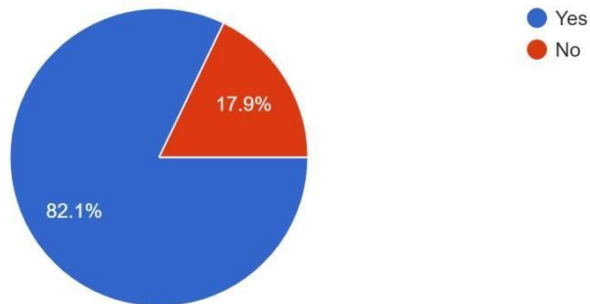


Figure 12 whether switching back to traditional mode

Interpretation: - 82 % of respondents feel that after the pandemic the said teaching-learning method will switch back to traditional mode.

Do you think excessive use of gadget lead to Head ache, Eyesight problem And obesity.

56 responses

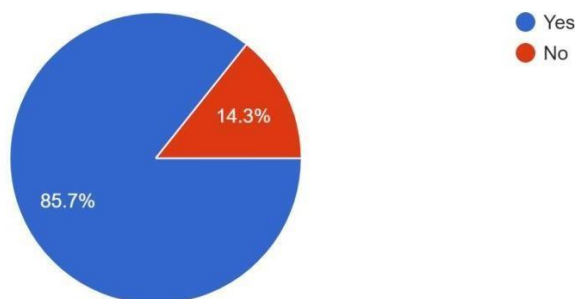


Figure 13 Health issues due to excessive use of gadgets

Do you think excessive use of gadget lead to Fatigue , Anxiety , stress , And Depression

56 responses

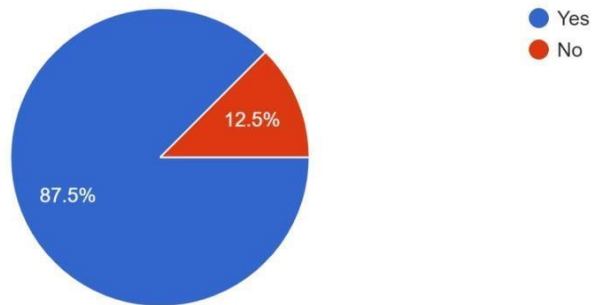


Figure 14 Mental Health issues due to excessive use of gadgets

Interpretation: - 88 % of respondents feel that using these gadgets for learning may create fatigue, anxiety, stress and depression.

Are you now user friendly to this kind of digital mode of teaching.

56 responses

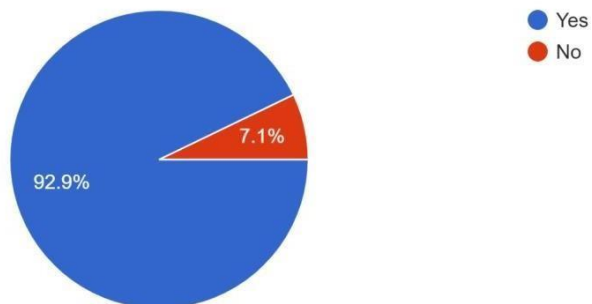


Figure 15 User friendliness of Digital Mode of Teaching

Interpretation: - 92.9 % respondents mentioned that the digital mode of teaching is quiet user friendly.

Was it easy to evaluate the students using these kind of technology in the pandemic situation.

56 responses

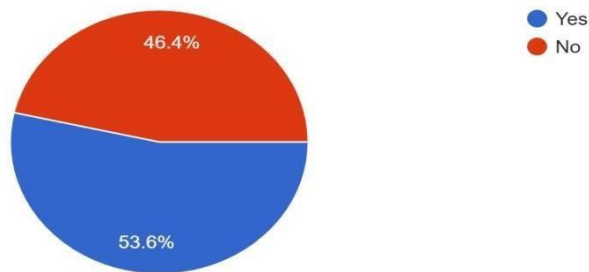


Figure 16 Ease in evaluation

Interpretation: - 54 % of respondents said that it is easy to evaluate the students through various online exams and survey methods.

Was the online teaching helpful to switch over to paper less and pen less classroom .

56 responses

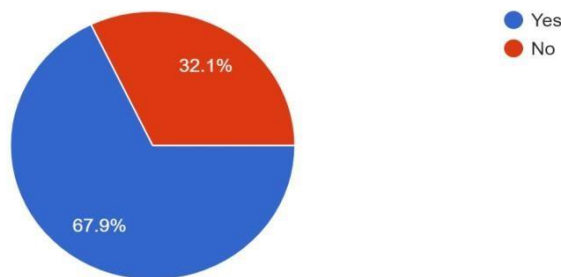


Figure 17 Switch- over to paperless and pen-less classrooms

Interpretation: - 68 % of respondents feel that it is helpful to switch over to paperless classrooms.

Conclusion:-

- Finally, immersive blended learning is a growing educational strategy that mixes traditional classroom instruction with digital technologies and interactive activities.
- Innovative instructional approaches and technology tools are required to successfully adopt this approach. Teachers must be trained to use cutting-edge technology effectively and efficiently to engage students and improve their learning experience.
- Furthermore, students require access to a wide range of technological tools and resources that allow them to collaborate, explore, and learn in novel and engaging ways. Immersive blended learning can alter education and prepare students for digital success. However, its ultimate effectiveness is dependent on educators' capacity to adapt and innovate in response to changing technologies and learning settings.
- Most of the students find it easier as the exams are also online
- Most of the students are familiar with various online teaching platforms.
- Most of the students find it easier as they can access online lectures anytime and anywhere.
- It is easier for students to understand concepts through various videos also.

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28. Figure 2 Identification of Studies via data base and registers
(https://www.researchgate.net/publication/362324500_Innovative_pedagogical_principles_and_technological_tools_capabilities_for_immersive_blended_learning_a_systematic_literature_review/figures?lo=1)