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Effectiveness of teaching mathematics through blended learning

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Abstract: The advance evolution of technology offers much new advancement in the process of teaching and learning in the classroom. Teaching, studying, and analysis are all benefiting from the use of digital platforms. Many mathematicians understand the significance and relevance of a Blended Learning (BL) method in teaching mathematics, which takes advantage of the various mathematical software that can be used in the classroom. In this paper the investigator is highlighting the tools which can be used for teaching mathematics in creative and innovative manner.

INTRODUCTION

Teaching and studying mathematics through digital tools expands the boundaries of education and expands the number of solutions to several mathematical problems. These interactive resources support both students and teachers in the classroom. Blended learning is the method of merging the digital and conventional worlds to make education more exciting for today's technocrats. Indeed, innovative thinking skills can be built and possibilities for creativity explored using a combination of face-to-face classroom communication and technical resources. When Blended Learning is used, we can intercommunicate impetus and cooperative content; of mathematics and teaching and learning can be done anywhere anytime on teaching and learning.

BLENDED LEARNING

Hybrid learning joins the two learning strategies — conventional learning and digital platforms means electronic learning. Every area of education like content matter, and understanding the individual differences of learners the lesson plans can be prepared in step by step organized pattern which carries traditional ways and independent learning modes like computer based training web links etc. This makes teachers technocrats and gives new vision and new platforms to their thoughts.

Although role-playing with immediate face-to-face feedback is available in the classroom, online learning provides customized, self-paced learning with e-Learning/m-Learning components that lend themselves to interactive media such as skill-building, games, videos, tutorials, quizzes, and social media components, all accessible from the learner's home page in the Learning Management System (LMS).

Blended Learning Models

Its very important to teach students according to their learning level and style so that they can grasp the concept in a better way. A blended learning model can help you to adapt your subject matter for time constraints, learning proficiency, and even custom-built orientation, but you can also use a hybrid learning model to think more clearly, envision content, and implement it more effectively.

Blended Learning Methods

- Face-to-Face: in conventional method different sessions on learnign can be organised to motivate students to learn better at their own pace Role-playing, mentoring, hands-on instruction, and reviews are all benefits.

- Rotation:Students can simply rotate from formal learning to non-formal learning according to their understanding and interest levels. Learning stations, labs, and the flipped classroom are all examples of how learners can practise a lesson before attending face-to-face training.

- Flex: The individualised learning and flex learning are interchangeable terms Students guide their learning journey by accessing means of learning incorporation in a Learning Management System (LMS) and choosing what they want to learn. The teacher is usually present to answer questions and serve as a guide

- Gamification: Allowing students to play is one of the most important ways to inspire them. Learners feel a sense of competitiveness and are more inspired to explore the content on their own time when game play elements such as points or levels are used.

- Online Lab: This blended learning model takes place before, during, or after a training and is completely interactive, with little or no teacher interaction. Students can easily learn through their mobile gadgets. The learning can be easily understandable

- Self-Blended Learning: Self-blended learning is widen the content area like —webinars, white papers, industry blogs, or video tutorials—that enables self-motivated learners to delve deeper into a subject. To promote curiosity and development, a robust LMS may bring together multiple thoughts and ideas into one framework.

- Online Driver:

- These programs are entirely base on personalised learning.Students may communicate with an instructor through chat, email, or a message board. It offers a flexible schedule and customised learning, but it lacks the face-to-face engagement that other blended learning methods do. An LMS is the great option to guide students according to their own learning styles while also the progess of child can be tracked as they watch videos and ultimately participate in classroom discussions. You have the option of using one of the current learning management systems or having one built specifically for your needs.

TOOLS OF BLENDED LEARNING FOR MATHEMATICS

- Khan Academy.:-Khan Academy allows for students to self-pace through material, and scales material based on student progress, something that is impossible in a traditional classroom. Students can be linked to "coaches" who can be their classroom teacher, a parent, a tutor, or a peer-tutor.
- PowerSchool.- Its an award winning student system software. PowerSchool SIS is the leading student information software solution for K-12 educational institutions. It powers your operation with flexible, innovative, easy-to-use technology that plays an important roll in school.
- 3PLEARNING:-It is a blended teaching community which create learning experiences that stick with blended learning tools for mathematics and literacy..
- ST Math.:-It is a program for conceptual understanding they believe that every students can understand and truly love mathematics. It's a visual instructional program that leverages the brain's innate spatial-temporal reasoning ability to solve mathematical problems.It is a unique, patented approach provides students with equitable access to learning through challenging puzzles, non-routine problem solving, and informative feedback.
- ALEKS.:-ALEKS is a tried-and-true online platform that helps educators and parents completely comprehend each student's knowledge and learning progress, as well as provide the individualised instruction that each student needs to master the skills.
- Illuminate Education.:-They all accept that the world has changed. Much more data is needed to inform instructional and intervention decisions. Illuminate is a unified approach that aids educators in assessing learning, identifying needs, coordinating personalised supports, and monitoring student progress.
- i-Ready.:-It is an online evaluation and instruction platform that assists teachers and students in excelling in mathematics.
- DreamBox Learning.:-DreamBox is a K-8 interactive math platform that is structured to follow the mathematics curriculum regardless of whether the child is learning at home or at school. Following extensive research, all lesson plans cater to students with a variety of learning styles, allowing them to learn at their own pace.

BENEFITS OF USING BLENDED LEARNING

1. It's Cost-efficient

You can reduce training costs and increase ROI by using blended learning. Forget about missing lectures, paying for flights, or taking time off work to attend daily trainings. Classroom trainings and pre-registered courses can easily be combined. You may also have a live online training session so that your students are up to date with everything..

2. Be Consistent In Activities Also Pre-training

Before the in-class training even begins, everybody should be on the same page. So they can come prepared, give them reading materials, recordings, and pre-course questionnaires.

3. Access the Content From Anywhere, Anytime, on Any Device

Your students will be able to remain linked to your content at all times. They can even download courses so that they can use them even though they don't have access to the internet.

4. Increase User Engagement Easily

The perfect formula for a rich learning environment is the combination of digital and instructional design. What matters the most? Learners will return to the courses as much as they like in order to obtain excellent results over time.

5. Get insightful reports about your learners

Analyze the students' operation and see where they are succeeding and where they are failing. You can then customise the content as required.

CONCLUSION:

"Hybrid learning is a learning model that blends formal (classroom) and non-formal (online) methodologies which makes mathematics easy to learn anywhere and anytime. All the different digital platforms are very helpful and student can use according to their pace.

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