Computer Applications in Engineering Education

Special Issue Call for Papers

Web 3.0 and Blended Learning for Increasing Student Retention & Engagement in E-Learning Environment

Blended learning and web 3.0 are the two cutting-edge technologies increasingly adopted among educational institutions with a growing emphasis on enhancing student learning. When we take a deep stride into the E-learning environment, educators today have faced a huge challenge: not all students possess an intrinsic motivation to learn. This, in turn, will lead to reduced student performance. Modern learners today are firmly adapted to digital media platforms for learning, and they require more interactive materials that they are more familiar with. Blended learning and web 3.0 forms the most effective tools to increase classroom retention and engagement.

Blended learning converges the two best strategic approaches associated with the learning environment: face-to-face learning functionality and computer-aided technologies to deliver instruction. On the other hand, web 3.0 for E-learning promises semantic annotation, intelligent agents, personalization, computer understandable data and knowledge management. The maximization of these resources is highly dependent on how the educators put them in place and how the students make use of it. This pedagogical approach with blended learning and web 3.0 functionalities effectively integrate synchronous and asynchronous learning tools, thus providing a holistic view to the effective learning process with improved student engagement. Some of the considerable benefits of implementing these technologies in E-learning include reduced expense, knowledge construction, learning, smart searches, efficient changes in teaching methodology, increased students interest, personal learning network maintenance, and personal education administration. Further, it provides more flexibility and convenience to the students by offering a more comprehensive understanding of the course content. The effective integration of the course content, interactive multimedia tutorials and simulations will enable the students to better understand the subject. But however, a broader application of web 3.0 and blended learning may not be appropriate for all the aspects of the E-learning curriculum. Hence, more advanced research is needed in this stream to increase student achievement and retention.

This special issue entitled “web 3.0 and blended learning for increasing student retention and engagement in an E-learning environment” aims to explore the new and innovative research on converging web 3.0 and blended learning for increasing learner engagement in the future era of emerging technological convergence and dependence. We welcome researchers and practitioners working in this stream to present their novel and innovative solutions.

Potential topic of interest include, but are not limited to:

- ✓ Web 3.0 and blended learning, modelling and its application in engineering education
- ✓ Mobile web application for engineering education
- ✓ Advances in blended learning and web 3.0 for increasing student retention and engagement in engineering education
- ✓ Better opportunities for experiential learning in engineering education using blended learning and web 3.0
- ✓ Innovative tools for enhancing student teacher interaction using web 3.0 for complex engineering curriculum
- ✓ New innovative tools, algorithms, and technologies to improve engineering students performance and engagement using blended learning and web 3.0
- ✓ Advances in blended learning strategies for improving student retention in the context of digital learning for engineering education
- ✓ Effective ways of reshaping the engineering education practices using blended learning and web 3.0 technologies
- ✓ Cooperative learning strategies with blended learning and web 3.0 for engineering education
- ✓ Concept mapping, mind mapping, and infographic tools using web 3.0 technologies for enhancing accessibility and usability of the engineering education platforms
- ✓ New innovative blended learning and web 3.0 tools for efficient collaboration and user-generated content in engineering education
- ✓ Role of blended learning and web 3.0 tools in increasing the student interest among the E-learning platforms for engineering education

Proposed Timeline:

Submission Deadline: 6-15-2022
Authors Notification: 8-31-2022
Revised Papers Deadline: 10-25-2022
Final Notification: 1-30-2023

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