How the Digital Technology Taking Place In Mathematics Education in the Covid-19 Pandemic

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Commentary

Due to the COVID-19 pandemic as a result of travel bans and quarantines, educational institutions around the world had also turned their focus to online learning. This could mean an increase in education and better prepare us to deal with future disasters. COVID-19 may enhance the development of strong competencies in regions where there is sufficient connectivity, infrastructure, and resources determined by the nature of global digital education.

Providing pertinent information on COVID-19's favorable side effects, the study will utilize global and local trends that recognize the importance of incorporating digital technology into mathematics instruction, adding a topical topic on COVID-19 and the use of digital technology in mathematics education to educational libraries. Illustrating teachers on how to use digital technology in math classes and providing important insights to those designing curricula in the world's Educational authorities on the usage or use of digital technology in mathematics education. Contributing to the formation of new research avenues in order to keep up with technology and leverage on its positive role in mathematics education.

Technology integration in education is a complex process involving numerous aspects and it is extremely important, as with all other innovative concepts that it not be accomplished unless the various elements have been rigorously checked. It's critical to back up innovations with evidence of their acceptability and suitability as well as their application in classrooms, impact on the learning process and cost-effectiveness. Numerous novel approaches in mathematics education have been proposed, developed, piloted and implemented for use with a variety of indicators. Educational technologies are based on ICT, use of open and distance learning, virtual educational platforms and distribution of open educational resources and application of research conclusions are some of the domains where they have proven to be successful.

Researchers are increasingly focused on the potential areas of application and possibilities of digital technology yet in terms of mathematics education this is still an under-researched subject. Nonetheless, some work has been performed about how this type of technology could be used in mathematics teaching and learning. The first studies exploring the use of mobile learning in mathematics date from the late 2000s and there has been a substantial growth in this type of study in terms of both international conferences and sector-specific journals since then. The majority of the research examined in this study can be categorized into three parts.

Crompton conducted a study that exhibits how mobile devices might be used to improve mathematical conceptual learning. Crompton presented a design-based research study in which iPads were used as a medium for facilitating the learning of the topic of angles in primary school children as part of her work. The students used mobile devices in this learning environment to recognize and visualize forms that resembled angles that appeared naturally in their environment (e.g., tree stumps, shoe patterns, or table corners). The students then used dynamic geometry applications placed on their mobile devices to analyses the photographed shapes. As a result, the students were able to determine if the produced naturally angles they saw in their environment related to the numerical functionalities of an angle.

Learning objects (LO) are components of a novel concept of e based on an object-focused approach in computer science as initiated by the IEEE Learning Technology Standards Committee. An LO is a digital object and may be used recreately, and labeled with metadata to promote learning according to the definition. Learning objects are categorized by their usability, compatibility, and reusability. Accessibility refers to the ability to tag learning objects with metadata so even though interoperability refers to the ability to share learning objects with other technology systems without involving them to be modified and reusability refers to the ability to use learning objects in a variety of educational settings. MERLOT (Multimedia Educational Resources for Learning and Online Teaching), Wisc-Online, DRI, Khan Academy, and EBA (Digital Repository of Turkey) are some of the most broadly utilized learning resources in virtual repositories [1-5].

References


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