TEACHING MATHEMATICS ONLINE

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Abstract:

In the current public health crisis, we are all working quickly to move our classes out of the classroom. Fortunately, even if online teaching and learning are new to us, there is a lot of experience to draw on. On this article have been compiled the best resources, learning activities, and other aspects of online instruction.

Keywords:

Mathematics, online teaching method, correlation, scientific approach, mathematical concept, expository method, implementation.

Currently, online teaching method, due to the period of confinement that is occurring due to COVID-19, has increased its use and application in the teaching and learning processes. The main objective of this article is to identify the effectiveness of online mathematics teaching method. The study developed is quantitative, descriptive and correlational. The practice shows that use of the online teaching method has a positive influence on motivation, autonomy, participation, mathematical concepts, results and grades. It can be concluded that online teaching method leads to improvement in students who are studying the mathematical subject in the educational stage, provided that it is compared with the expository method. Therefore, this method is considered effective for its implementation in students.

In the current situation we don't need to become an expert in online course delivery. Our course won't be perfect, and it won't be the same as it was in the classroom, and that is ok. Many students don't have much experience learning online, and they are arranging too.

There are many tools available: Zoom, Skype, Blackboard, Canvas, Slack, Voice Thread, email, online chats, video chats, MS teams, Google docs, and many others. Even if students are not familiar with them, students might be and the institution is more likely to offer support for those platforms. Coordinating with colleagues to use similar tools will allow to support one another.

Online course doesn't need to replicate everything in face-to-face course. Instead of starting with previous course design and trying to adapt it all to be online, start with goals for the course and the tools which students have available, and figure out what's feasible.

Be transparent about why students are making decisions and setting priorities. This will reduce anxiety for everyone. Communicate clearly and often about expectations and deadlines.

Reliable assessment refers to tools for formative and summative assessment that reveal students' understanding, reasoning, and ability to apply key concepts in reliable mathematical contexts.

- Incorporate more formative assessment to support student learning and develop tools for reliable assessment.
- Consider alternatives such as comprehensive projects that synthesize concepts, small frequent quizzes, group tasks, or opportunities to critique the reasoning represented in sample student work.
- Some textbook publishers have online test banks. Even if these are not the ideal choice for assessment, we may be able to make them work, in order to complete this semester.
- Beware of privacy affairs with video-monitoring software and other proctoring solutions. Recognize that determined students can overcome any obstacles to cheating, whether in class or online. Consider assessments that are open book and open notes, and structure exams to make proctoring less of a concern.
- Talk openly with students about what they need to know in order to be ready for next semester's courses, to help them focus on what is important for them to learn.
- Learn more about basic concepts and expand planning and implementation of sound assessment practices.

In general, it can be indicated that the dimensions of motivation, participation, concepts, results and teacher qualification have proved to be significant. That is to say, according to the study group, differences are observed in the evaluations given by the students. In one group the expository method has been developed and in the other the e-learning method. The most valued dimensions have been those of the group in which the e-learning method has been developed. Finally, the improvement in the concepts and results generates an improvement in the qualification of the students, and therefore, an improvement in the self-evaluation of the didactic actions developed.

As a future line of research, it is presented to develop this online teaching method in other educational stages and in other educational subjects.

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