

# MATHEMATICAL MODELLING IN A LONG DISTANCE TEACHER EDUCATION COURSE IN BRAZIL: DEMOCRATIZING MATHEMATICS

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Brazil has experienced an accelerated economic growth with accompanying social changes. The country is now the 7<sup>th</sup> largest economy in the world. It sponsored the 2014 World Cup and it is sponsoring the Olympics in Rio in 2016, and is going through a tremendous amount of modernization in relation to infrastructure, including that of health and education. Nation-wide a process of upgrading teacher competencies and the training of new teachers on a massive scale has been developed by integrating the use of long distance and multimedia technologies.

To increase access to a wider audience, the *Brazilian Open University* system aims to democratize and increase access to higher education. In this regard, the study of new educational and methodological proposals such as mathematical modeling become relevant as it promotes social changes resulting from contemporary scientific and technological development. The need to update and upgrade professional development for teachers raises new institutional solutions, methods and resources in order to meet the demand for specialized teacher education programs.

This context allows federal universities in Brazil to offer *Seminars in Mathematical Modelling* in long distance mathematics undergraduate courses, which are offered entirely in an environment mediated by new technologies and the internet. The development of the activities in these courses is conducted through the use of the Moodle platform that possesses interactional tools among teachers, tutors, and students.

Long distance education contributes and can assist students to overcome difficulties regarding the adoption of mathematical modeling courses because technological tools offered by the platforms such as Moodle are simple and functional. Through the use of discussion forums and videoconferences, professors and tutors are able to critically analyze interactions enabled by these tools, which can contribute to the reflexive development of the elaboration of mathematical models in the Virtual Learning Environment (VLE).

## References

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