



<http://dx.doi.org/10.23925/2237-9657.2021.v10i1p003-004>

Editorial

The Journal of the International GeoGebra Institute of São Paulo (IGISP), ISSN 2237-9657, of biannual regularity, is an electronic publication of the GeoGebra Institute of São Paulo based at the Faculty of Exact Sciences and Technology, Program of Post-Graduate Studies in Mathematics Education of the Pontifical Catholic University of São Paulo (PUC-SP), Brazil.

Free of charge, it aims to offer a space for the dissemination and circulation of researches and works developed with the use of the software GeoGebra, mainly in Latin America.

The first issue of the volume 10, 2021, presents nine articles seeking to encompass the different possibilities and paths with the GeoGebra can be investigated.

In the first article "*About a problem that was not interesting to Erdős*", the author Zoltán Kovács, assistant professor at The Private University College of Education of the Diocese of Linz, Austria, presents a problem of elementary Euclidean Geometry using GeoGebra's Automatic Reasoning Tools, in which various details of the original problem could be placed in an algebraic context and its automated research was possible, in some sense, mechanically.

The second article "*Angle classification through a story in support classes for students with learning difficulties*" of the authors Mariana Cruz Gomes and José Manuel Dos Santos Dos Santos present an action intervention that occurs an analysis of the difficulties of students, of the 5th year, in the context of curricular support in mathematics, in which they develop a teaching experience based on a hypothetical trajectory of previously defined learning. GeoGebra software emerges as one of the mediators of learning, stimulating the development of communication, geometric thinking and mathematical reasoning of the students participating in the study.

"*Using GeoGebra in processes of generalization of challenging geometric problems*" is the third article and the authors Rudimar Luiz Nós, Mari Sano and Rodrigo Cesar Lago aim to present three challenging geometric problems present in mathematical literature. In the generalizations the authors adopted theoretical assumptions established for this process and employed GeoGebra to construct figures and animations.

In the fourth article, "*GeoGebra to introduce hyperbolic geometry in elementary school*" the authors Hiago Portella de Portella and José Carlos Pinto Leivas aim to analyze how the use of GeoGebra software can contribute to the insertion of knowledge of Hyperbolic Geometry in Elementary School.

Rannelly Rodrigues de Oliveira, João Luzeilton de Oliveira, Rui Eduardo Brasileiro Paiva and Antônia Emanuela Oliveira de Lima are the authors of the fifth article "*GeoGebra software as a contribution to mathematics teaching and application in numerical sequences*" and present as theoretical input authors who discuss active

methodologies, methodological proposals, by which teachers seek to suggest activities that take over students actively participate in the teaching and learning process and presented GeoGebra as an example of these methodologies.

In the sixth article *"Exponential Function and GeoGebra: what has been discussed in brazilian literature?"* the authors Rodrigo dos Santos Ferreira and André Pereira da Costa aim to investigate how the teaching of exponential function linked to the use of GeoGebra has been discussed in articles published in the last 10 years (2010-2019) in Brazilian journals in the teaching area, whose scope contains the teaching of mathematics and/or sciences.

In the seventh article *"Performing a playful/mathematical activity with the use of GeoGebra and Tangram discussed in the light of the Theory of Activity"* the authors bring the discussion of a mathematical activity: the construction of one of the figures that can be formed with the pieces of the Tangram, using the isometry options in the GeoGebra plane with an approach to the Engeström Activity Theory.

Ana Maria Amarillo Bertone, Vítor Dias do Valle Tanajura, Aline Silvestre Borges, Walyssom Miranda Medeiros and Rosana Sueli da Motta Jafelice are the authors of the eighth article *"Bees and GeoGebra: a partnership in the animation of the dance of the broken"* and analyze, through artistic animation, the behavior of bees through dance known as dance of the broken reproducing it through parametric curves and functions using the GeoGebra software and according to the distance of the food source and direction of the sun.

Finally, the ninth article *"Building the bond of the planet mars in relation to distant stars in the Copernicus system"* by the authors Luana Paula Goulart de Menezes and Vitor Marques Pereira present a proposal for an approximate construction of the Movement of Mars that generates, for an observer on Earth, a bond shape in relation to distant stars from the perspective of the Copernicus system considering, as possible, promote a broader and interdisciplinary discussion on different concepts.

We express our gratitude to all who contributed to the realization of this volume of the issue and to the academic research of Mathematics Education.

Celina A. A. P. Abar - Editor