

20 years of support for Research, Education and History of Earth Sciences

Presentation

We are immersed in temporality. Saint Augustine [354-430] attributed to this inescapable fact the difficulty of explaining what time consists of, a concept of which we can only have an intuitive perspective:

(...) we know nothing and cannot know about time (...) perhaps it would be appropriate to say that times are three: *present of past things, present of present things, present of future things* (Universo da Filosofia, 2018).

The beautiful phrase in Renato Russo's song, "we have our own time", expresses a similar idea.

Symposium

Yes, we have our own time: in November 2023, the Graduate Program on Teaching and History of Earth Sciences (PTHES) recalled the planting of a small seed, 50 years ago, on Earth Sciences Education, at the University of São Paulo USP). The seed bore fruit, bringing together motivated people interested in expanding the dissemination of Geoscience knowledge, this time at Unicamp. Professors from USP, UNESP and other Higher Education Institutions (HEIs) also joined the movement. The *Symposium on Geosciences and Teaching Interfaces: 50 years of experiences (1973-2023)*, whose proceedings can be downloaded from the URL: <https://www.ige.unicamp.br/50anos-ensinogeo-2023/resumos/>, revealed many facets of the busy trajectory of experiences, research and systematic activities dedicated to the dissemination of knowledge about the Earth, the environment and its social and economic transformations. *Terræ Didática* is one of these developments. Some of the papers pre-selected by the event's scientific committee of the symposium were accepted to compose volumes 19 and 20 of this journal.

The symposium revealed the pioneering spirit, the innovations of the significant achievements made over five decades, while at the same time highlighting the advantages of collaborative work, capable of bringing together teachers from different disciplines and teaching units. The pioneering spirit continues to this day, as PTHES is the only

Postgraduate Teaching Program in Geosciences in Brazil. In other words, except better judgement, it is the unique national PPG on teaching dedicated to eminently strategic issues, such as the training of human resources for science and technology around the potential and limits of natural resources, which covers not only oil, hydrocarbons, iron, fertilizers and a multitude of mineral goods, but also water, the issue of climate change, the use of geothermal energy, the recognition and preservation of geo-biodiversity, etc. The Symposium reinforced the idea that teachers need to have autonomy, freedom and resourcefulness to decide on the curriculum; prepare teaching materials; plan teaching units and activities and establish links between theory, field and laboratory practices.

The periodical

Yes, we have our own time: with the publication of the volume 20, by the end of 2024, *Terræ Didática* will celebrate twenty years of punctuality and regularity. During the break in 2005 (26/12/2005 to 01/01/2006), between Christmas and New Year, the Institute of Geosciences continued to work on finalizing the journal, so that by the end of 2005 it could be included in the global network (*Terræ Didática* Editorial Team, 2005). In the course of that specific year, the contributions were added up, until the 96 pages of Volume 1 were produced. A few days later, the first printed copy would leave a printing house, to be distributed by post. The purpose of the IG-Unicamp journal was clear: to disseminate original articles, syntheses, reviews, educational proposals, teaching materials and resources on paper or in electronic form, news and information of interest to the Geology, Geography and Education communities, in Brazil and abroad. exterior.

A few days later, we received the first message, the content of which we condensed:

Good morning, my name is Fábio, I am a 2nd year undergraduate student in Geosciences and Environmental Education taught by USP. I would like to suggest an article about this course because it is the first in Brazil, in 2006 the 3rd class entered, and it fits perfectly with the objective of the

site, which is Geosciences Education. Another suggestion, if I may, is about the job market for these new professionals who will be graduating soon. This is unknown, even for us! Thank you, Fábio Zacarias, on January 4, 2006.

The response was immediate:

Your message is the first to reach the magazine's new email address. It should be celebrated, less because it is the first, but because you captured exactly the spirit of this initiative. Since the beginning, we have collaborated with the magazine, my personal friend, course coordinator, professor Maria Cristina Motta de Toledo. I think it would be great for her to take advantage of the suggestion and put together, together with any co-authors, an article about the new course. I copied the message to her. An idea that you can develop together with your colleagues is to produce, yourselves, a text of impressions about the most relevant aspects of the new course, the challenges that arose, the deficiencies of your previous training to face a different course and that, after all, deals with the dissemination of Geosciences. Major geological disasters and the context in which they occur, versus people's lack of knowledge about all of this, could well constitute the background theme of your research. If you want, I have some texts to suggest to you, as a starting point. Good job. (CDRC, email, 05.01.2006.)

Years have passed. Many geologists, geographers, biologists, civil engineers, environmental engineers, economists, jurists, economists, educators, sociologists, teachers trained in Geosciences and Environmental Education and other professionals have participated and continue to participate actively in the journal, making invaluable contributions. It's worth remembering that many of the graduates of the pioneering course at USP mentioned above went on to study master's and doctoral degrees at the Graduate Program in Teaching and History of Earth Sciences (PTHES) at the Institute of Geosciences at the State University of Campinas.

As expected, the journal increased the number of pages and the number of issues per volume; TD published editions in electronic and paper formats; the periodicity became two issues per volume, then three per volume and four per yearly volume, gradually, starting from 2019 in a continuous edition; y; TD was indexed by several portals and in 2018 absorbed *Terrae* in 2018, another IG-Unicamp

journal, to gain visibility. Currently, *Terrae Didatica* has established a select group of editorial advisors: experts from different fields of knowledge who carry out double-blind peer review. The collaboration of the members of the scientific community who make up the Editorial Board of TD shows their unconditional support for the journal.

Approximately 70 manuscripts were received in 2023, with an annual rejection rate of approximately 30%. This high percentage reflects the rigorous peer review carried out by highly qualified experts from Brazil and abroad. It is worth remembering that the number of pages published per volume has remained at a good level since the beginning of continuous publication regime began (560p., 2019, v.15), (570p., 2020, v.16), (601p., 2021, v.17), (473p., 2022, v.18), (456p., 2023, v.19).

What will the next 20 years be like? No one can predict "the present of the future things", but the challenges are growing, and so is the importance of the issues covered by the journal. Geosciences provide indispensable elements for understanding the dynamics of the environment and for establishing cause and effect relationships between human interventions and changes in the Earth's environment:

While other sciences have become analytical, Geology has maintained a tradition in synthetic thinking, which is the ongoing activity of comparing, connecting, and joining thoughts and perceptions. (...) It is time for geologists to publicize their pragmatic approach to sustaining a habitable planet, sharing their naturalistic reasoning processes with the public (Baker, 1996, p.42-43).

The conflictual relationships between societies and the environment continue to be serious, intense and perhaps even intractable. . Unfortunately, there are many national examples. It is ironic that the tragedies that occurred in Mariana (05/11/2015) and Brumadinho (25/01/2019), both in the state of Minas Gerais, reveal a 'veiled dispute' for the position of "the greatest environmental tragedy in the history of Brazil" (Rocha, 2021). As we write this text, we are witnessing another very serious environmental disaster, caused by almost 50 years of underground mining activities in an urban area, in the city of Maceió (AL). The critical effects of this high-risk situation are still unfolding, and the outcome is unpredictable. What is certain, however, is that the lives of those most directly

affected will be changed forever, as is the case with the survivors of Mariana and Brumadinho, who are still waiting for fair compensation. Above all, these examples stimulate serious reflections, because they encourage us to think about fundamentally changing how humankind relates to nature.

Geological time and human time

In Geology, Astronomy and other Science fields, the concept of time is crucial. The concept of Geological Time, one of the ideas that “changed the course of history” and began to occupy a central role in modern human culture (Cervato & Frode-man, 2014, p.68), is a fundamental contribution of Geology to human knowledge. The concept of time is involved in the study of any natural process; regardless of the speed at which the dynamics under analysis evolved, there must be a direct link with time intervals (Martins & Carneiro, 2023). Cervato & Frode-man (2014, p.76) suggest that “all students – Geosciences or not – should be exposed to the broad economic, political and cultural dimensions” of the concept of deep time”.

The recurring discussion about the National Common Curriculum Base for secondary education privileges issues such as the number of distance learning hours, “training itineraries” and the uncompromising defense of the interests of private schools. It is necessary to go ahead and make clear the dissolution of Earth Sciences in school education, which follows a political purpose of training people who are eager to “escape” from disasters similar to those of the Brumadinho dam or the Maceió phenomenon. People who have no idea what the discovery of the pre-salt means and what are the direct effects of the massive production and export of raw ore from Carajás. Perhaps we could address the social function of Geology, the professional and social responsibility of geologists and other Earth Science professionals, to design sustainable mining and a more harmonious relationship with nature that helps produce wealth for Brazil and not just for shareholders of Vale and Petrobras.

If there was already no geological knowledge at school... it has been reduced even further after each curricular reform.

Indeed, most people are unaware of the importance of the Geosciences in reducing, or avoiding, the various negative environmental impacts that are challenging, living conditions on the planet. Prob-

lems related to the extinction of species continue to increase: we are witnessing worrying situations of deterioration in the quality of life of many populations, at the same time that the destruction of habitats, deforestation and the actions of dispersing contaminants that compromise the lives of people are growing rapidly. countless species, including humans... Cynically, some people wonder if there really is intelligent life on Earth.

Is it possible to avoid these actions? Yes, there is an immense store of knowledge that reveals, both the dangers and the solutions to such gigantic problems.

Age of Disinformation

The topic of disinformation was addressed in the presentation of volume 19, with reference to the spread of lies and absurd ideas without scientific support:

The post-Covid reality revealed a darker world, not only because of the abundance of fake news and unlimited access to it, but because it clearly revealed a widely disseminated degree of ignorance (Carneiro et al., 2023, p.2).

The issue is quite broad, and unfolds into aspects that must be taken seriously by authors, readers and members of the editorial board members of scientific journals. One of these is predatory and hijacked journals, which pose a critical challenge. By definition, predatory journals ignore good publishing and normal scientific publishing practices. For a fee, unsuspecting people accept insistent invitations from publishing companies/groups that publish them, to publish their work within of a few days, “with DOI or without DOI”. Peer review mechanisms are relaxed and acceptance criteria become malleable. It is common for researchers to receive invitations from journals they have never heard of in order to publish their research quickly:

The scope of [predatory] journals, in general, has no relation to their area of study; but it doesn't matter, they are automated, generic messages, massively sent to scientists, doctors and engineers around the world with the sole objective of recruiting clients — in this case, researchers looking for a place to publish their research (...). A consequence of this is that scientific literature and public debate are polluted by a large number

of low-quality or even fraudulent research, filled with evidence and conclusions that, in reality, are unreliable — which opens up huge gaps in production. of scientific disinformation (Escobar, 2023, p.1-2).

Kidnapped journals are those whose titles have been appropriated by third parties, who are not part of the journal's control team. In this type of scam, the kidnappers pretend to be publishers and demand payment to bypass rigorous peer-review processes, in order to publish manuscripts in a matter of days. It is easy to find lists of such journals in both categories on the internet. The astonishing thing about this phenomenon is that many of them have been evaluated by CAPES, thus bypassing the Qualis mechanisms.

The immediate consequence, for *Terræ Didatica*, is the definition of a new editorial evaluation rule: if a given manuscript contains any linkable reference to a predatory or hijacked journal, the authors will be warned, so that the manuscript can be reformulated accordingly, under penalty of rejection.

Bilingual editions

The institutional visibility provided by the presence of *Terræ Didatica* in the Portal of Scientific Electronic Periodicals (SEPP) (URL: <https://periodicos.sbu.unicamp.br/ojs/index.php/td>) of the State University of Campinas allows the editors to invest in yet another initiative with great potential impact: the publication of bilingual articles. Once an article has been evaluated and accepted, the author(s) are invited to translate his/her/their work into a second language. The final check is carried out by the journal's technical team.

Call for papers: 2024, volume 20

Terræ Didatica is open to manuscripts of excellent quality, always with a Geosciences focus, in multidisciplinary areas of geoscientific research and/or geoeducational application. The journal has established itself within the national and international Earth Sciences community, being chosen by both young and experienced researchers to publish original and unpublished research results. We hope to increase the journal's penetration in 2024, while reaffirming our belief in the inestimable value of disseminating high quality science. To properly manage the continuous flow of manuscripts within the Open Journal Systems

(OJS) environment, authors are invited to consult the submission rules, paying particular attention to the insertion of trilingual metadata for each work, as specified by the guidelines for authors. It is necessary for each author to be registered in the ORCID system, from the first insertion of data in the OJS process. Readers, authors and reviewers need to be able to consult and verify the registration data with the journal. Outdated profiles hinder editorial agility.

References

Terræ Didatica adopts the standard of bibliographic references of the American Psychological Association (known as APA), standard for bibliographic references, one of the most widely used in journals. The publishing manual is not free (<https://www.apastyle.org/products/4200066>), but there are several websites with detailed instructions. The link www.ige.unicamp.br/terraedidatica is maintained on the IG-Unicamp Portal, but all visitors to this address are redirected to the link for the Scientific Electronic Periodicals Portal (SEPP) of the State University of Campinas:

<https://periodicos.sbu.unicamp.br/ojs/index.php/td>

We would like to express our gratitude to all those who have helped us to produce every single page of Volume 19, which has been completed on this occasion. Enjoy reading.

The Editors.
Campinas, January, 2024.

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