

Editorial

The Latin American Journal of Astronomy Education (RELEA) reaches its twenty-ninth issue.

Difficult times for all of us in this period of isolation because of the pandemic caused by the coronavirus (Covid-19). Even so, at this time we had a number of submissions that can be considered normal compared to previous years. However, the desired regional distribution continues with an enormous concentration in Brazil, but there is still a shortage of article submissions from various Latin-American countries. We thank the efforts of all who have collaborated with RELEA.

With the aim of a better international visibility, the RELEA will request from the next issue the so-called ORCID ID code (Open Researcher and Contributor ID, <http://orcid.org>). Thus, we ask authors, when submitting new articles, to inform the ORCID code to be included in the next editions. We will also start using the American Psychology Association (APA) Reference Standards, 6th edition, which is widely used internationally. For further information, the Guidelines for Authors can be consulted on the RELEA website.

We take the opportunity to inform the incorporation of two new Associate Editors: Daniel Trevisan Sanzovo and Sônia E. M. Gonzatti which we welcome, thank you for your willingness to collaborate with RELEA and wish success. Daniel and Sônia join Marcos Daniel Longhini and Silvia Calbo Aroca, who have been dedicated to RELEA as Associate Editors and remain in office.

In this issue we have six articles:

Uma proposta de ensino de fundamentos de Astronomia e Astrofísica via ensino sob medida (A proposal for teaching Astronomy and Astrophysics foundations via just-in-time teaching), by Thiago Nunes Cestari, Márcio Gabriel dos Santos and Rafael Aislan Amaral. This work presents a didactic sequence using the just-in-time teaching method, addressing themes of the Solar System, stellar structure and evolution and the origin and expansion of the Universe. Five lessons were given and at the end of each one, a test was applied to assess learning and an opinion questionnaire. As a result, it was found that there was real learning, along with greater student engagement.

Nossa posição no Universo: uma proposta de sequência didática para o ensino médio (Our position in the Universe: a proposal of didactic sequence for high school), by Thiago Pereira da Silva and Sérgio Mascarello Bisch. This article aims to analyze a didactic sequence developed for high-school students with sky observation activities, models, debates, videos and software. The analysis of the collected data allowed to investigate the evidence of a significant learning by students, understanding that in the sky, in addition to the stars, there are planets visible to the naked eye and that it has a *depth*, showing greater elaboration, approximation and integrative reconciliation between the concepts of sky and Universe.

Discursos de docentes dos anos iniciais do ensino fundamental sobre o tema "estações do ano" (Discourses of elementary school teachers from the first years on the subject "seasons of the year"), by Sorandra Corrêa de Lima and Roberto Nardi. This work deals with a research on an active teacher's training course in which the researchers advised teachers from the early years on Science contents. The objective was to find out how such

advice contributed to new interpretations and methodological strategies for teachers. Speeches about the seasons are highlighted with Discourse Analysis as a theoretical and methodological framework. Among the achieved goals, teachers began to explain the phenomenon in a scientifically accepted way and created forms to insert it into their pedagogical practices with greater autonomy.

Análise da inserção do conteúdo de Astronomia no Exame Nacional do Ensino Médio do Brasil (1998-2018) (Analysis of the insertion of the astronomy content into the Brazilian High School National Exam (1998-2018)), by Raquel de Oliveira dos Santos and Marcos Antonio Florczak. This article deals with a documentary analysis of the questions about Astronomy in the National High School Exam (*ENEM*). 58 questions (2.33%) were identified and analyzed between the years 1998 and 2018, classified in terms of Astronomy themes and compared with the official high school documents (*PCN+*). A qualitative research was carried out on the contents, subjects and the way of evaluating the answers to these questions. It was found that the content provided by the *PCN+* are addressed despite the fact that the recurrence of questions is small and quite variable in each edition of *ENEM*.

Comparison of Astronomy school education curricula between Philippines and Japan, by Lieza Crisostomo, Sachiyo Uenoyama, Kanae Sagisaka and Akihiko Tomita. The work presents a case study for developing countries with the objective of improving school education in science and Astronomy, comparing the curricula of the Philippines and Japan. The National Curriculum Standards, scientific books, higher and informal education in both countries were used in the analysis of skills in learning Astronomy. The results show that the topics in the two countries are almost the same, but Filipino students have more time and exposure to the concepts of Astronomy and Japan is rich in research by high school students. This offers more opportunities for Japanese students, creating a more favorable research environment in Astronomy.

Formação de professores dos anos iniciais e saberes docentes mobilizados durante um curso de formação em Astronomia (Early years teachers training and their mobilized knowledge during a course in Astronomy training), by Andréia Fernandes Prado and Roberto Nardi. The article presents a research on the teaching knowledge retrieved by teachers of the early years during an extension course in Astronomy. For the theoretical foundation, references were used in science teaching, teacher training, education in astronomy and Discourse Analysis. The results indicate a need for Astronomy content in the training of teachers, as they are multipurpose, with training in Pedagogy and Professorship degrees, not covering such content. The study also shows that teachers retrieved different types of knowledge, including disciplinary knowledge.

More information about the Journal and instructions for authors can be found at: <www.relea.ufscar.br>. The articles can be written in Portuguese, Spanish or English.

We are grateful to Mr. Walison Aparecido de Oliveira and Mr. Gustavo Ferreira de Amaral for their work towards the publication of this issue, Associated Editors, authors, referees and all those who, directly or indirectly, assisted us in the continuity of this initiative and, in particular, in the preparation of this edition.

Editors

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