WG of Astronomy Education Research & Methods, Commission C1 Triennial Report 2021-2024

Co-chairs

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1. Astronomy Education Journal (AEJ)

AEJ aims to meet the needs of the astronomy education community by providing a location for all manner of practical, newsworthy and scholarly publications involving developments in the field. In a sense, the journal tries to capture the original spirit whilst taking on board the important lessons from the, now out-of-print, Astronomy Education Review. By focusing on building community collaboration, disseminating important news and opinions, while also maintaining a section on more formal, technical, Astronomy Education Research (AER).

Editorial Team

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Archives

Vol. 1 No. 1 (2021): Astronomy Education Journal-December 2021 Vol. 2 No. 1 (2022): Astronomy Education Journal-December 2022 Vol. 3 No. 1 (2023): Astronomy Education Journal-December 2023

See the website: https://astroedjournal.org/

2. Astronomy Education Conference 2023 (AstroEdu2023)

The inaugural AstroEdu Conference in 2019 (Under WG7: Commission C1), held in Garching at the ESO Supernova, Germany, showed that there is a need for a conference dedicated to bringing together researchers and practitioners from astronomy, astronomy education, general education and other communities. The second AstroEdu Conference 2023 (has been shifted to OAE with the cooperation of Commission C1), with the theme of Bridging Research & Practice, was successfully held from 10 to 12 May 2023, generously hosted by the Dunlap Institute for Astronomy, University of Toronto, Canada, in a hybrid format with over 140 registered participants. The conference had three keynote speakers and 46 talks that covered Astronomy Education Research, Astronomy Education Practice, Indigenous perspectives in (astronomy) education, and Future of Astronomy Education. In addition, there were 15 workshop sessions, over 50 posters, and a special panel discussion on the Future of Astronomy Education. The 2023 conference themes provided an overview of what has happened in the five years and looked ahead into the future. For more information about the conference visit: https://astroeducon.org/2023/

Conference Themes

- 1. Theory and Methodology: Astronomy Education Research Highlighting the developments and innovations in research methodologies and theoretical perspectives.
- 2. Tangible Outcomes: Astronomy Education Practice
- 3. Highlighting the innovations in bringing astronomy into the classroom and beyond.
- 4. The Future of Astronomy Education: Learning from the past, building the present, and looking forward to the future.

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3. Astronomy Day in Schools (ADiS)

Astronomy Day in Schools, hereafter abbreviated as ADiS, is a project to share practices of astronomy education worldwide. Although the ADiS has the same goals as many of the existing astronomy education projects as sharing the practices, it is unique in that it has quarterly online meetings where teachers and students interact and share educational practices, and that it focuses on equinoxes and solstices.

The IAU WGs were reconstituted in 2021, and the sub-WG of Teacher and Educator Training was reorganized into a new sub-WG of ADiS under the WG of Astronomy Education Research & Methods. As an ongoing activity of the sub WG, a quarterly online meeting began at the March equinox 2021. This was proposed by Iranian Teachers' Astronomy Union (ITAU), and Students International Network for Astronomy (SINA), an association of students in Iran. In parallel, the ADiS website was launched in September 2021, kindly hosted by the National Astronomical Research Institute of Thailand (NARIT) [1], being managed by Sze-leung Cheung. The quarterly meetings at the time of solstices and equinoxes have been held over Zoom (table 1). Many schools participated in the program; for example, for the March equinox program on 20 March 2024, 3 schools from Japan, 5 schools from Thailand, and 26 schools from Romania shared the resources. Participation certificates are designed by Sze-leung Cheung. The flier of the program has been designed by Hosein Khezri and Iranian colleagues. Recordings of these meetings are made available on a YouTube channel with English subtitles, maintained by Akihiko Tomita [2].

Table 1: Summary of the online programs of the ADiS.

Date Participating countries

19 March 2021 Romania, Bulgaria, Iran, Japan

21 June 2021 Romania, Bulgaria, Malaysia, Brazil, Italy, Spain,
Qatar, Iran, Japan

24 September 2021 Iran, Japan

21 December 2021 Iran, Malaysia, Japan, India, Bulgaria, Romania,
Spain, Italy, Tanzania, Brazil, Mexico, Thailand

21 March 2022 Round table discussion by the sub-WG members

28 June 2022 Thailand, Romania, Bulgaria, Iran, Japan

30 September 2022 Japan, Thailand, Iran, Bulgaria, Romania, Egypt

23 December 2022 Japan, Thailand, India, Iran, Russia, Bulgaria, Romania, Spain, Brazil, Columbia, Peru

26 March 2023 Romania, Bulgaria, Iran, Thailand, Japan, India

30 September 2023 Japan, Thailand, Iran, Romania

22 December 2023 Japan, Thailand, Iran, Bulgaria, Romania

20 March 2024 Japan, Thailand, Iran, Romania, Greece, Brazil

21 June 2024 Japan, Thailand, Romania, Bulgaria, Greece,
Brazil

During each two- to three-hour session, teachers and students from primary to high schools, extracurricular centers and clubs from several countries present their activities related to astronomy education, educational practices related to solstices and equinoxes, and traditional activities in their region. Although the solstice or equinox is a global astronomical phenomenon that occurs throughout the globe, the activities in each region are very diverse and local, such as festivals, rituals, food, and customs. The Sun's motion, altitude, and climate are also different from place to place, and teachers and students try to measure them. Ancient observatories were also related to these special occasions of the year. The ADIS is becoming a repository of educational materials that link astronomy, culture, society, and daily life. The repository is currently under construction [3].

The National Astronomy Education Network (NAEC) network under the Office of Astronomy for Education (OAE) has been very helpful in publicizing our events. The quarterly online meetings have been organized by Akihiko Tomita, Paulo Sergio Bretones, the co-chairs, and Boonrucksar Soonthornthum, the president of the Commission C1. With great regret, PBS, founder of the ADiS, passed away in August 2023. His will is the cornerstone of current development of the ADiS.

[1] ADiS Home Site: https://adis.narit.or.th/

[2] ADiS archive YouTube channel:

https://www.youtube.com/@astronomydayinschoolsproje8412

[3] ADiS Repository of resources:

https://sites.google.com/view/adisrepository/