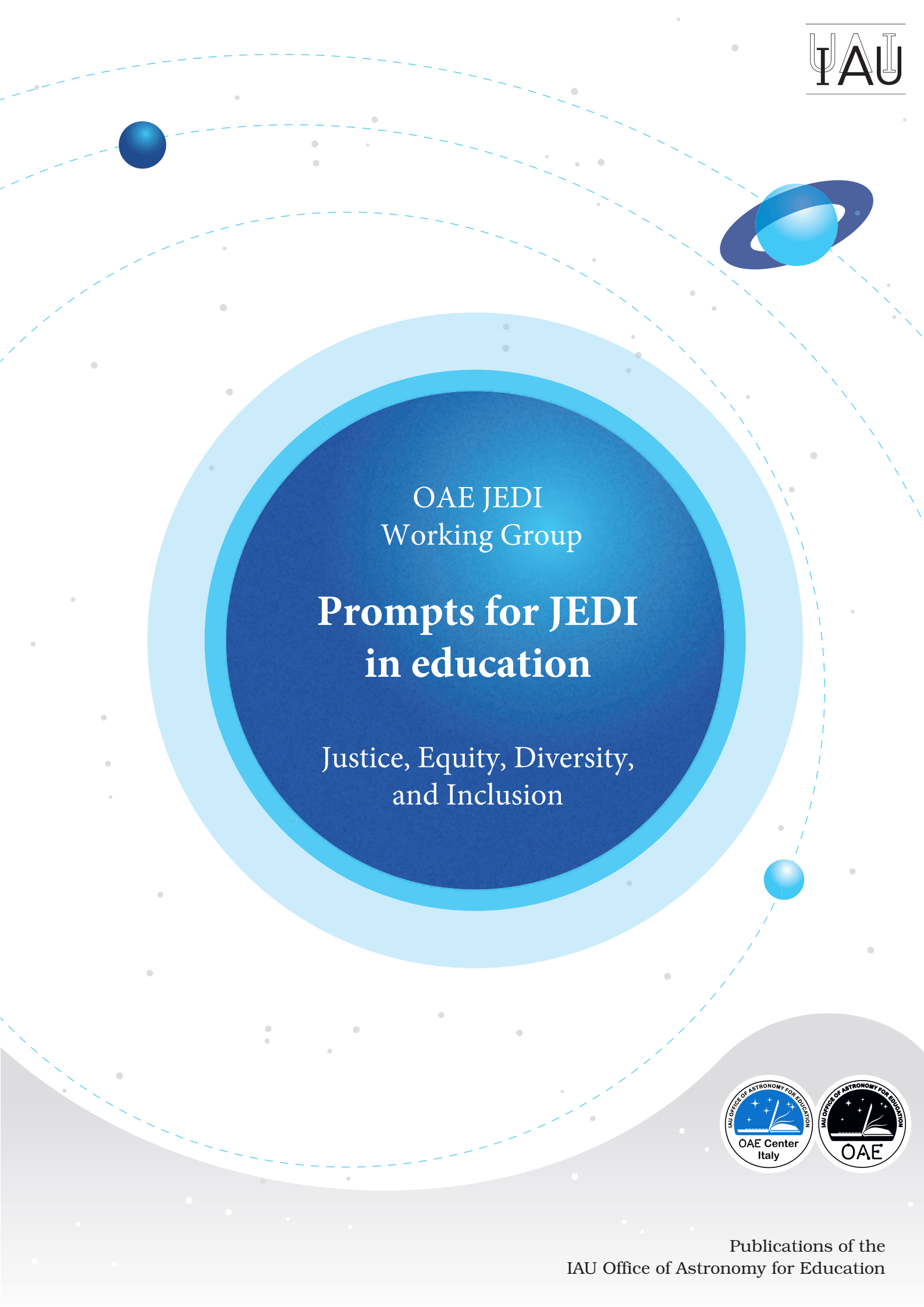


The background of the entire page is a light blue-grey gradient. It features several concentric dashed blue circles that resemble orbits. Scattered throughout are small grey dots representing stars. Three stylized celestial bodies are placed along the orbits: a solid dark blue sphere in the upper left, a blue sphere with a dark blue ring in the upper right, and a smaller solid light blue sphere in the lower right. The central text is contained within a large blue circle that has a lighter blue outer ring.

OAE JEDI
Working Group

Prompts for JEDI in education

Justice, Equity, Diversity,
and Inclusion



Compiled by: JEDI WG

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The IAU Office of Astronomy for Education (OAE) Justice, Equity, Diversity, and Inclusion (JEDI) working group supports awareness within the design of educational resources and environments as welcoming and accessible as possible, within the framework of Universal Design for Learning.

The IAU OAE is hosted at Haus der Astronomie (HdA), managed by the Max Planck Institute for Astronomy. The OAE's mission is to support and coordinate astronomy education by astronomy researchers and educators, aimed at primary or secondary schools worldwide. HdA's hosting the OAE was made possible through the support of the German foundations Klaus Tschira Stiftung and Carl-Zeiss-Stiftung.

Prompts for JEDI

(Justice, Equity, Diversity, and Inclusion)

Thought starters for designing accessible and welcoming educational activities

Justice, equity, diversity, and inclusion (JEDI) have become central ideals across a growing number of institutional, professional, and public contexts. The effort to translate these principles into concrete good practices has expanded considerably in recent years, spanning work environments, community engagement, and, more recently, educational settings. In education, this commitment takes on particular significance: creating welcoming and accessible learning environments requires action at multiple levels simultaneously.

Despite the growing consensus on the importance of these goals, their implementation remains uneven and context-dependent.

This document aims to offer a structured overview of some of the key challenges involved, organised around two complementary dimensions: the main areas of JEDI to consider, and the specific aspects that practitioners and institutions should actively account for when designing inclusive educational practices.

To this end, this document proposes a series of guiding questions organised by theme, that educators and activity designers can use as a practical list of items to consider when planning learning experiences from a JEDI perspective.

The prompts proposed below are not abstract recommendations, but draw directly from the experiences of the community of educators and practitioners. They stem from the thematic analysis of the 2025 Teacher Training Program (TTP) proposals, conducted by the OAE JEDI Working Group. The analysis looked at applicants' responses to the equity, accessibility, and inclusion questions included in the 2025 TTP applications, identifying recurring considerations that applicants had already reflected on within their own contexts. These considerations were then grouped according to the underlying needs they addressed — whether related to disability, or to cultural, social, and economic factors. Finally, each identified need was translated into a possible key question, designed to help other practitioners recognise similar needs and reflect on how to address them in their own activities.

Useful resources for the design of inclusive activities have already been developed, such as the [CAST Universal Design for Learning Guidelines](#). This document aims to complement such frameworks by offering a practical approach — providing concrete examples of how to address different situations when aiming for justice, equity, diversity and inclusion in Astronomy education.

The Appendix presents the full thematic analysis of the responses to equity, accessibility and inclusion questions in the 2025 TTP applications, which served as the basis for this work.

CULTURAL DIVERSITY

POSSIBLE KEY QUESTION	PROMPTS
<i>What can help to make people from diverse cultural backgrounds feel welcome?</i>	• Include role models and stories that represent several cultures and religions. • Make materials and sources available in multiple languages.

COGNITIVE DIVERSITY

POSSIBLE KEY QUESTION	PROMPTS
<i>What can help people with different cognitive needs and learning preferences feel welcome?</i>	• Co-design with experts and caregivers. • Include clear step-by-step guides for activities. • Provide hands-on experimentation. • If needed, seek personalised pedagogical advice. • Create an online support network. • Provide online versions of lectures and materials. • Try to keep activities open ended (i.e. allow sub-objectives, still satisfactory). <i>Note: some needs cannot be addressed through activity design alone.</i>

GENDER IDENTITIES

POSSIBLE KEY QUESTION	PROMPTS
<i>What can help make people with diverse gender identities feel welcome and represented?</i>	• Include role models of people with diverse gender identities. • When possible, involve facilitators who themselves represent diverse gender identities. • Use gender neutral language in the activities.

SENSORY NEEDS

POSSIBLE KEY QUESTION	PROMPTS
<i>What can help people with different sensory needs feel welcome?</i>	• Make key concepts accessible through different sensory channels (e.g. touch, vision, hearing). • When working with deaf sign language users, use sign language interpreters, competent in scientific contents.

INVISIBLE CHALLENGES

These are general considerations proposed by the JEDI WG that can help create [accessible](#) and [welcoming](#) learning environments, thus easing difficulties that may not be clearly recognisable at first glance.

ACCESSIBLE

POSSIBLE KEY QUESTION	PROMPTS
<i>What might be considered when creating an accessible learning environment?</i>	• Use plain language (short sentences, common words). • Print materials using large fonts and high contrast. • Use alternative text, captions, and files compatible with screen readers. • Organise content into small, accessible learning units.

WELCOMING

POSSIBLE KEY QUESTION	PROMPTS
<i>What can help create a welcoming and motivating learning environment?</i>	• Start from questions and interests that participants can relate to and share with others. • Embed new ideas in familiar ideas and contexts. • Participate in the learning process (be a co-learner, don't be afraid of not knowing).

APPENDIX

Here we report the results of the thematic analysis of the responses to equity, accessibility and inclusion questions in the 2025 TTP applications.

For each question, the underlying needs and practices found in the responses have been grouped in a common theme, in order to be easily referred to a common challenge foreseen or encountered by the proponent designers.

EQUITY question 3 reports all identified practices organised in chronological order and then reported as prompts in the main table. Each prompt refers to a corresponding grouping theme identified through the analysis in other questions.

EQUITY Question 1 Which group(s) are underrepresented in the educational community that form your participant pool?	
GROUPING THEME	NEEDS IN THE RESPONSES
GEOGRAPHY	Geographical difficulties/diversity (rural, remote, further areas) Transport difficulties Limited opportunities to participate in scientific initiatives
SOCIO-ECONOMIC	Overcrowded classrooms High school dropout rate different socioeconomic contexts low income households Under-resourced areas Underserved areas schools with limited funding and infrastructures Lacking/limited access to lab equipment (war) Limited access to astronomy resources No access to interactive experiences Lacking/limited access to (quality) astronomy education rural and Indigenous communities Public school teachers

CULTURE	Lack of cultural integration Immigrant children Children of different cultural backgrounds First or second generation migrants Valuable (and diverse) cultural perspectives and knowledge to enrich the collective learning process Teachers close with the community who apply astronomy in local life Teachers who speak a different language
PROFESSIONALISATION	Lacking astronomy knowledge Limited/lacking astronomy teacher training Limited/lacking (continuous) professional development First generation educators (?)
WOMEN IN STEM	Women in STEM (gender inclusivity) Gender discrepancy in enrollment Teachers are mostly men due to insecurity for women Discouragement from pursuing science and engineering Balanced and inclusive participant pool
DISABILITIES	People with sensory disabilities. Teachers with disabilities (blind, visually impaired) Teachers from special schools for the blind Lack of professionalisation for handling disabilities Lacking accessible resources

EQUITY QUESTION 2

How will you encourage/ recruit members of underrepresented group(s) to participate in the workshop?

GROUPING THEME	PRACTICES IN THE RESPONSES
RECRUITING/	Distributed calls (governmental institutions, social media,

ADVERTISING	local media, astronomy groups) Collaboration with rural school networks Outreach for advertisement (visits) Advertising through teacher networks Advertising through NAECs (social) networks Contacting former students from universities for education Multilingual promo of rural success stories Advertising through local Education/Science departments National platform for TTP programs School visits to directly invite teachers
ENCOURAGING	Presenting unique opportunities Participation certificates Showcasing program benefits Make teachers familiarise with the facilitators Places reserved for teachers from public schools Attention to gender balance (50% female) Half seats for country-level STEM teachers with no prior astro training Relatable role models Invitation of female speakers Transparent call Inclusive representations Inclusive language Local NGOs for underrepresented groups Mailing lists of teachers national association for deaf and visually impaired people to contact their affiliates Good reputation of the program No fees Local offices of astronomy for development Schools with low representation in past astronomy events Prioritisation of schools with no astronomy clubs or equipment Opportunity to present their results to a larger audience (from Question 3)

SUPPORT (also in Question 3)	Travel support Meals Help (funding) for accommodation Stipends for travel/accommodation Offer childcare
EASING PARTICIPATION (also in Question 3)	Convenient times for school and family duties Printed/digital materials Free/low cost kits Venue accessible in wheel chairs Online participation

EQUITY Question 3

What support will be offered to underrepresented group(s)?

	PRACTICES IN THE RESPONSES
BEFORE THE EVENT (repeated from SUPPORT in Question 2, except new entries in <i>italic</i>)	Travel organisation Meals organisation Help (funding) for accommodation Stipends for travel/accommodation <i>Invitation letters to get travel support by the government</i> <i>Foresee a recognition of achievements</i>
DURING THE EVENT (repeated from SUPPORT and EASING PARTICIPATION in Question 2, except new entries in <i>italic</i>)	Community of practice Step-by-step guides for activities Mentorship Convenient times for school and family duties flexible schedules Printed/digital materials Free/low cost kits Venue accessible in wheel chairs <i>Personalised pedagogical advice</i>

	<i>Lectures also available online</i> <i>Online support network</i> <i>Female facilitators</i> <i>Translation into native language</i> <i>Adaptation to their cultural contexts</i> <i>3D printers</i> <i>Sign language interpreters</i> <i>Blind people to teach facilitators to accompany BVI people</i> <i>Special transportation for teachers with disabilities</i> <i>Help from volunteers for transportation</i> <i>Lodging costs covered for selected participants</i> <i>Childcare (or some economical support)</i> <i>Multisensory activities</i> <i>Adapted materials</i> <i>Connectivity (internet)</i> <i>Social media groups</i> <i>Inclusive and motivating learning environment</i>
AFTER THE EVENT	<i>Post workshop access to telescope</i> <i>Post workshop mentoring sessions</i>

ACCESSIBILITY

What measures will you be undertaking to make your workshop accessible to people with different kinds of dis/abilities?

GROUPING THEME	NEEDS AND PRACTICES IN THE RESPONSES
DISABILITIES CATEGORIES	Mobility disabilities Visual impairments/blindness Hearing impairments/deafness Cognitive disabilities Learning disabilities ADHD

	Obesity
PHYSICAL AND STRUCTURAL ACCESSIBILITY	Wheelchair accessible/accessibility Ground floor Ramps Elevators Accessible seating Accessible restrooms Mobility challenges
NEEDS IDENTIFICATION AND ASSESSMENT	Registration form inquiry Special need identification/assessment Special needs sharing in advance Electronic form questions
COMMUNICATION AND LANGUAGE SUPPORT	Sign language interpreter Local language interpreters Hearing impaired assistance
MATERIALS	Large prints/fonts High contrast Braille Tactile models Digital formats Screen reader compatible Audio materials/recordings Universal design principles Clear language
DIGITAL/TECHNO SUPPORT	Subtitles/close captions Online/virtual support Live captions Streaming Digital resources Adaptive telescope controls
PERSONALISED SUPPORT	One-on-one assistance Individual support Support volunteers

	Tutorial support Special needs accomodation
METHODOLOGIES	Flexible participation methods Adaptable activities hands-on activities adaptation Visual aids Audio descriptions Verbal explanations Inclusive engagement Learning disabilities adaptation