

ACDS Indigenous Science Learning & Teaching for HE

Website and Community of Practice



Australian Council
of Deans of Science

Who are we?

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What are we?

Support staff teaching into
mainstream science/maths units

Provides a safe place to have very
honest discussions

Where do I start?

What can I offer?

How can I improve?

What don't I see?





[Photo by Curioso photography on
Unsplash]

<https://www.acds.edu.au/teaching-learning/indigenous-science/>

Ecosystems

The First Australians had millennia to study the way that land, plants and animals interacted and were interlinked. Their ability to observe and collect information about these natural systems allowed 60,000+ years of continuous culture. This makes Australia's first people the earliest observational scientists whose society is still with us. This encyclopedia-like knowledge and an understanding that nature was different across place and time, and was vital to successfully inhabit every part of Australia. The perspectives that developed over those millennia are still here for us to learn from. We have chosen the large overarching topic of Ecosystems to match the complexity the Aboriginal and Torres Strait Islanders see the world. Plants do not exist without the birds that feed on their fruit, the microbes that keep their roots healthy, and the nutrient in the soil in which they grow. Systems are complex and Indigenous knowledges and perspectives embrace that complexity at their core.

[Explore our resources](#)

Site Tour

Did not use traditional Science subjects
for content organisation

Content

A large number of videos to hear direct from Aboriginal and Torres Strait Islander experts

Links to other important sites e.g., Aboriginal Astronomy

Next step is to build more on L&T examples and case studies

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always been a point of mystery for astronomers worldwide. On the surface, they appear to move like stars, but after a period of observation, it becomes evident that these 'stars' do not behave like typical stars. There are some key characteristics of planets that differentiate them from typical stars. They move irregularly when compared to other stars, and they also have a peculiar retrograde motion – phenomenon where they appear to be heading backwards.

planets that tend to be observable by the naked eye and all 5 appear frequently in Indigenous traditions – Mercury, Venus, Mars, Jupiter, and Saturn.

planets in Aboriginal Australia by Hamacher. This link gives a comprehensive overview of the interpretations of the observable planets in Indigenous astronomy for Indigenous communities across the continent. The significance of the



An emerging Community of Practice

- Launched 22nd April 2021
- Fluid membership (50+ attendees/meeting)
 - >90% non-Indigenous, but Indigenous participants and/or guests always present.
- Most already incorporating Indigenous Knowledges or will do in next 12 mths
- **66% want to learn** how to teaching Indigenous knowledges/perspectives in STEM
- **20% have experience** that they want to share with a CoP





Indigenous Science Webinars

The Indigenous Science Community of Practice (CoP) supported by the ACDS is gathering momentum. This CoP grew out of the ... *Continue Reading»*

Indigenous science as a core subject - Curtin Uni

Introductions - CAS and SAE team

We would like to acknowledge the contribution of Sonia Ferra, Marian Kickett, David Cusack and Chris Rawson in the development of this unit.

Centre for Aboriginal Studies & Faculty of Science and Engineering [NPSC1003] Curtin University

Teaching Philosophy - Both-ways learning

Both-ways is a philosophy of education that brings together Indigenous Australian traditions of knowledge and Western academic disciplinary positions and cultural contexts, and embraces values of respect, tolerance and diversity (Batchelor Institute, 2007, p. 4 cited in Ober, 2009, p.34)

Centre for Aboriginal Studies & Faculty of Science and Engineering [NPSC1003] Curtin University

A journey to decolonise science curricula - USyd

Better in Blak!

A personal, ethical journey towards decolonising the Science curriculum by exposure to Indigenous Knowledge Systems

Dr Matt Pye,
Dr Rebecca Cross,
Dr Fran van den Berg.

'Western' "Positioning" of Indigenous knowledges

- Fact vs Fiction
- Expert vs Lay
- Peer-review vs Cultural transmission
- Observation and Listening (material vs spiritual)
- In situ vs removed from place

• The Myth of Aboriginal Stories being Myths – Jacinta Koolmatine

Community and schools partnership – Macquarie Uni

The National Indigenous Science Education Program (NISEP)

Facilitating Equity, Inclusion and Belonging in Secondary and Higher Education

this presentation contains images of Indigenous people, some of whom are now deceased

Coming up...

Co-designing a subject with an Indigenous Community:
A framework for Indigenous health curricula

What is your Faculty currently doing to address Indigenous inclusion and reconciliation?



What is your Faculty's #1 priority for Indigenous inclusion and reconciliation over the next 12 months?

Better inclusion of Indigenous perspectives in the curriculum

Further including indigenous knowledge systems throughout the curricula

Developing practical examples for inclusion in the curriculum.

Embedding indigenous perspectives in research and teaching

More indigenous knowledge and practice embedded in the curriculum. More academics on staff through our indigenous academic pathway program

Develop a course in Indigenous Environmental Science and embed in Science programs

Key aspect in our faculty strategic plan and the university regarding inclusion and retention improvements

include indigenous into LO of as many units as possible.

Increasing Indigenous student participation and increasing workforce

What is your Faculty's #1 priority for Indigenous inclusion and reconciliation over the next 12 months?

Developing a cultural competency strategy.

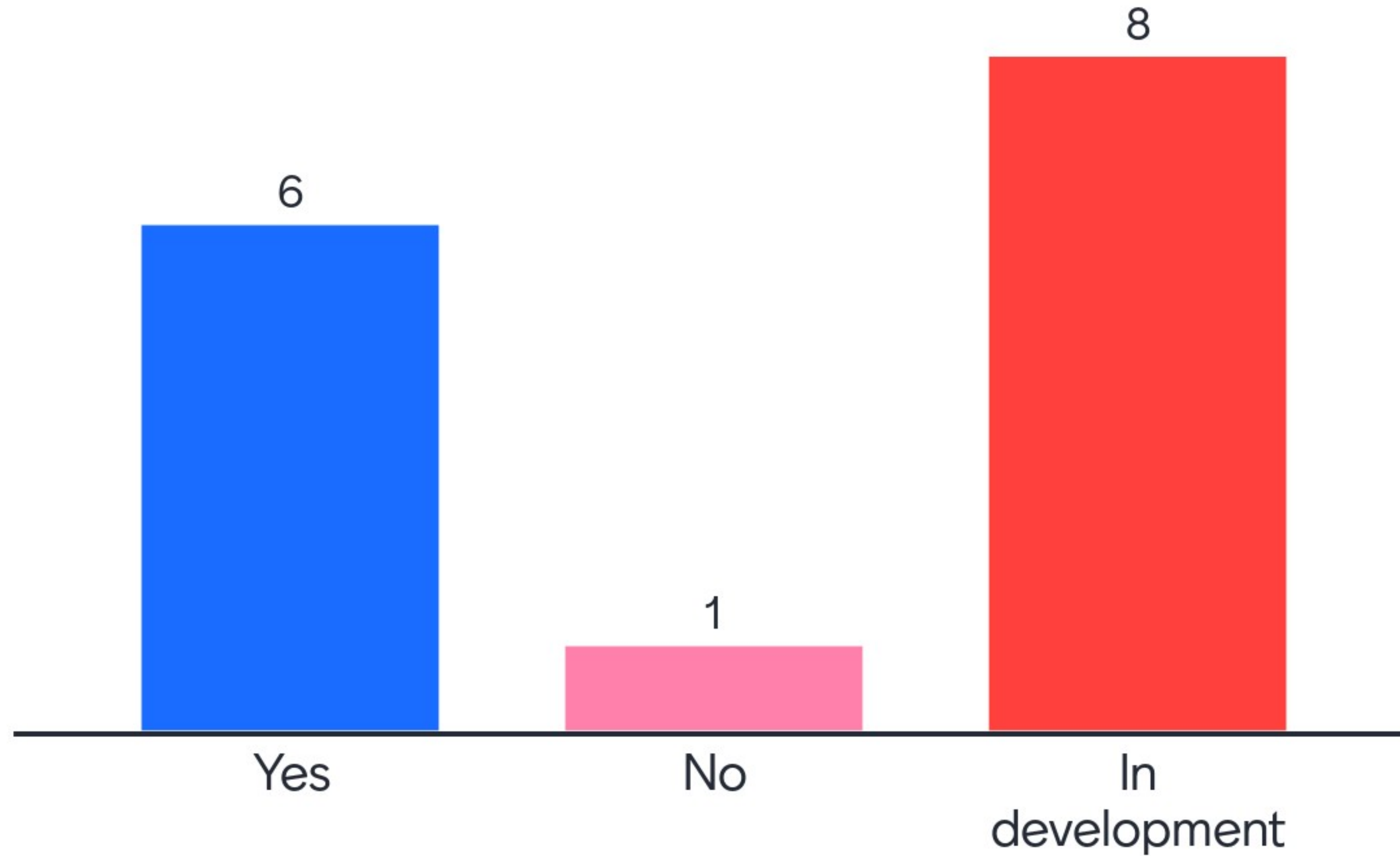
Growing indigenous student inclusion in research activities.

Working with TOs and TOCs about sharing knowledge of land management and care through both ways learning framework

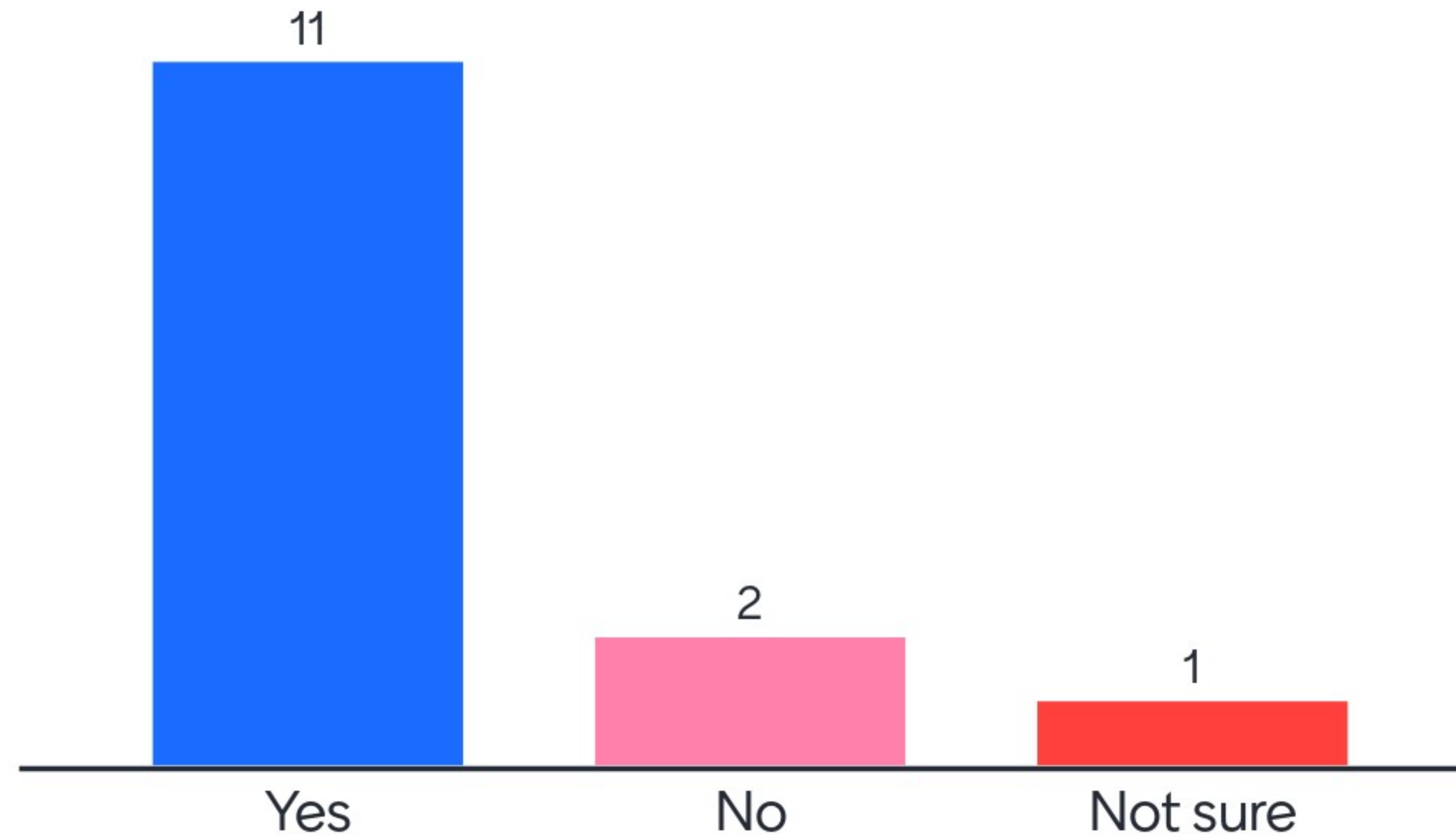
Developing content for curriculum - concern that we do not yet have appropriate guidelines to support cultural IP

Yes

Do you have a formal Indigenous strategic development plan in place for your Faculty?



If you have a strategic plan, does it have metrics in place specifically for the education of non-Indigenous science students?



What do you envisage our national CoP could address? What outcomes could you see coming from this group?

Sharing ideas

I really like the non-judgemental forums for asking difficult questions.

sharing resources

Really important to share practice (avoid re-inventing the wheel and ensure that we do this well)

Best practice strategies for embedding indigenous knowledge and practice in a science curriculum

reconciliation of ideas and perceptions. What I thought was the right way (e.g. integration) was totally rejected by my indigenous colleague.

IP awareness and solutions

Questions?



Thanks for your attention. Questions welcome...

0 questions
0 upvotes