



Emeritus Professor Angela Brew - chair@acur.org.au

ACUR | *Australasian Council for Undergraduate Research*



2nd ACUR Exchange Colloquium Sponsor: Notre Dame University

Professor Elizabeth Labone, Deputy Vice-Chancellor Learning and Teaching,



ACUR 2022 Conference The University of Sydney with keynote speaker Dr Karl Kruszelnicki

Colloquium Helpers



Lilia Mantai

The University of Sydney
Planning and conceptualisation



Dawn Bennett

Bond University
Program planning and conceptualisation



Daniel Johnstone

Newcastle University
Panel planning and liaison



Christine de Matos

Notre Dame University
Notre Dame Location and Facilities



Emma Van der Schyff

The University of Sydney
Setting up

Olivia Urbaniak

The University of Sydney
Location and Catering



Donna Bennett

ACUR
Administration and publicity

Other members of the ACUR Executive Committee



Denise Wood

Sunshine Coast University



Ian Fuller

Massey University



Rachel Spronken-Smith

Otago University



Charles O'Neill

Australian National University



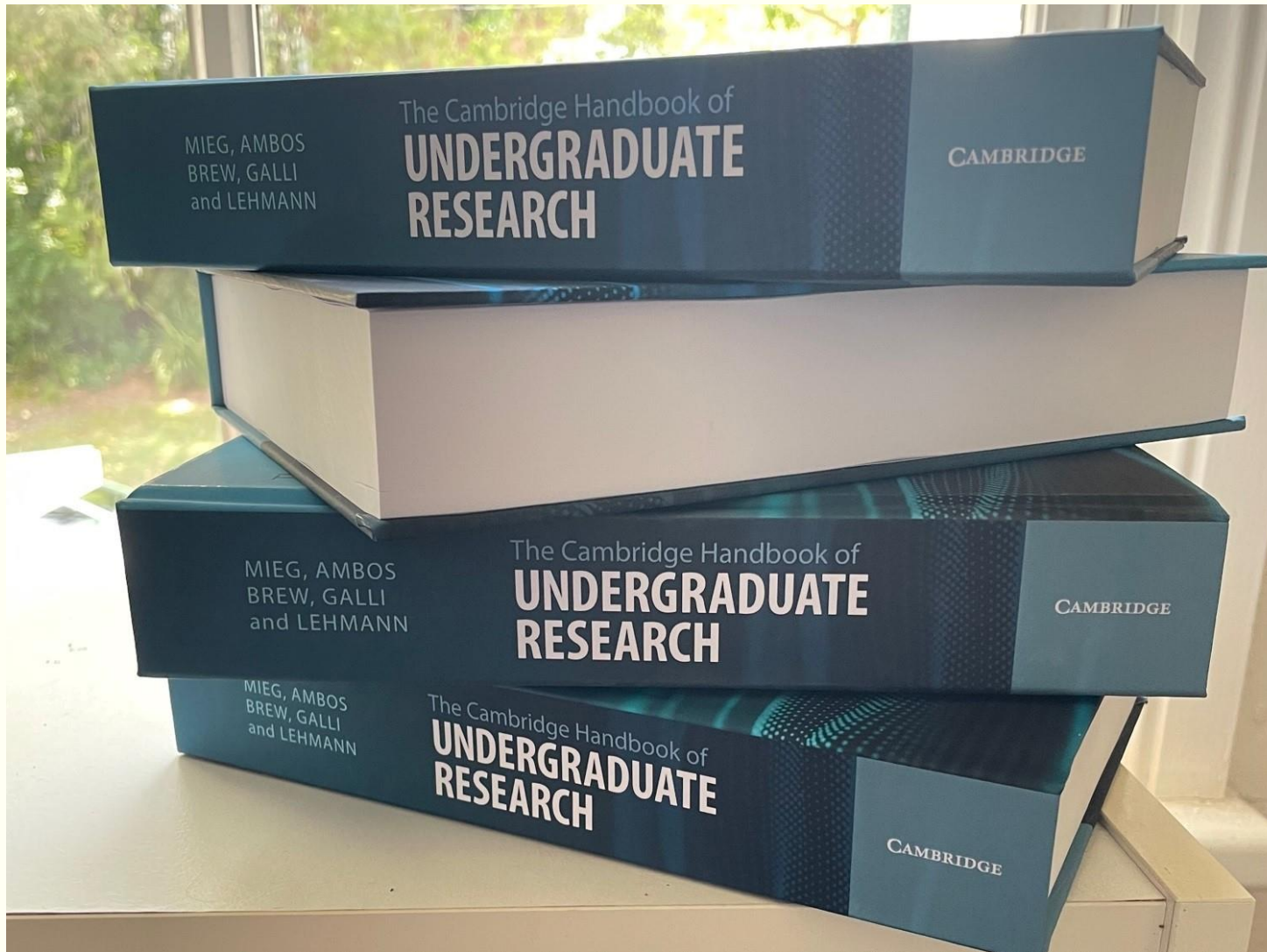
Max Kirkby

The University of Queensland

Colloquium Rationale

How can we, in 2023, create an undergraduate curriculum that truly inspires students, responds to their needs and prepares them for what lies ahead?

Transformative approaches to undergraduate education; ones that excite students and bring fresh energy to their study, can come about through cross-fertilisation of ideas and networks.



Meig, H., Ambos, E., Brew, A., Galli, D. M., & Lehmann, J. (Eds.). (2022). *The Cambridge Handbook of Undergraduate Research*. Cambridge University Press. DOI: 10.1017/9781108869508

What is the goal of undergraduate education?

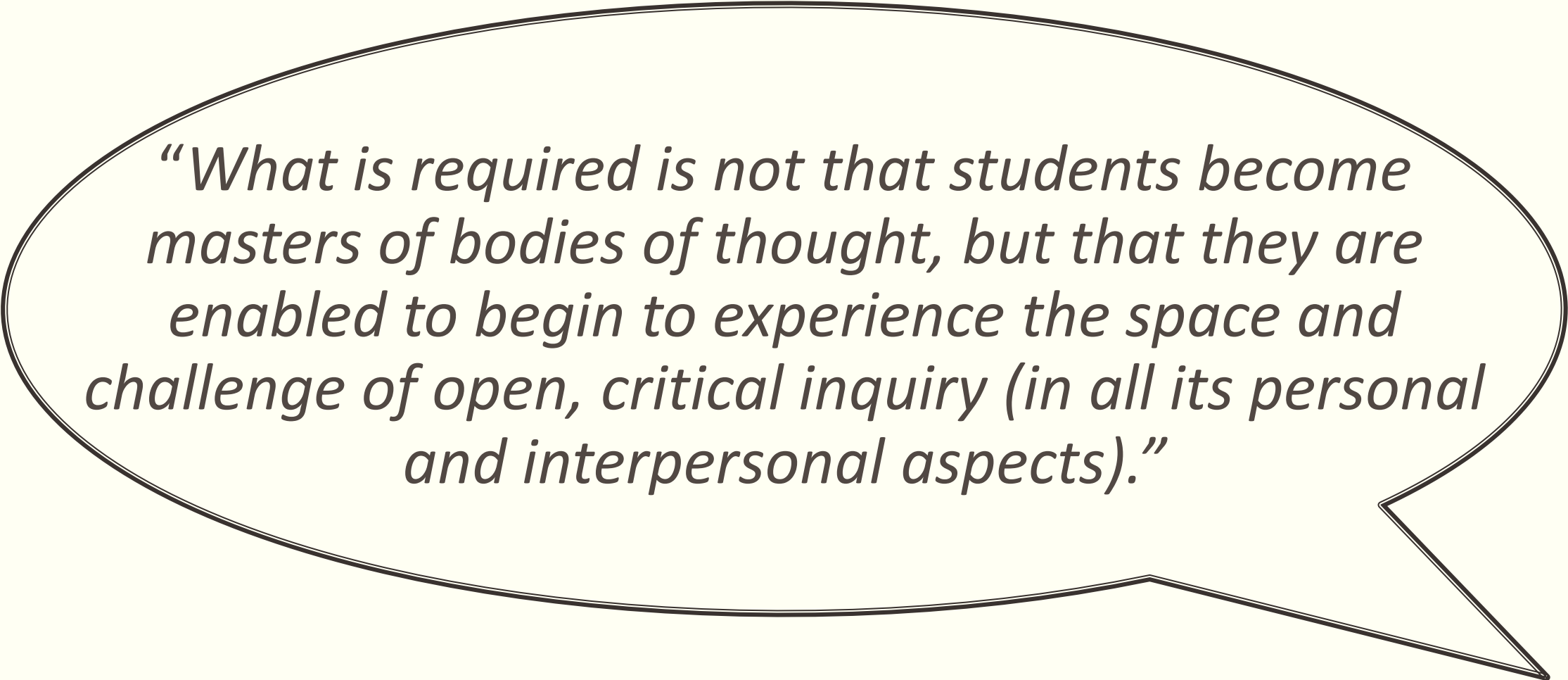


Job readiness?

What are we aiming for? What must we aim for?

What kind of higher education curriculum is appropriate to prepare students for life and work in the post-pandemic world?

How can we help students to respond to the challenges of contemporary society, in which knowledge is uncertain and debates about what is true abound?



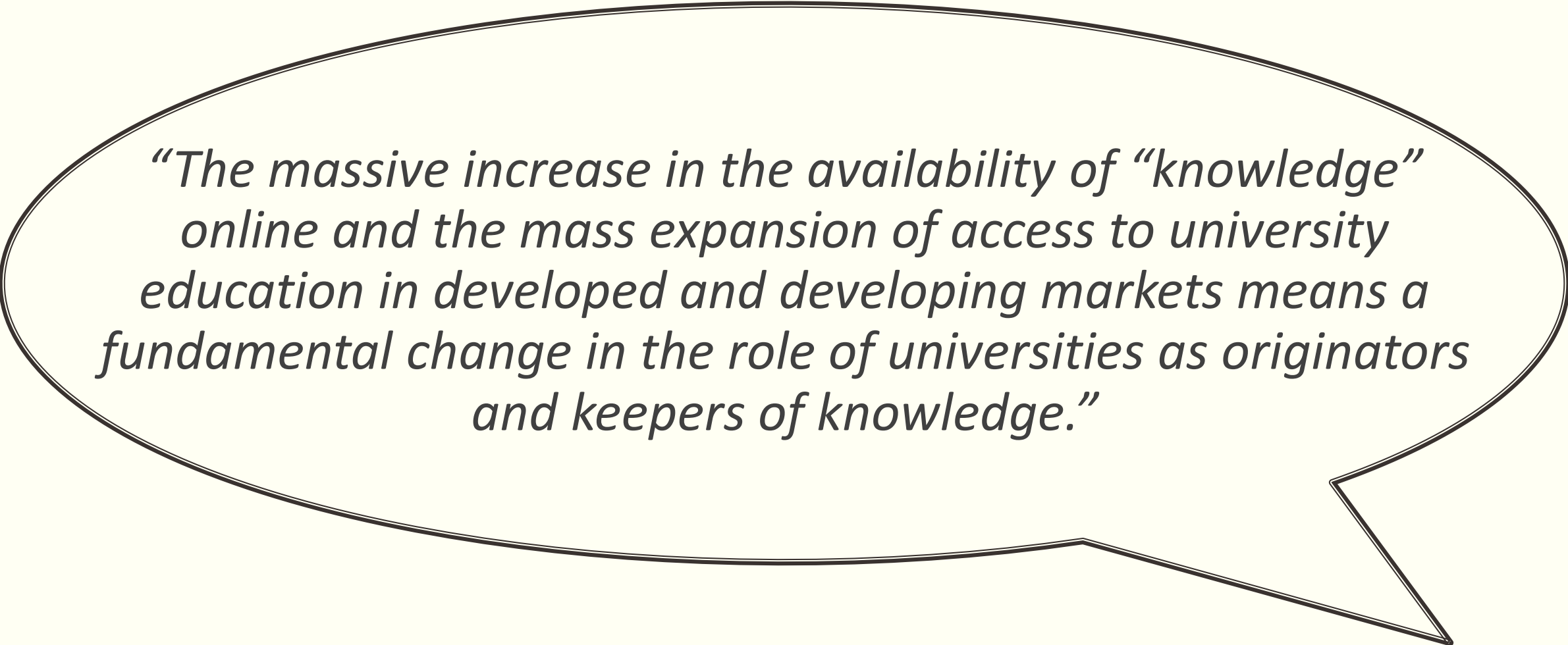
“What is required is not that students become masters of bodies of thought, but that they are enabled to begin to experience the space and challenge of open, critical inquiry (in all its personal and interpersonal aspects).”

“Transaction spaces”



... the work of scientists has acquired intense social significance. It has moved centre stage in what we call the *agora*- the space in which market and politics meet and mingle, (Nowotny, Scott & Gibbons, 2001, p. 183.)

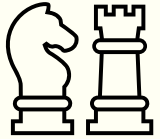
The democratisation of knowledge production (Nowotny et al 2001)



“The massive increase in the availability of “knowledge” online and the mass expansion of access to university education in developed and developing markets means a fundamental change in the role of universities as originators and keepers of knowledge.”

(Justin Boker, 2012, p. 4).

Key trends



inquiry-based learning

work-integrated learning



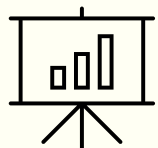
partnerships with industry

employability thinking



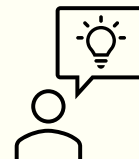
students as change agents

students as partners

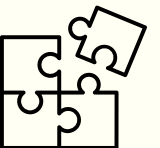


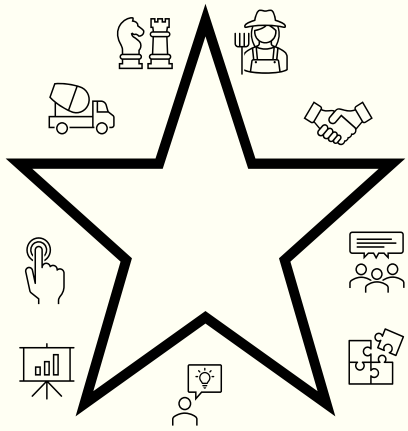
Entrepreneurship

CUREs



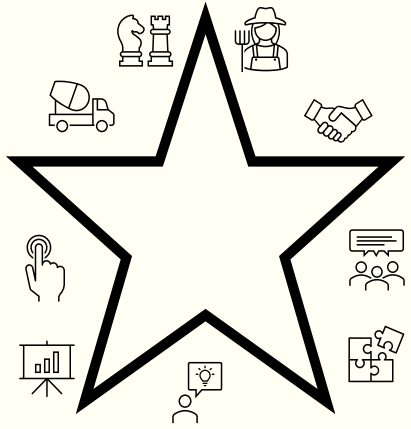
research-based learning





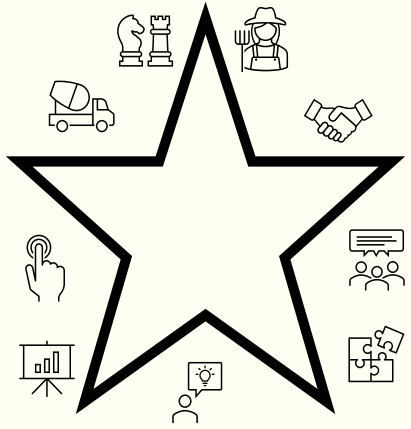
Key Questions

- ★ What are the skills and capabilities that are all being developed within these initiatives?
- ★ Do they indeed make students more prepared for life after graduation?
- ★ Do they indeed prepare students for the world of work?
- ★ Are they preparing students for the challenges of the future?
- ★ What are we actually preparing students for?



Key Questions

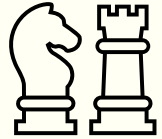
- ★ Are some better than others at developing certain kinds of skills and capabilities?
- ★ Are some initiatives more transformative in educational terms than others?
- ★ Do they meet the specific needs of students as they perceive them?
- ★ Are there important skills and abilities that are left out?
- ★ And importantly, what is missing that is essential for preparing students for an uncertain, troubling and complex world?



Key Questions

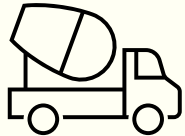
- ★ **What is the collective contribution of these initiatives?**
- ★ **Are we all working towards the same goals?**
- ★ **How do our different interests overlap and intersect?**
- ★ **How do the various communities of practise exhibited by these initiatives link together?**
- ★ **So, how can our different approaches be brought together to create a higher education that truly inspires students, engages them in the kinds of transaction spaces that Nowotny and colleagues talk about, and which prepares them for post-pandemic challenges of living and working?**
- ★ **Are there ways of organising student learning to facilitate such engagement?**

Key Questions



inquiry-based learning

work-integrated learning



partnerships with industry

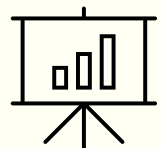
employability thinking



students as change agents

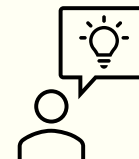
What is the
contribution of
undergraduate
research?

students as partners

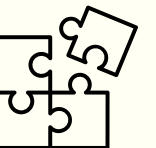


Entrepreneurship

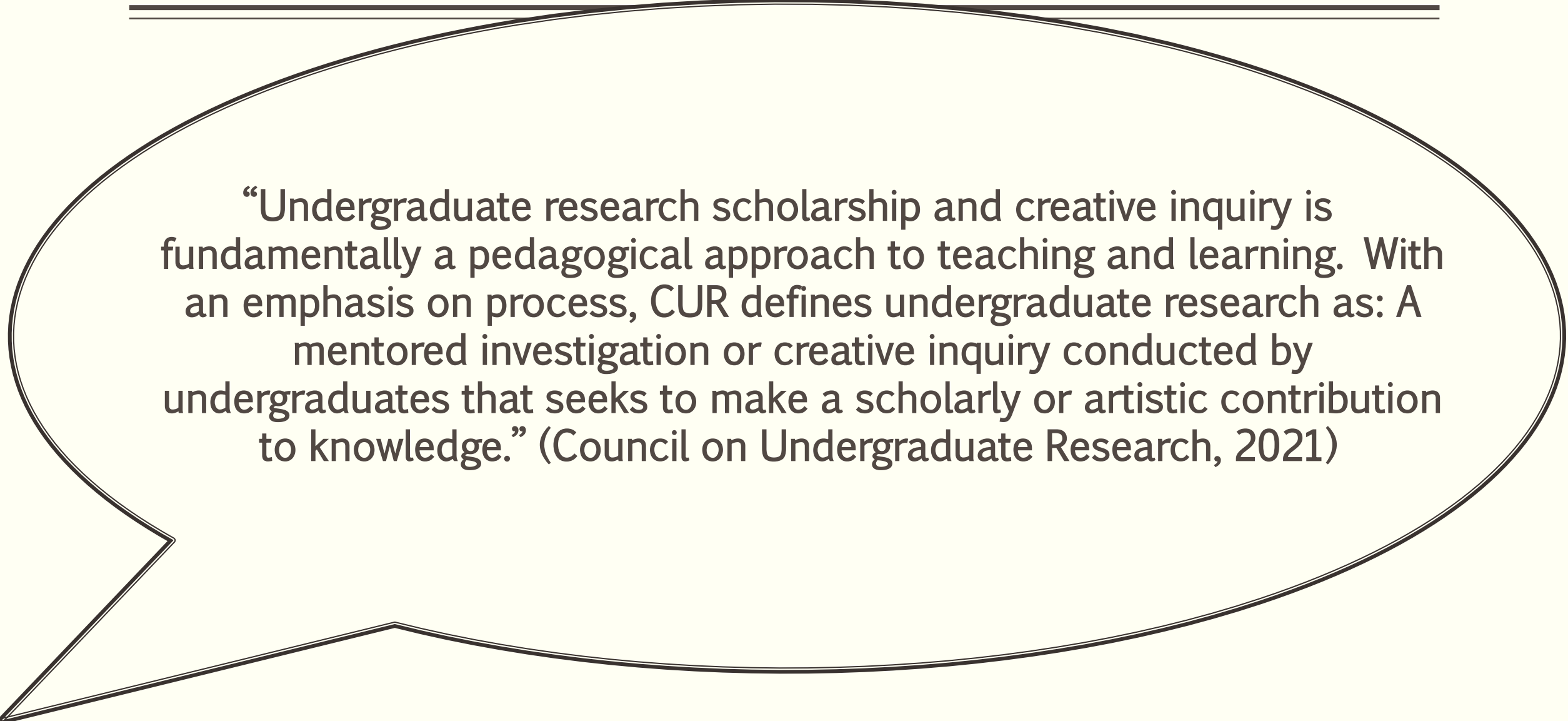
CUREs



research-based learning

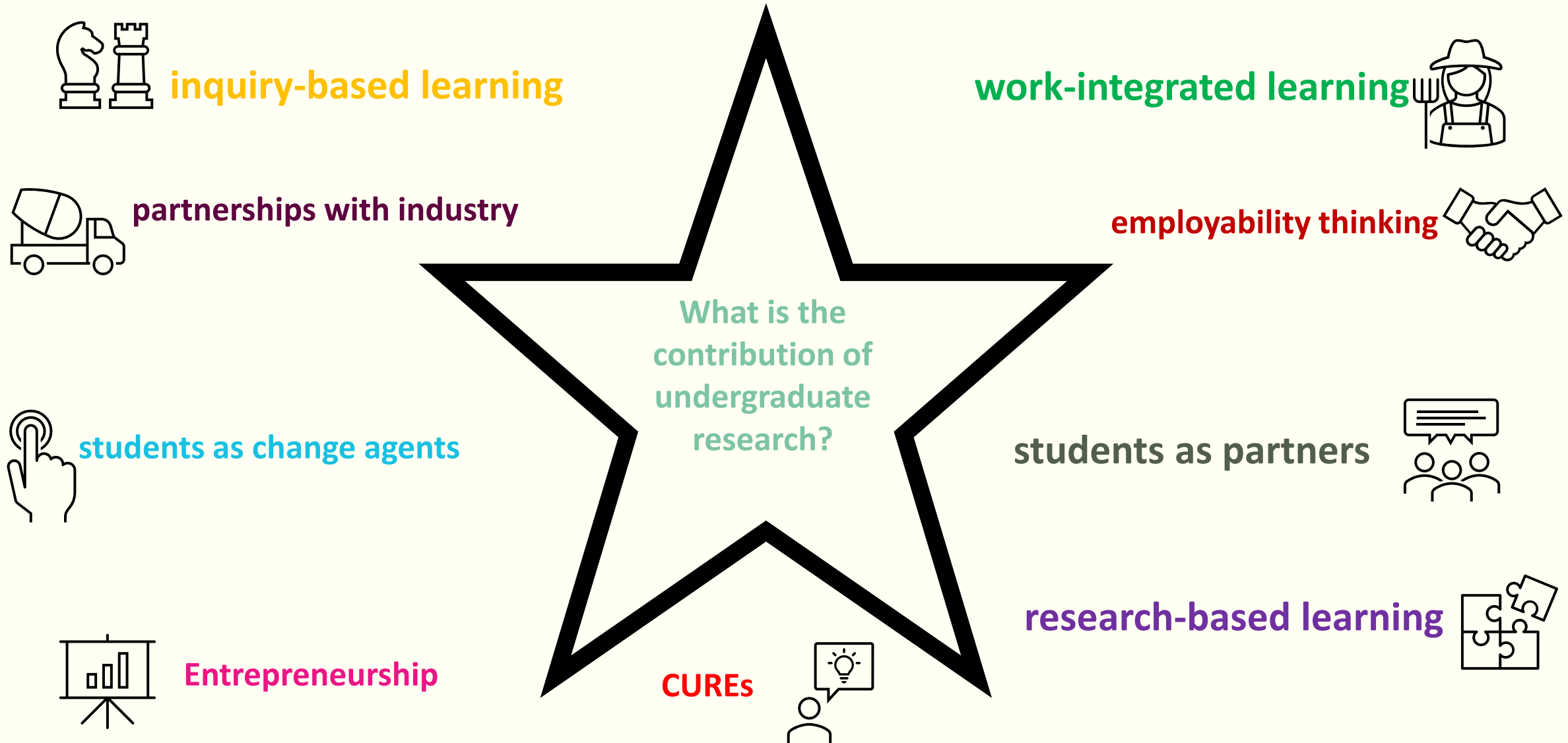


What do we mean by undergraduate research?



“Undergraduate research scholarship and creative inquiry is fundamentally a pedagogical approach to teaching and learning. With an emphasis on process, CUR defines undergraduate research as: A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge.” (Council on Undergraduate Research, 2021)

Key trends

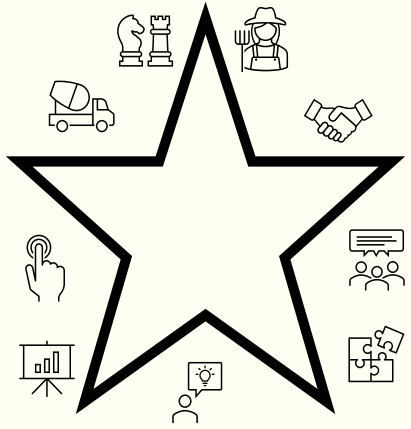


Four main conclusions about the effects of undergraduate research

More than twenty years of research studies transcending nation and culture show:

- that UR is *effective*. i.e develops scientific competence, that is “students' conceptions and practice of scientific thinking”, there is a clear positive effect on academic achievement: grades improve among students with research experience. Also evidence suggests that UR strengthens student retention.
- Secondly, a very clear lesson is that UR requires *mentoring* and some form of scaffolding Students require a learning framework, intentional skill-building, and well-defined learning pathways.
- Studies probing UR distinctions with respect to gender and subject of study have provided ambiguous, but the positive effects for marginalized groups transcend national boundaries. It is clear that UR *supports inclusion and diversity*. It benefits historically underrepresented students, underserved students, and/or minority students.
- Studies in recent years show that research for the purpose of UR must *make sense* for students in order to be effective. Importantly seem to be UR's perceived benefits to career prospects, especially if research or dealing with research results is part of later professional practice.

(from Meig, H., Ambos, B. & Brew, a., (in review). The Cambridge Handbook of Undergraduate Research: New Global Insights. *Scholarship and practice of undergraduate research*.)



So to reiterate...

- ★ **What is the collective contribution of these initiatives?**
- ★ **Are we all working towards the same goals?**
- ★ **How do our different interests overlap and intersect?**
- ★ **How do the various communities of practise exhibited by these initiatives link together?**
- ★ **How can our different approaches be brought together to create a higher education that truly inspires students, engages them in the kinds of transaction spaces that Nowotny and colleagues talk about, and which prepares them for post-pandemic challenges of living and working?**
- ★ **Are there ways of organising student learning to facilitate such engagement**

Program

9:15 am WELCOME

Preparing Undergraduates for Future Life and Careers: Bringing Together Communities of Practice

Emeritus Professor Angela Brew,

9:40 am INTERACTIVE KEYNOTE

What Research Tells Us About How to Prepare Students for Employment

Professor Dawn Bennett, Bond University

10:30 am MORNING TEA

11:00 am KEYNOTE ADDRESS

Industry-University Partnerships and the Student Experience

Professor Chris Moran, Deputy Vice-Chancellor (Research), Curtin University

12:00 pm PANEL DISCUSSION

Perspectives of Past ACUR Presenters on how their Undergraduate Experiences Prepared Them

Led by Dr Dan Johnstone, The University of Newcastle

Olivia Jessop, The University of Queensland

Seak Lin Ly, The University of Newcastle

Chris Kilby, The Cairnmiller Institute

Supreet Saluja, Macquarie University

1:00 pm LUNCH

Program (continued)

1:45 pm KEYNOTE ADDRESS

Exploring the Synergies of Work-Integrated Learning and educating future professionals

Professor Franziska Trede, University of Technology Sydney

EXAMPLE OF PRACTICE

Community-based research and Indigenous students

Jennifer Campbell, Griffith University

2:45 pm AFTERNOON TEA

3:00 pm KEYNOTE ADDRESS

Exploring the Link Between Engaging Students as Partners and Career-Ready Graduates

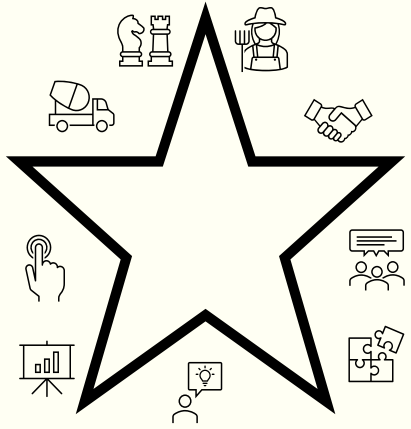
Associate Professor Kelly Matthews, The University of Queensland

EXAMPLE OF PRACTICE

Dr Tai Peseta and student partners (Western Sydney University)

4:30 pm CLOSING DISCUSSIONS

5:00 pm End



So to reiterate...

- ★ What is the collective contribution of these initiatives?
- ★ Are we all working towards the same goals?
- ★ How do our different interests overlap and intersect?
- ★ How do the various communities of practise exhibited by these initiatives link together?
- ★ **How can our different approaches be brought together to create a higher education that truly inspires students, engages them in the kinds of transaction spaces that Nowotny and colleagues talk about, and which prepares them for post-pandemic challenges of living and working?**
- ★ Are there ways of organising student learning to facilitate such engagement