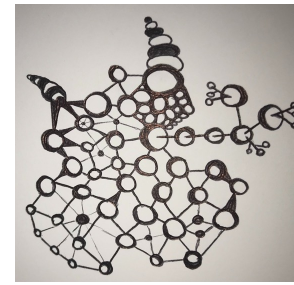# Industry-University Partnerships and the Student Experience

Chris Moran

Curtin University

ACUR Keynote

January 2023
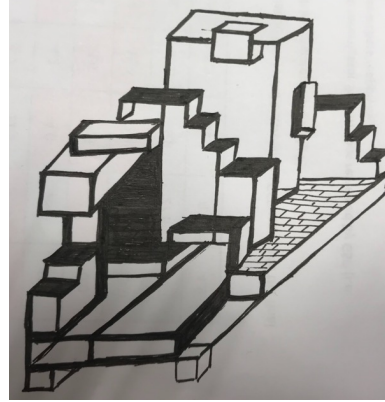
Parnell Dempster, *Down to drink*, c1949, pastel and charcoal on paper, 58.6 x 76.4cm

Outline

▶ *A characterisation of university industry arrangements*

▶ *Student opportunities in arrangements*

▶ *(something else's view)*

▶ *The significance of relationships in excellent student experiences*

▶ *How do we get relationship experiences?*

▶ *Discussion*

Curtin University

Building Blocks

A characterisation of university industry arrangements

Curtin University

A characterization of university-industry arrangements (1)

Consulting	**What is it?** A specific task (or set of tasks) in a specified time for a fixed price	**Why do we/they do it?** A solution and/or answer is needed to solve a problem, provide information or meet a deadline.
	Where is the work carried out? Dominantly in the university but specific jobs can be entirely in the company. **Governance**: University generally responsible for all aspects of delivery to a specification.	**What are the IP Payment and Arrangements?** • Payment is by *price.* • IP generally owned by the company

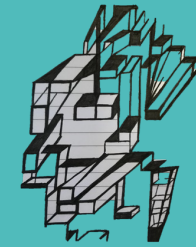|		
Industry funded research projects, e.g., scholarships, industry fellowships	**What is it?** Company is seeking to make a contribution analogous to philanthropy.	**Why do we/they do it?** • The outcomes are driven by the researchers/students. • Companies have community/social expenditure and sometimes foundations from where such funds are drawn. • Shareholder value is delivered through company reputation.
	Where is the work carried out? • Dominantly university environment and facilities. • Company connection can provide access to data, people and facilities in the company/sites**.** • **Governance:** Variable – generally light and supportive. Reporting generally formal.	**What are the IP Payment and Arrangements?** • Costing is variable and often university co-contributes • IP generally owned by the university and/or student

Curtin University

A characterization of university-industry arrangements (2)

Type of Arrangement		
University - Industry projects and initiatives, e.g., ARC Linkage, direct funding	**What is it?** • Company wants a university research approach to a specific problem, opportunity or area of concern. OR • University wants to try an idea/implementation and company is willing to partner.	**Why do we/they do it?** The topic is beyond immediate problem solving (consulting), i.e., more complex/difficult and/or the company wants to work with a particular individual or team and access their skills.
	Where is the work carried out? • Dominantly in the university but specific jobs can be entirely in the company. • Access to company resources common. • **Governance**: Joint oversighting/committee common	**What are the IP Payment and Arrangements?** • Costing is variable often involves university financial contribution (minimum input would be in-kind) • IP generally shared - commercialization arrangements variable (from fixed to company to owned by university)

Curtin University

A characterization of university-industry arrangements (3)

Type of Arrangement		
University-Industry multi-party collaborations, e.g., Cooperative Research Centres, Centres of Excellence, UJV's	**What is it?** • Various forms of initiatives that combine university and industry perspectives and creates teams to tackle problems and opportunities. • Balance of input from industry and university on content/challenge and approach (healthy creative tensions abound)	**Why do we/they do it?** • Critical mass research groups and combined resources allow industry to approach larger "halfway to the horizon" challenges. • Universities get to participate in large collaborations and build networks allowing them to impact wider scope or larger issues and questions.
	Where is the work carried out? • Often done as part of a joint venture. Dominantly carried out in university environment. • Company connection can provide access to data, people and facilities in the company/sites. • **Governance:** Formal governance is the norm. Partnership Agreements common (and desirable).	**What are the IP Payment and Arrangements?** • Costing is variable and most often university co-contributes (in-kind contributions frequent) • Often pre-competitive so results can be shared between companies that fund the work. • IP dominantly shared between *multiple* parties (commercialization thus challenging). • Offshoot fully-costed university-industry projects can be very beneficial. Offshoot fully-costed university-industry projects can be very beneficial.

A characterization of university-industry arrangements (4)

Industry-University Projects and Initiatives, e.g., CRC-Projects, Trailblazer	**What is it?** Industry-driven focused on a specific business challenge or potential breakthrough opportunity. Company knows how it fits to the business. "Translation" minimal.	**Why do we/they do it?** Focus on a specific problem or "horizon" challenge where IP control is important to the companies providing funding.
	Where is the work carried out? • Dominantly industry environment (but can be mixed). • Formal project management frequent. • **Governance**: Formal and preferably part of an overarching agreement/partnership	**What are the IP Payment and Arrangements?** • Company to pay full cost of direct uptake work. • Costing in a partnership can be variable and sometimes involves university financial contribution but in the strategic (parallel) research areas. • IP generally with company for direct implementation. University may have n ongoing financial return if well negotiated contract (difficult to achieve). • IP can be shared - commercialization arrangements variable (from fixed to company to owned by university)

Curtin University

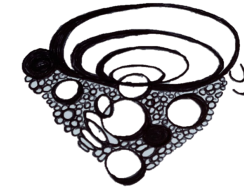# What *specific* opportunities do these arrangements create for students?

Type of Arrangement		Student learnings
Consulting	**Accumulating lessons**	• Future work insight, e.g., focus, deadlines • Work is not all about technical/domain capability
Industry funding projects, e.g., scholarships, industry fellowships, internships		• Some companies will back ideas, people and contribute to the greater good
University - Industry projects and initiatives, e.g., ARC Linkage, direct (co?)resourcing		• Direct involvement with technical specialists in a "safe" environment. • Planning, project management, liaison dynamics, collaboration,. • Informal mentoring
University-Industry multi-party collaborations, e.g., Cooperative Research Centres		• Team members, Multi-party governance, explicit planned skills building, network building in "safe" environments. • Formal mentoring
Industry-University Projects and Initiatives, e.g., CRC-Projects, Trailblazer		• Working on real sites, e.g. safety • Company teaming tools and processes • Innovation and spin-off involvement • Distance collaborations

Curtin University

What *general* opportunities do these arrangements create for students?

| Type of Arrangement	A Spectrum of Learning Environments		Cross-cutting student opportunities
Consulting	Greater involvement in the workplace ↓	Observation, assistance, work life is not all technical	• Observing/participating in actual work environments • Network building • Project management • Financial management and budgeting • Collaboration • Teamwork • Course extensions, e.g., entrepreneurship • Occupational Health and Safety requirements • Mentoring • Employment Opportunities – part time, full time, careers
Industry funding projects, e.g., scholarships, industry fellowships		Sponsorship provides company/work environment insights	
University - Industry projects and initiatives, e.g., ARC Linkage, direct (co?)resourcing		Work Integrated Learning Opportunities	
University-Industry multi-party collaborations, e.g., Cooperative Research Centres			
Industry-University Projects and Initiatives, e.g., CRC-Projects, Trailblazer		Learning Integrated Work Opportunities	

Curtin University

The Student Perspective

Unknown Carrolup artist, *The fenced road*, c1949, charcoal and pastel on paper, 18.3 x 24.5cm

A modern summary view
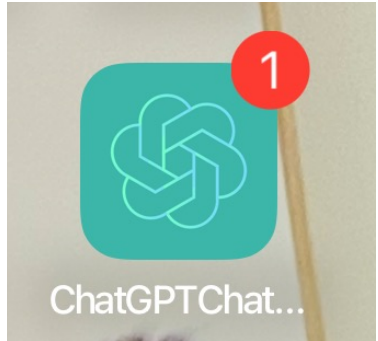
> **How can university undergraduate students benefit from university linkages and partnerships with industry**

> University linkages and partnerships with industry can provide many benefits to undergraduate students. By connecting with industry, university students have access to mentorships and learning opportunities through internships, job shadowing, and other forms of experiential learning. Through industry partnerships, students gain an understanding of the real-world application of the knowledge they learn in their courses. Additionally, some university-industry partnerships offer students scholarships and other forms of financial support. Finally, by connecting with industry, students expand their network and can gain valuable contacts for future job opportunities.

What are the right conditions to access excellent outcomes?

What is the secret sauce of great student experiences and learning?

Unknown Carrolup artist, *The golden road*, pastel and charcoal on paper, 28 x 38.5cm

How do we move from existence of opportunities to great experiences? In one word - **RELATIONSHIPS**
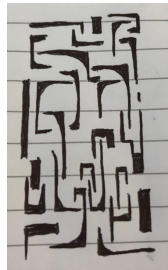
FROM
Quantity of opportunities

TO
Quality of experiences

Transactions

- Task-based interactions
- Student seen as deliverer of their "bit"
- Minimum exposure in company
- Company not welcoming
- Mentoring absent

Partnerships

- Student is team member with university responsible for their experience
- Formal project accountability – student has a defined and acknowledged role
- University leads student involvement and stewards them
- Mentoring absent or *ad hoc*

Relationships

- Company and uni have joint responsibility for the student and individuals are personally accountable for the quality of the student stewardship
- Company offers and finds advantages for the student alongside formal project accountability
- Mentoring in-built
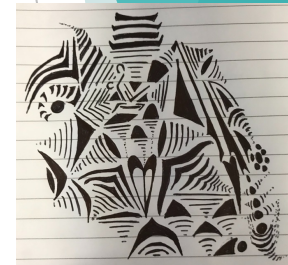
Curtin University

How does the student choose the most likely opportunity to deliver a great experience? Things to look for (1)

1) **The university has a stated relationship with the company and can show evidence of it in practice**

   What does a that look like?
   i.   Principles and values alignment
   ii.   Overarching relationship objectives are stated (beyond tasks and outputs)
   iii. Clear and effective governance
   iv.   Stated intent to deliver excellence in student experiences

How does the student choose the most likely opportunity to deliver a great experience? Things to look for (2)

2) **For student experiences the university-company relationship includes:**

   i.   Statement of intent for students
   ii.   Processes and guidelines for managing student involvement
   iii. Agreed indicators of a good experience
   iv.   Commitment to have people available and skilled to ensure success
   v.   Agreements on resourcing
   vi.   Processes for finding and managing problems that inevitably arise

Curtin University

Discussion

Unknown Carrolup artist, *The take off*, c1949, pastel and charcoal on paper, 28 x 37.9cm

Another heading

Parnell Dempster, *Down to drink*, c1949, pastel and charcoal on paper, 58.6 x 76.4cm