

# Universities As Intermediaries in Knowledge to Innovation Processes

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Sujata Gamage, LIRNEasia

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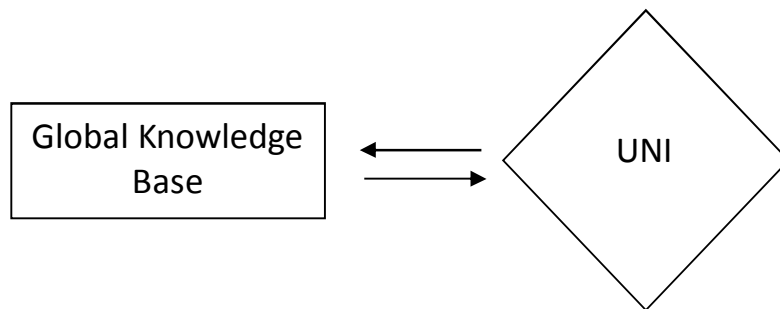
# Universities

## The Ideal v. Reality

# Universities as Intermediaries

## the literature-1

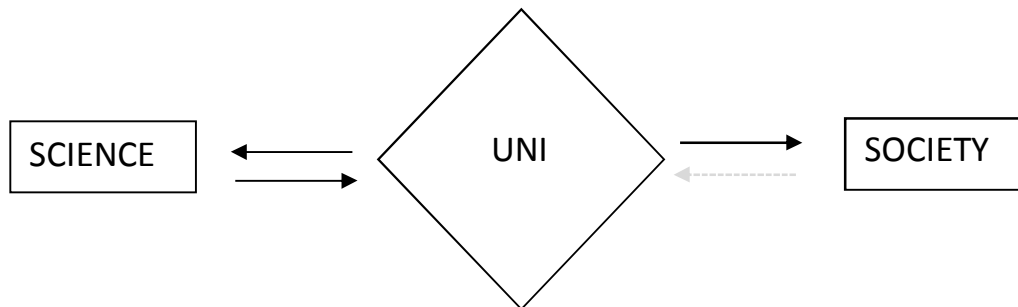
- Universities in developing countries should continue to engage in high quality research in order to stay connected to an expanding global knowledge base (or mode-1),  
Lord Robert May, IDRC, Ottawa, [September 2004]



# Universities as Intermediaries

## the literature-2

- often there is a presumption that communication flows from science to society- without scant attention paid to describing the transformative effects of any reverse communication  
Novotny, Scott & Gibbons (2001). Rethinking Science.

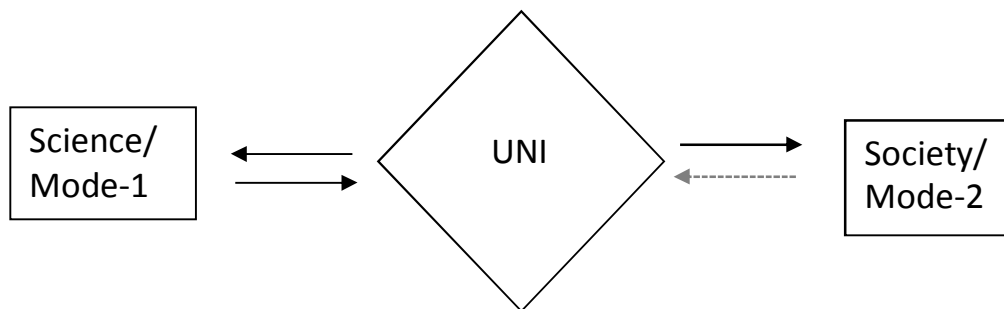


# Universities as Intermediaries

## the literature-3

- Mode -2 knowledge or knowledge produced in application is becoming more reflexive and affects at the deepest level what shall count as 'good science'.

Gibbons (1994). The New Production of knowledge

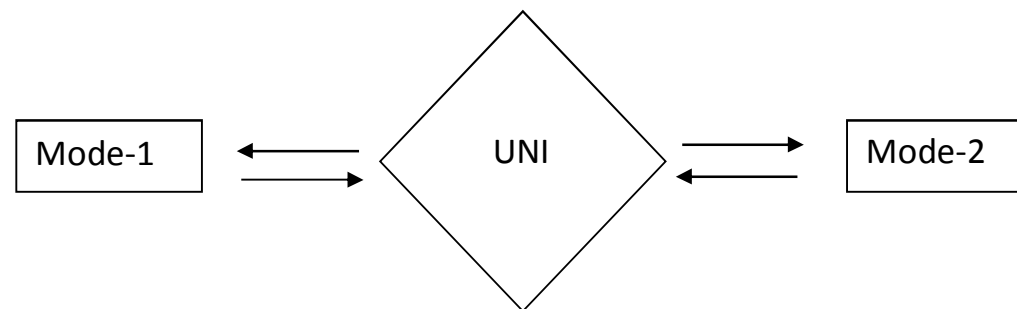


# Universities as Intermediaries

## the literature-4

- The great significance of the institution of the university today is that it can be the most important site of interconnectivity.....opening up avenues of between different kinds of knowledge, in particular between **knowledge as science and knowledge as culture**

(Gerald Delanty (2000). Challenging Knowledge: The University in the Knowledge Society. Open University Press, UK)



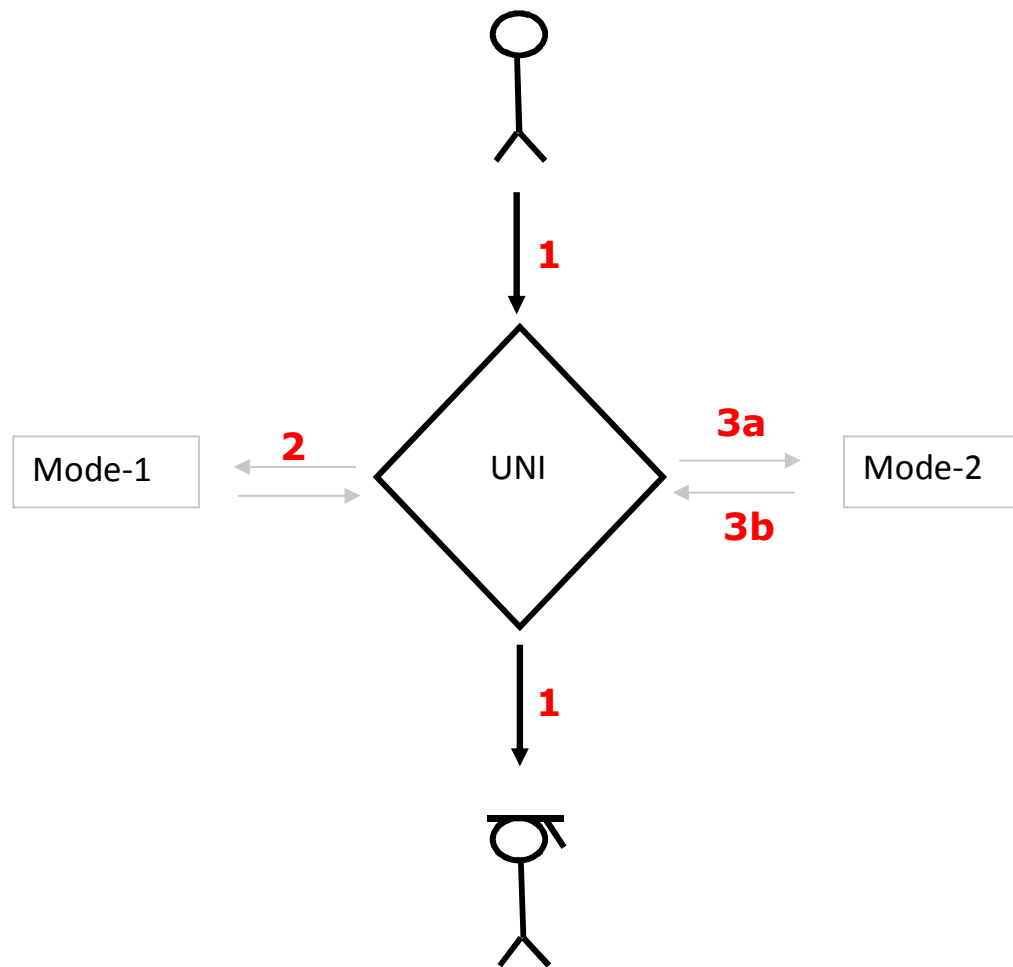


# Universities

## The All Important Third Dimension

# Universities as Intermediaries

Credentialing is the most important activity





# Universities as Intermediaries

## Three types of linkages

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- 1      Credentialing                              (Teaching)
- 2      Connectedness to Mode-1      (Research)
- 3      Connectedness to Mode-2      (Extension/Service)

# Universities as Intermediaries

Process Measures (unit of analysis–university, faculty, dept or employee)

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- 1 Days per year spent on Research
- 2 Days per year spent on Extension/Service
- 3 Days per year spent on teaching, mentoring or related administration

# Universities as Intermediaries

Output Measures (unit of analysis –university, faculty or dept)

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- 1 Number and quality of graduates
- 2 Publication/citation data
- 3 Satisfaction of stakeholders in Industry/Gov/CSOs

# Universities as Intermediaries

Extent of Activities, some guesstimates

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- 1 Teaching (Credentialing) (89%)
- 2 Research (Connectedness to mode-1) (10%)
- 3 Extension (Connectedness to mode-2) (1%)



**This workshop**  
Connectedness to Mode-2

# Connectedness to Mode-2

DIRECT through New Products, Processes

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- ❑ BEETLE CONTROL method for coconut plantations  
(Neelakanthi Gunawardena, U of Kelaniya)
- ❑ MICRO-CREDIT system for the poor  
(Yunus, Chittagong University)
- ❑ TISSUE CULTURE METHOD for poor farmers
- ❑ NVQ National vocational Qualifications for local government  
(LIRNEasia Research)

Scope: National Innovation surveys in over 20 countries give a demand side view

# Connectedness to Mode-2

INDIRECT through Policy Interventions and People

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- BEETLE CONTROL -
- MICRO CREDIT -
- TISSUE CULTURE Policy, People
- ACCESS TO ICTs Policy, People
- NVQ for LGAs Policy, People

# Barriers to Connectedness

(1) Capacity (2) Attitudes (3) Academic calendar (52 wks.)

	<b>NUS</b>	<b>SL Uni</b>
Lectures	54%	56%
Orientation	2%	0%
StudyLeave/Exams	12%	27%
Recess/Vacation	33%	17%
<b>TOTAL , Weeks</b>	<b>52</b>	<b>52</b>

NUS: National University of Singapore; in SL Uni Study leave and vacations are typically spread over three semesters



# Barriers Linking with mode-2:

(1) Capacity (2) Attitudes (3) Academic calendar (proposed)

Semester	Activity	Duration, Weeks
1, Start Aug 15	Orientation	1
	Instruction	7
	Recess	1
	Instruction	7
	Study Leave	1
	Examination	2
	Vacation	2
2, Start Jan 10	Instruction	7
	Recess	1
	Instruction	5
	New Year Recess	2
	Instruction	2
	Study Leave	1
	Examination	2
3, Start June 01	Research/Internships	11
ALL		52

# Concluding Remarks for UNIID workshop

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## ❑ TEACHING:

University faculty in a given university system may spend 75%-100% of their time in teaching/administration

## ❑ RESEARCH:

Good research is a pre-requisite for good extension

(or connectedness to science/Mode-1 is a prerequisite for connectedness to society/Mode-2)

## ❑ EXTENSION:

University faculty are more likely succeed in Extension using policy or people than products or processes



**Thank you**