



Interdisciplinarity

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Interdisciplinarity

- ⊕ What it is?
- ⊕ Why consider it?
- ⊕ How does it relate to Capitals of Culture and higher education?



Interdisciplinarity: what is it?

Confusing terminology:

- Transdisciplinary, interdisciplinary and multidisciplinary are all used

They all:

- describe the organisation of knowledge geared to the solution of practical problems
- seek to overcome disciplinary boundaries
- draw on different fields of expertise



Interdisciplinarity: what it is NOT?

Confusing terminology:

- **Multidisciplinary** research occurs when several disciplines work in parallel
 - ▣ Normally with independent goals
 - ▣ With minimal communication
- **Transdisciplinary** activity is integrated where functions and expertise overlaps
 - ▣ Implies the act of crossing disciplinary boundaries
 - ▣ Explain one subject in the terms of another



Interdisciplinarity: what is it?

- **Interdisciplinary** research - two or more disciplines collaborate in the research process
- goal of fostering inter-professional interactions
- to enhance the practice of each discipline.
- normally incorporates collaboration through joint planning, decision-making, and goal-setting.
- It implies working together closely
- Communicating frequently
- optimise activity around solving a common set of problems
- Example: medical field - train to meet a common goal, the health and welfare of the patient



Interdisciplinarity: what is it?

- "*interdisciplinary studies* may be defined as a process of answering a question, solving a problem, or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession." (Klein and Newell, 1998)
- Disagree



Interdisciplinarity: what is it?

Stember (1998) comments

- Interdisciplinary analysis requires **integration of knowledge** from the disciplines being brought to bear on an issue.
- Disciplinary knowledge, concepts, tools, and rules of investigation are considered, contrasted, and combined in such a way that the **resulting understanding is greater** than simply the sum of its disciplinary parts.
- Interdisciplinary study may be “messy”, not neat solutions
- Contradictions and tensions between disciplines can provide a fuller understanding,
- Analysis of these leads to synthesis—the creation of new knowledge



Interdisciplinarity

- Disciplines collaborate in an **integrated** way in the research (and learning) process
- **Integration of knowledge** from the disciplines being brought to bear on an issue
- Disciplinary knowledge, concepts, tools, and rules of investigation are considered, contrasted, and **INTEGRATED** in such a way that the **resulting understanding is greater** than simply the sum of its disciplinary parts.



Interdisciplinarity

- Broader picture of the issue – synoptic
- Specialists help answer the questions
- Need to ensure generalists and specialists can participate
- Is interdisciplinarity a postgraduate function?
Role of new Masters and PhD programmes.
- What structures work?
- Passive and active interdisciplinarity



Interdisciplinarity: what is it?

- real interdisciplinary thinking means the use of each discipline as a valid source of knowledge in its own right and a valuable contribution to the discussion at hand
- Interdisciplinary approaches typically focus on problems felt by the investigators to be **too complex or wide-ranging** to be dealt with using the knowledge and methodology of a single discipline



Interdisciplinarity: definition

- ⊕ What it is?
- ⊕ **Why consider it?**
- ⊕ How does it relate to Capitals of Culture and higher education?



Interdisciplinarity: why consider it?

- **discipline-based model** dominant in most universities
- controls resources for teaching, research, and other activities

Bologna changes in education and training imply:

- a redesign of educational management
- reform of learning (student-centred)
- some authors (Barnett, 2003; Dawson, 2003) consider a **lifelong learning** perspective is essential
- the learner is engaged in the lifelong process of trying to live in the world fully and engage with its paradoxes and contradictions



Interdisciplinarity: why consider it?

Under Bologna:

- **new courses** that provide relevant skills and approaches for **employability** within European society
- the Council of Ministers (2000) stated that Europe needs academic approaches which are increasingly interdisciplinary
- European Student Association (ESIB, 2004) suggest Europe needs academic approaches which are increasingly interdisciplinary
- students need a **conceptual tools** to understand the modern world, while contributing to the social and economic development of member states and the establishment of democratic citizenship.
- higher education has so far paid **little attention** to this and to this point paid it has struggled to come to grips with these needs

Council of Ministers (2000), Recommendation Rec(2000)24 of the Committee of Ministers to member states on the Development of European Studies for Democratic Citizenship, Committee of Ministers, adopted on 20 December 2000, Council of Europe, Strasbourg

ESIB (2003), Bologna and interdisciplinarity, National Union of Students in Europe <http://www.esib.org>



Interdisciplinarity: why consider it?

- **Market-orientation** directs universities towards practical, entrepreneurial objectives that will increasingly engage them in an interdisciplinary world
- Murray (2004) suggests that universities need to remove barriers to and create mechanisms for much more interdisciplinary undergraduate and postgraduate education.
- Many courses remain within traditional boundaries
- Academics seek to protect their own space to exclude others.
- New demands on education has resulted in activities that merge or combine fields, thus pushing the limits of academic activities into new territories.
- Working in a genuinely interdisciplinary way is considered to be extremely challenging and thus worthy of significant interest (Barnett, 2003).

Barnett, R. (2003) *Beyond all Reason: living with ideology in the university*, SRHE/Open University Press

Murray B (2004), Weaving an interdisciplinary education, Enquiry-based courses

<http://www.ous.pdx.edu/main.htm>



Interdisciplinarity: why do it? (Nisani, 2006)

Creative Breakthroughs:

- involves linkage of previously unrelated ideas

Cross-disciplinary Oversights:

- Errors or omissions can be best detected by people familiar with two or more disciplines

Intellectual, Social, and Practical Problems:

- Many problems require holistic approaches.

Unity of Knowledge:

- Impossible to become an expert in everything. But we should not forget how much we don't know or cannot know.
- interdisciplinarity can help us see the various components of human knowledge for what they are: pieces in a panoramic jigsaw puzzle