

Investigating Interdisciplinary Engineering Education

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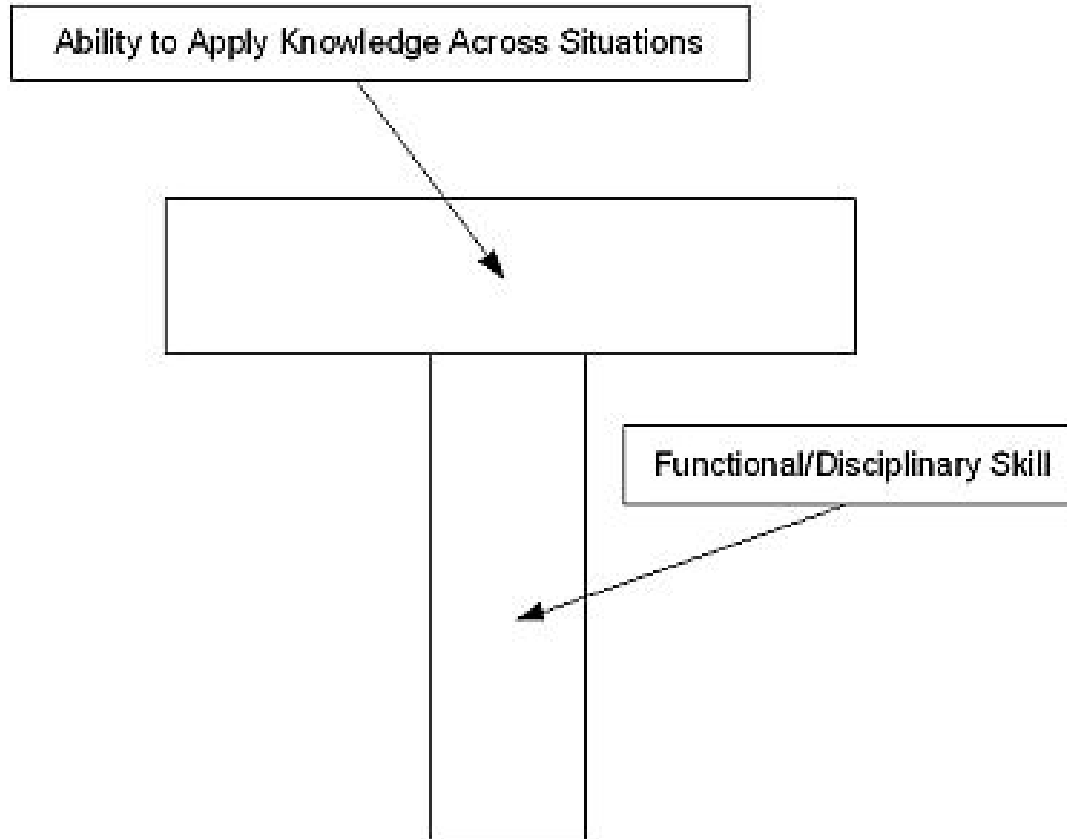
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- Feedback

Context and Practice

- Engineers of the future
- T-shape approach
- University culture

Context and Practice

T-shape approach

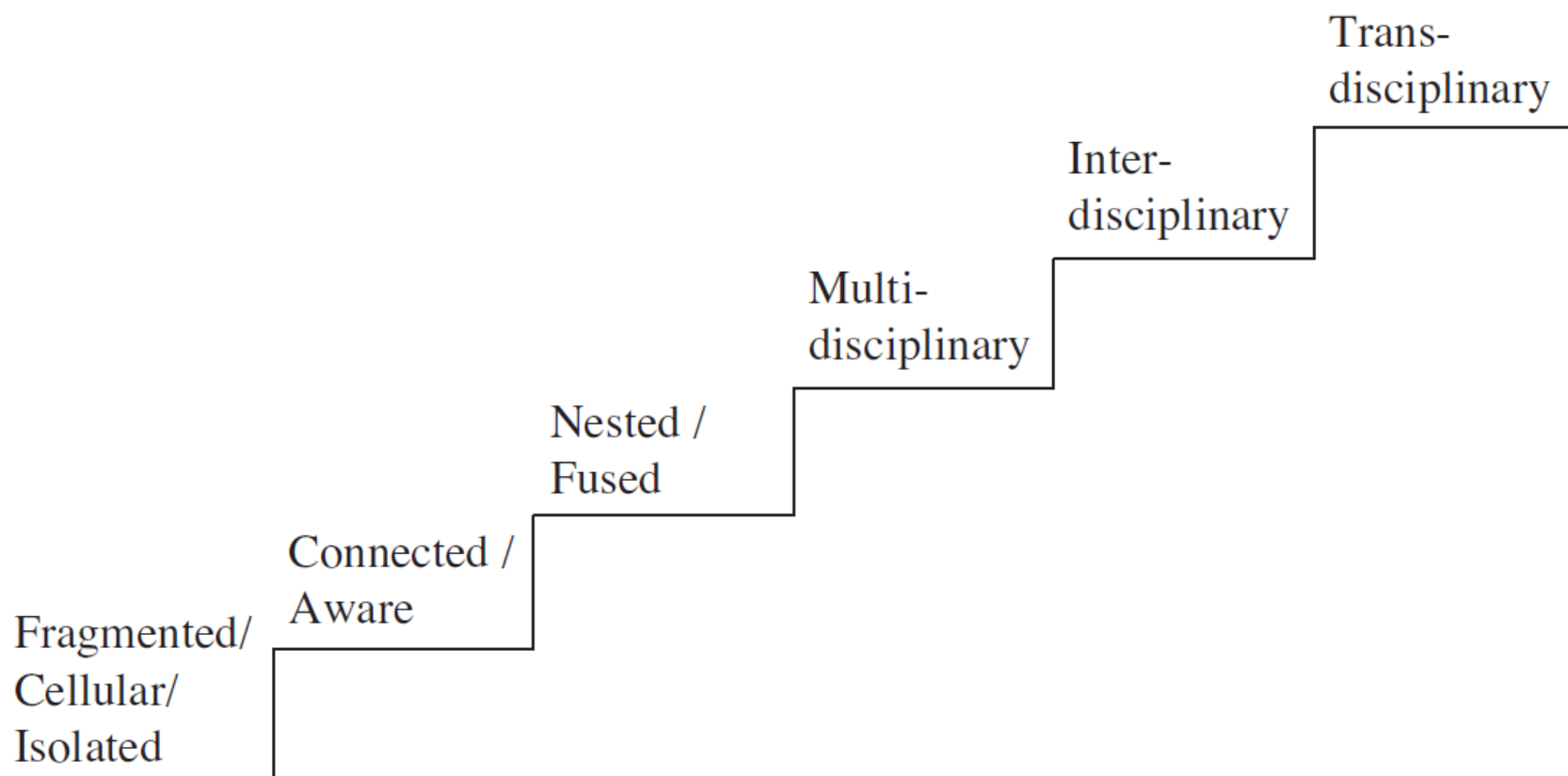


Context and Practice

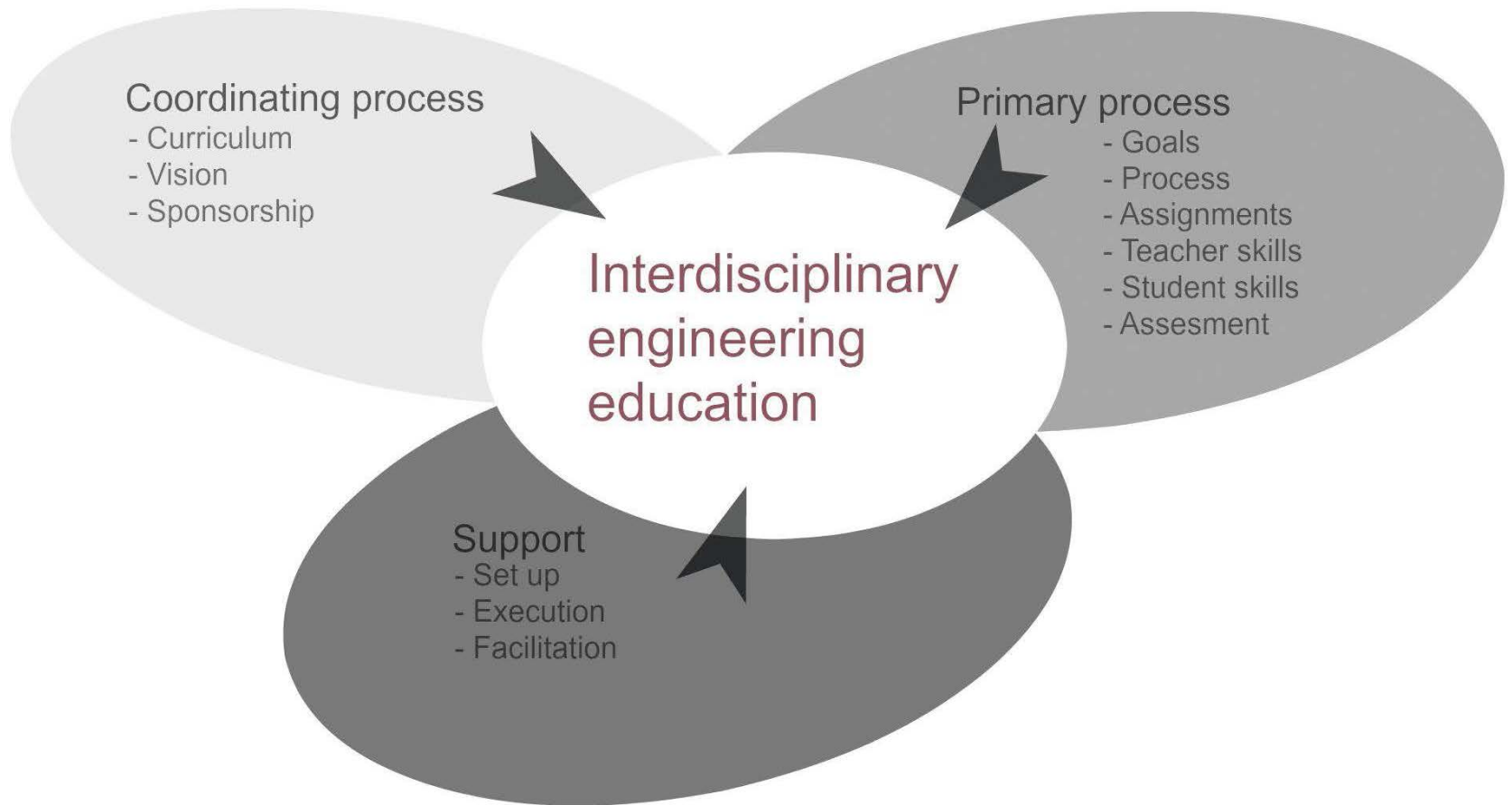
- 3TU project
- Literature review
- Case studies



Definitions



Framework



First results

- Differentiation: multi-disciplinary
- Collaboration: intra-disciplinary vs heterogeneous groups
- Student skills: system thinking, collaboration, organization, analytic skills, communication
- Assessment: little evaluation of interdisc. skills, reflection, personal development

First results

- Practical implications:
 - organization difficult,
 - traditional programme vs new paradigm,
 - joint language,
 - level of expertise within teams

Group discussion

- Discuss issues of IEE based on your own experience/situation
- Formulate challenges and success factors
- The framework as reference point

First results

- Success factors:
 - role based learning,
 - development of generic attributes,
 - contextual understanding of concepts and problems,
 - system approach,
 - teacher collaboration on course building

First results

- Challenges:
 - ambiguity among students and teachers,
 - mono-disciplinary nature of academia,
 - learning objectives in relation to problem/assignment,
 - consensus about boundaries of disciplinary content,
 - heterogeneity of groups,
 - teacher support for students

Thank you!

3TU. CENTRE FOR

ENGINEERING EDUCATION

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