

# CALOHEE: Context and Concept

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Educational Testing Service

with contributions by

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# Agenda

- European Union and the policy context
- CALOHEE and Tuning
- Assessment challenges

# European Union Support for Higher Education



Evidence for policy and practice



Cooperation between policy makers



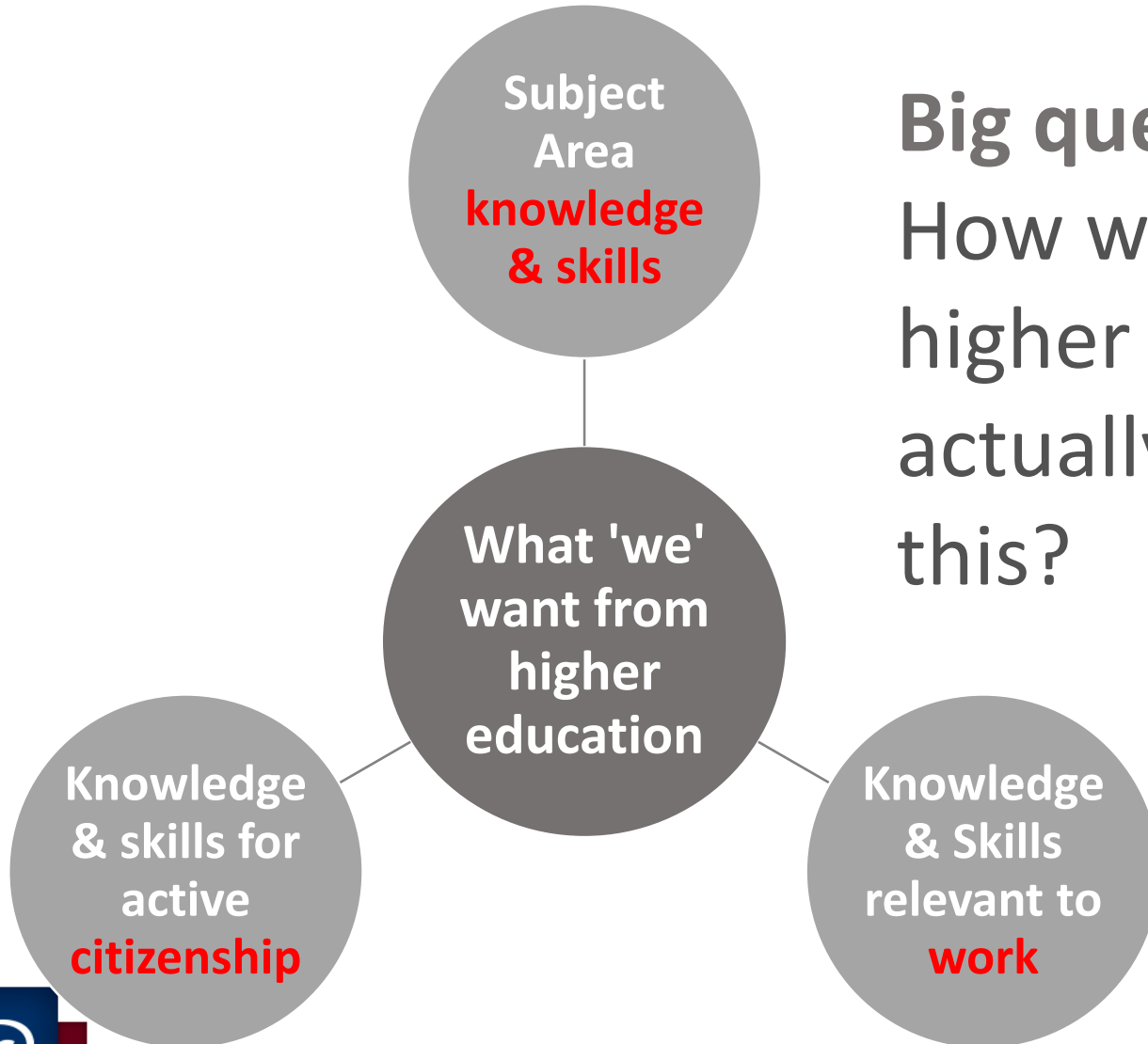
Cooperation between practitioners  
(HEIs, business, NGOs...)



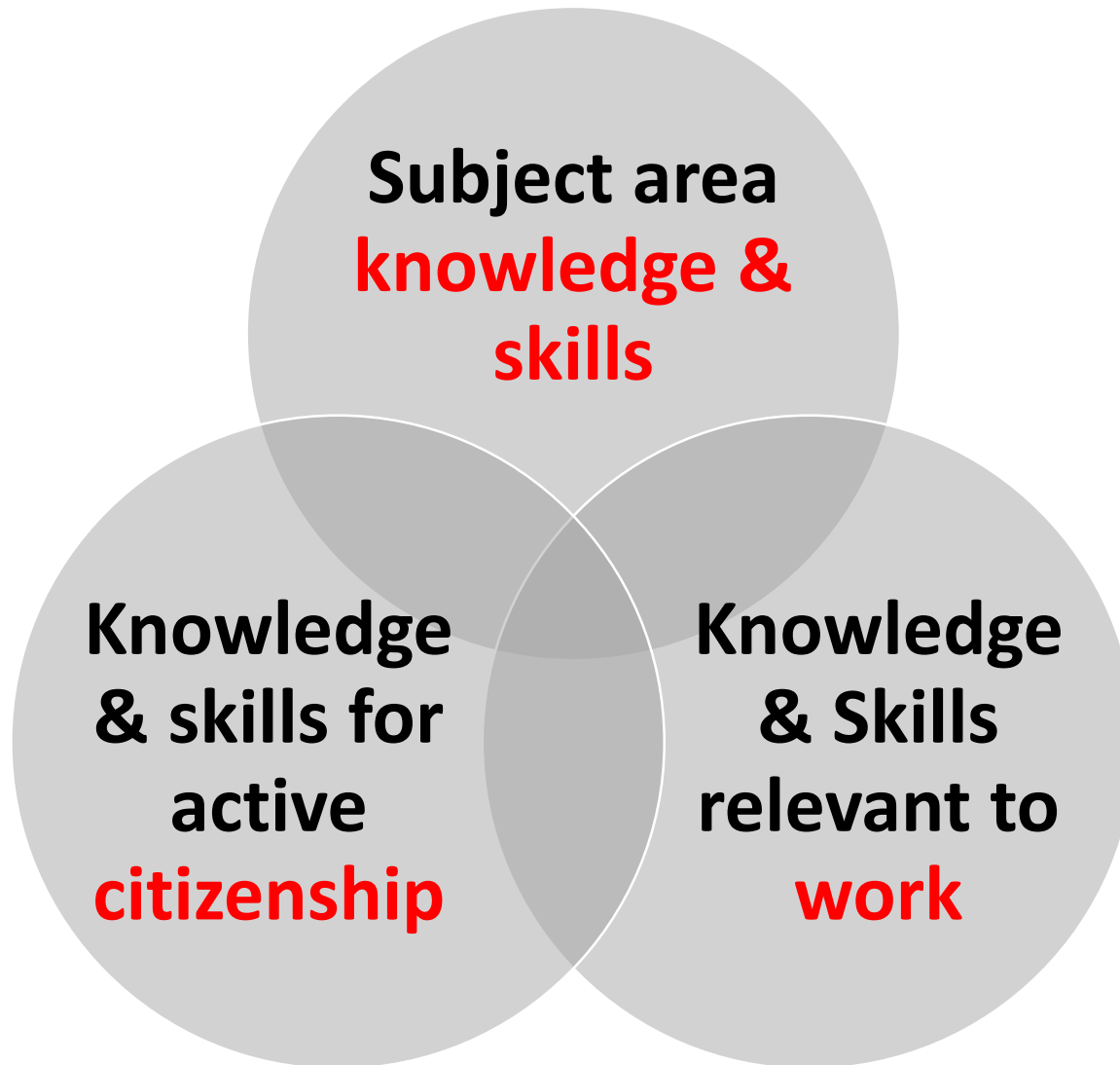
Individual mobility (students, staff...)

# Promoting “quality” and “relevance”

**Big question:**  
How well does  
higher education  
actually deliver  
this?



# Inter-related sets of competences



# Towards answers?

Graduate tracking

- Better **feedback loops** on what happens to past students (career progression, skills needs and skills use)

Measurement of learning outcomes

- Better measurement of **what students know and can do** when they leave higher education

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**CALOHEE?**

# What is CALOHEE

- Measuring and Comparing Achievements of Learning Outcomes in Higher Education in Europe
- Funding from the European Union
- Sponsored and organized by the Tuning Academy
  - Universities of Deusto, Bilbao (Spain) and Groningen (The Netherlands)
- Tuning was launched in 2000 as an academic response to the Bologna Process
- The goal of Tuning is engage in a process that will make programs of studies comparable, compatible and transparent.



# CALOHEE Project aims

- Develop transnational conceptual frameworks and assessment frameworks for five academic domains and five related disciplines
  - Civil Engineering
  - Nursing
  - History
  - Education
  - Physics
- Develop work plans for creation and implementation of assessments.
- Develop white papers explaining costs/benefits of various designs for transnational comparative assessment.
- Develop multi-dimensional instruments to measure and compare levels of learning doing justice to the different missions and profiles of HE institutions

# CALOHEE Partnership

- 75 universities from 15 countries each
- European Student Union (ESU) / BEST
- European Association of Institutions in Higher Education (EURASHE)
- European Consortium for Accreditation in Higher Education (ECA)
- European Network for Accreditation of Engineering Education (ENAE)
- University networks
  - Coimbra, Santander, UNICA, Utrecht, Compostela
- Other members in the advisory board: European University Association (EUA), the European Association for Quality Assurance in Higher Education (ENQA), European Association for International Education (EAIE), U-Multirank, Academic Cooperation Association (ACA), ENIC-NARIC
- The project is run by a Management Board and a Coordinating Team with technical support ETS

# Civil Engineering

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  - University of Sheffield (United Kingdom)
  - University Polytechnica Bucharest (Romania)
  - University of Salerno (Italy)
  - Ecole des Ponts Paris Tech (France)
  - Aalto University School of Engineering (Finland)
  - University of Minho (Portugal)
  - University of Architecture, Civil Engineering and Geodesy (Bulgaria)
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  - University of Szeged (Hungary)
  - Utrecht University (Netherlands)
  - Cukurova University (Turkey)
  - Dublin City University (Ireland)
  - Humboldt University Berlin (Germany)
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  - Ghent University (Belgium)
  - University of Potsdam (Germany)
  - University of Patras (Greece)
  - Higher Institute of Technology, Sligo (Ireland)
  - Utrecht University (Netherlands)
  - University of Helsinki (Finland)
  - Coimbra University (Portugal)
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  - NUI Galway (Ireland)
  - University of Bialystok (Poland)
  - Universidad Autonoma de Madrid (Spain)
  - Aristotle University of Thessaloniki (Greece)
  - University of Oulu (Finland)
  - University of Bologna (Italy)
  - Universität Salzburg (Austria)
  - Karadeniz Technical University (Turkey)
  - Babes-Bolyai University (Romania)
  - Queen's University Belfast (United Kingdom)
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  - University of Ljubljana (Slovenia)
  - Lithuanian University of Health Sciences (Lithuania)
  - Artesis Plantijn Hogeschool Antwerpen (Belgium)
  - King's College London (United Kingdom)
  - University College Dublin (Ireland)
  - Hanze University of Applied Sciences (Netherlands)
  - Universitat de Barcelona (Spain)
  - University of Malta (Malta)
  - University of Southern Denmark (Denmark)

# CALOHEE Design

Regional Approach:  
EUROPE

Foundation: Sectoral  
and Subject Area  
Frameworks

Integrated approach: subject  
specific + generic

Multi-dimensional approach:  
missions and profiles

Assessments at final  
stage BA



# Goal is Comparable Assessments

- To obtain / provide reliable information about achievements of learning in (transnational) comparative perspective at
  - Individual level
  - Programme level
  - Institutional level
  - National level
  - International level
- to allow for degree program enhancement focusing on the domain of knowledge taking into account preparation for employment and social and civic engagement.
- Offering main stakeholders reliable information for making informed choices.

# So What Would a Well-Engineered Assessment Program Look Like?

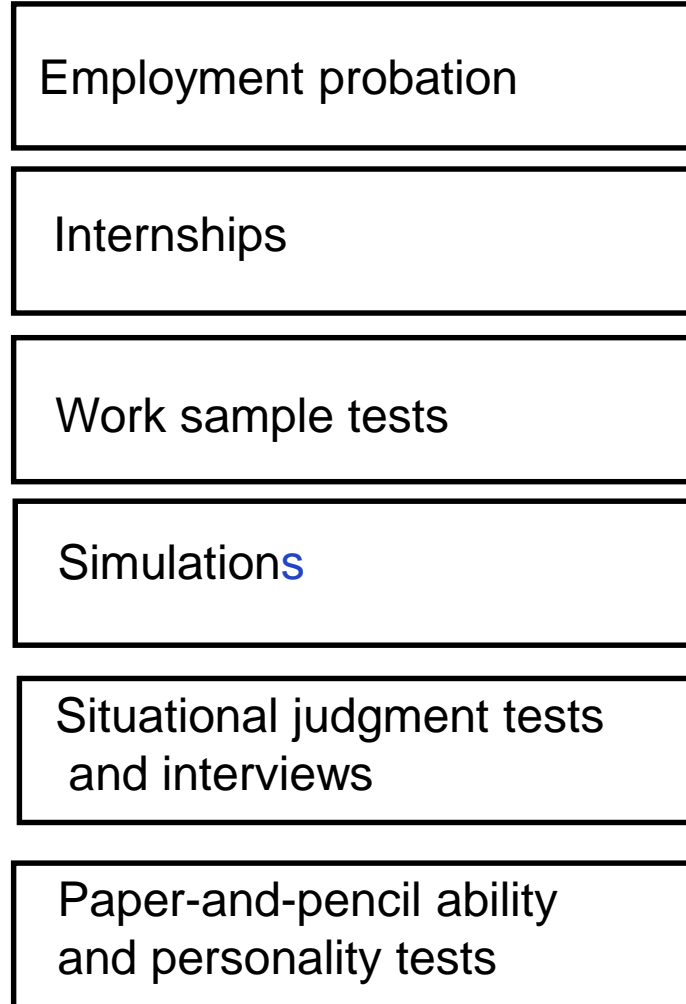
- Designed by faculty stakeholders
- Measure those learning outcomes that faculty think are most important
- Be smart about the mix choice (cheap) and constructed response (expensive) tasks
- Appear to students as measuring important skills in the real world
- Provide information of use to both institutional and individual stakeholders

# Assessment Design Is a Problem of Design Within Constraints

- Time
  - Testing time
  - Development time
- Innovation
- Technical quality
  - Validity
  - Reliability
- Content Knowledge
- Higher order skills
- Score use
  - Group?
  - Individual?
- Subscores
- Scoring
  - AI
  - Rater training
- **Authenticity**
- **Motivation**
- **Money**

# Authenticity

Thornton III & Kedharnath (2013)  
High fidelity (samples of behavior)



Low fidelity (signs of behavior)

# Motivation

- Motivation in low stakes tests is a challenge
  - Low motivation likely reduces validity of the interpretation of the assessment.
- Motivation increases to the extent that there are stakes for the test taker.
- Increased stakes, however, imposes increased obligations for technical quality.
  - Which typically translate into increased costs.

# Money

- In practical terms, money is usually the ultimate constraint.
- The normal process:
  - We try to imagine what we want, and then we compromise and try to get to what we can afford.
  - or
  - We know how much we have and maximize within that budget.
- It is impossible to know what a test will cost until we know what it is supposed to be a test of and what its purpose is.
- It may be wise to constrain design to within a reasonable budget.
  - If we know the budget it is limited it may be wise not too spend time thinking through test designs that involve the most expensive task types.

# Final Thoughts

- The choice of item types, formats, delivery mode, and other assessment implementation factors should be primarily driven by the assessment purposes and the claims to be made about test takers.
- The design could vary substantially across the five broad disciplines identified by CALOHEE given the unique nature of each discipline.

# Thank You! Questions?



## Contact

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