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Instrumente Structurale
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AGENTIA ROMANA
DE ASIGURARE A
CALITATII IN
INVATAMANTUL SUPERIOR

CURRICULA DESIGN BETWEEN PERSUASION AND TRAINING, AWARENESS AND COMPETENCE

Cătălin Daniel Gălățanu

Curriculum Change Cycles in Romania

The main conceptual shifts [1] :

- ☐ Switching from knowledge-based to knowledge, skills, and attitudes-based curriculum
- ☐ Encouraging essential higher order learning (i.e. intellectual abilities, values, and skills)
- ☐ Integration of subjects
- ☐ Stress on co-operative learning
- ☐ The impact of new technologies
- ☐ Links with non-formal education
- ☐ Focus on student's outcomes and performance assessment

Qualifications frameworks / three-cycle system

The classical definition (USA, Australia): An engineer can be described as a problem solver and designer.

Qualifications frameworks / three-cycle system

Competence = EXPERIENCE

Qualifications frameworks / three-cycle system

The Bologna objectives: the employability, looking to the engineer in a different manner.

The main difference consist in the complexity of the real jobs:

- a) Simple, repetitive, complete defined, assisted by senior engineers
- b) Complex, continuous variable, incomplete defined, working independent
- c) Creative, innovative, research orientated

ACPART - The National Agency for the Qualifications in the Field of Superior Education and Partnership with the Financial and Social Environment

The development of the Frame for Qualification in the Field of Superior Education (CNCIS)

National Register of Qualifications in the field of Superior Education

The procedure of university qualification validation (ACPART, annex 5, sheet 7: The Qualification Referential):

besides “the qualification curriculum and the inter-disciplinary sheet, **the methodology of evaluation of competences** (*and knowledge*) are also imperative to be specified at the end of the studies”.



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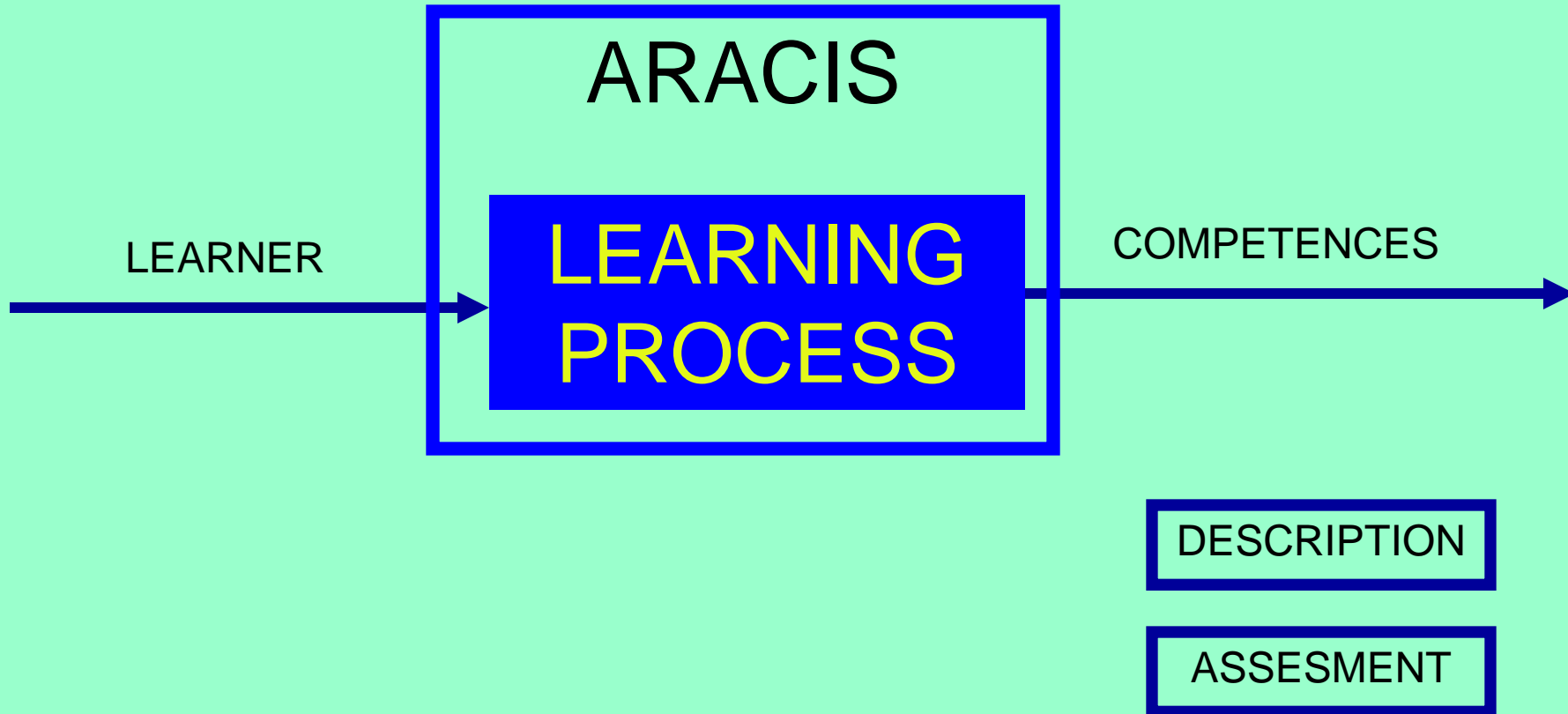


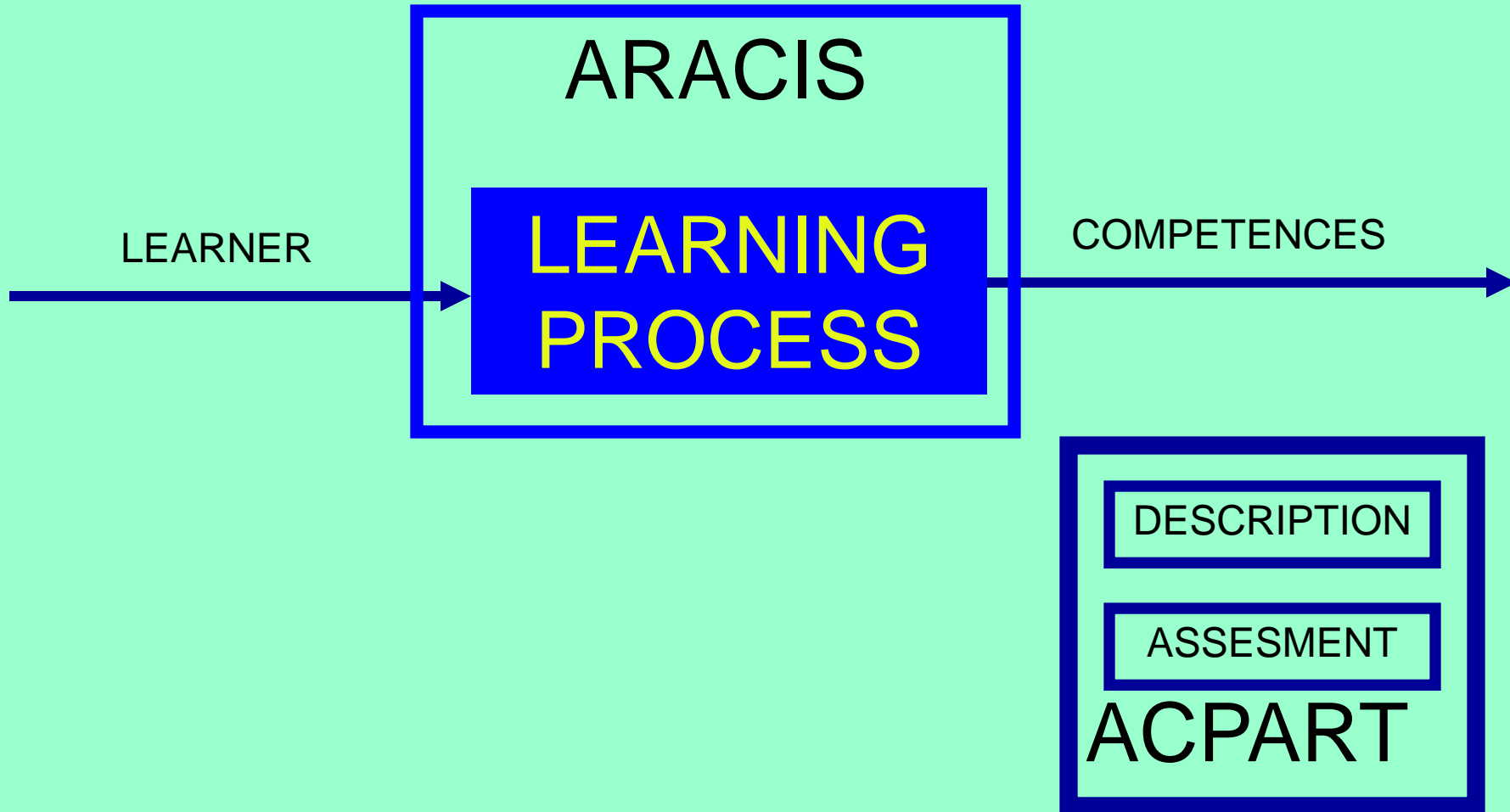
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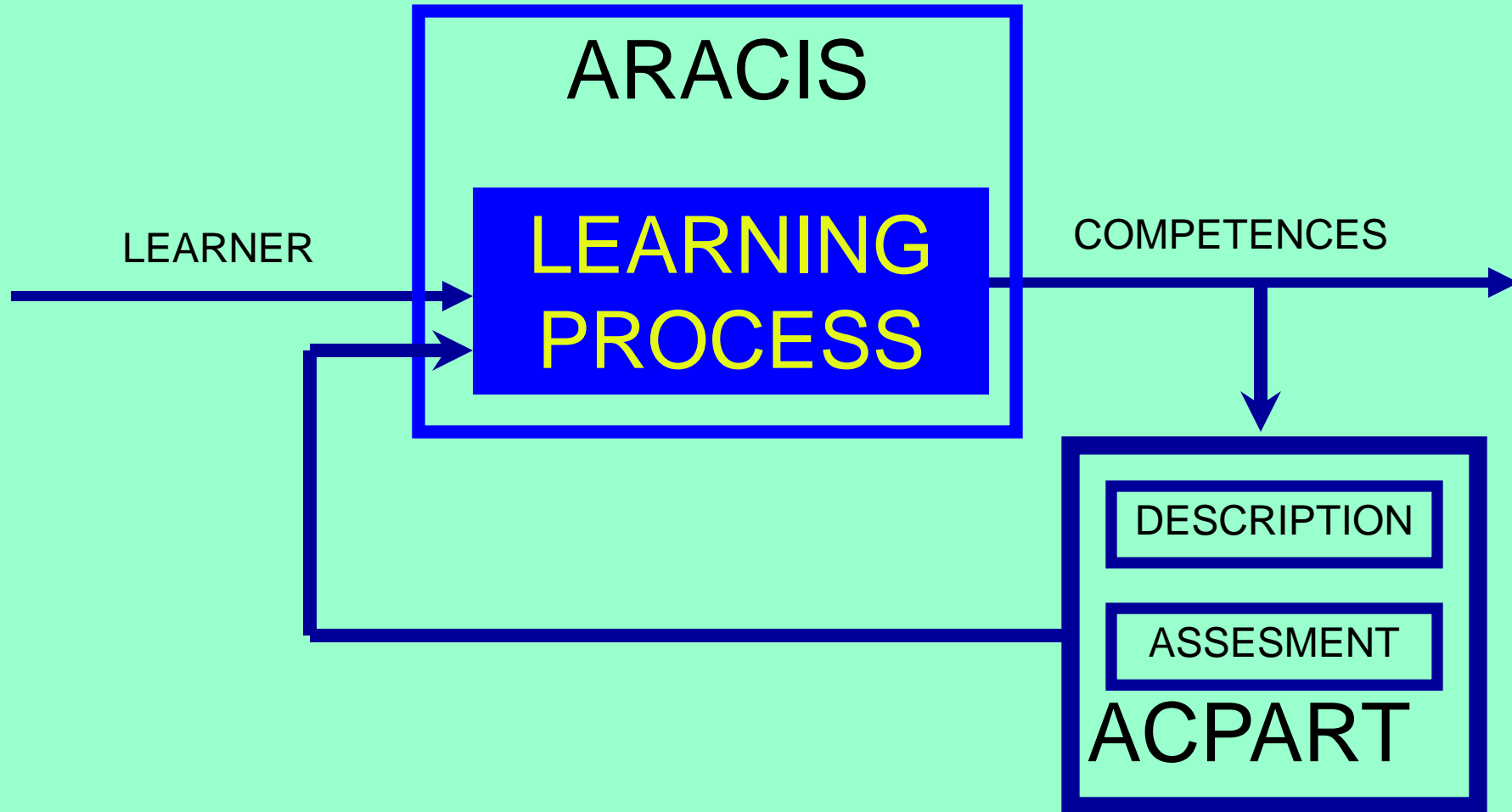


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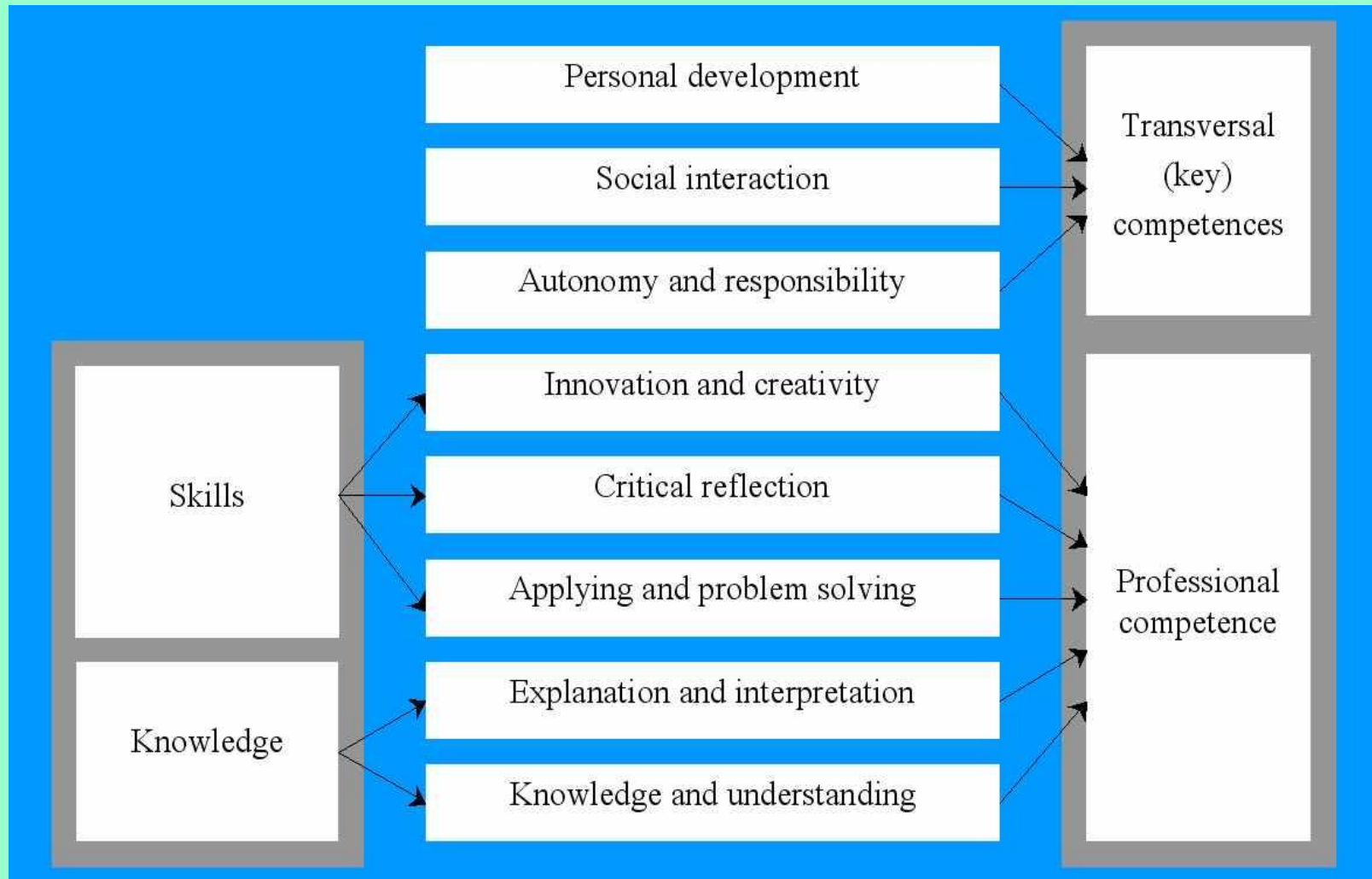


Figure 1. Learning outcomes [3, pg. 11].



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The Bloom's taxonomy versus level descriptors of competence

N o	Level descriptors (ACPART)	Bloom's taxonomy	Useful verbs (for Bloom's taxonomy)
1	Knowledge understanding	Knowledge	Tell, list, describe, relate, locate, write, find, state, name
2	Explanation and interpretation	Comprehension	Explain, interpret, outline, discuss, distinguish, predict, restate, translate, compare, describe
3	Applying and problem solving	Application	Solve, show, use, illustrate, construct, complete, examine, classify
4	Critical reflection	Analysis	Analyze, distinguish, examine, compare, contrast, investigate, categorize, identify, explain, separate, advertise
5	Innovation and creativity	Synthesis	Create, invent, compose, predict, plan, construct design, imagine, propose, devise, formulate
6		Evaluation	Judge, select, choose, decide, justify, debate, verify, argue, recommend, assess, discuss, rate, prioritize, determine

ACPART – Grid no. 2

Level descriptors - Disciplines

LICENSE qualification : for simple tasks, repetitive, complete defined, using simplified methods (tables, using software, nomograms) assisted by senior engineers

Competence assessment: Using level descriptors:

Knowledge	- not acceptable
Explanation and interpretation	- acceptable with reserve
Applying and problem solving	- acceptable
Critical reflection	- GOOD
Innovation and creativity	- VERY GOOD

MASTER qualification : complete the gained competence with general methods (fully mathematics, developing software, simulation etc) for complex tasks, in continuous changing, incomplete defined and working independent.

Competence assessment: Using level descriptors:

Knowledge	- not acceptable
Explanation and interpretation	- acceptable with reserve
Applying and problem solving	- acceptable
Critical reflection	- GOOD
Innovation and creativity	- VERY GOOD

Curricula design based on project management

Curricula design can be seen like a task that can be accomplished in two different manners:

- a) With well-known results and table of contents (reserving the existing situation, like a very well one);
- b) With fuzzy results (new table of contents = improving the process and the results).

Figure 2. Matrix organization for simultaneous projects

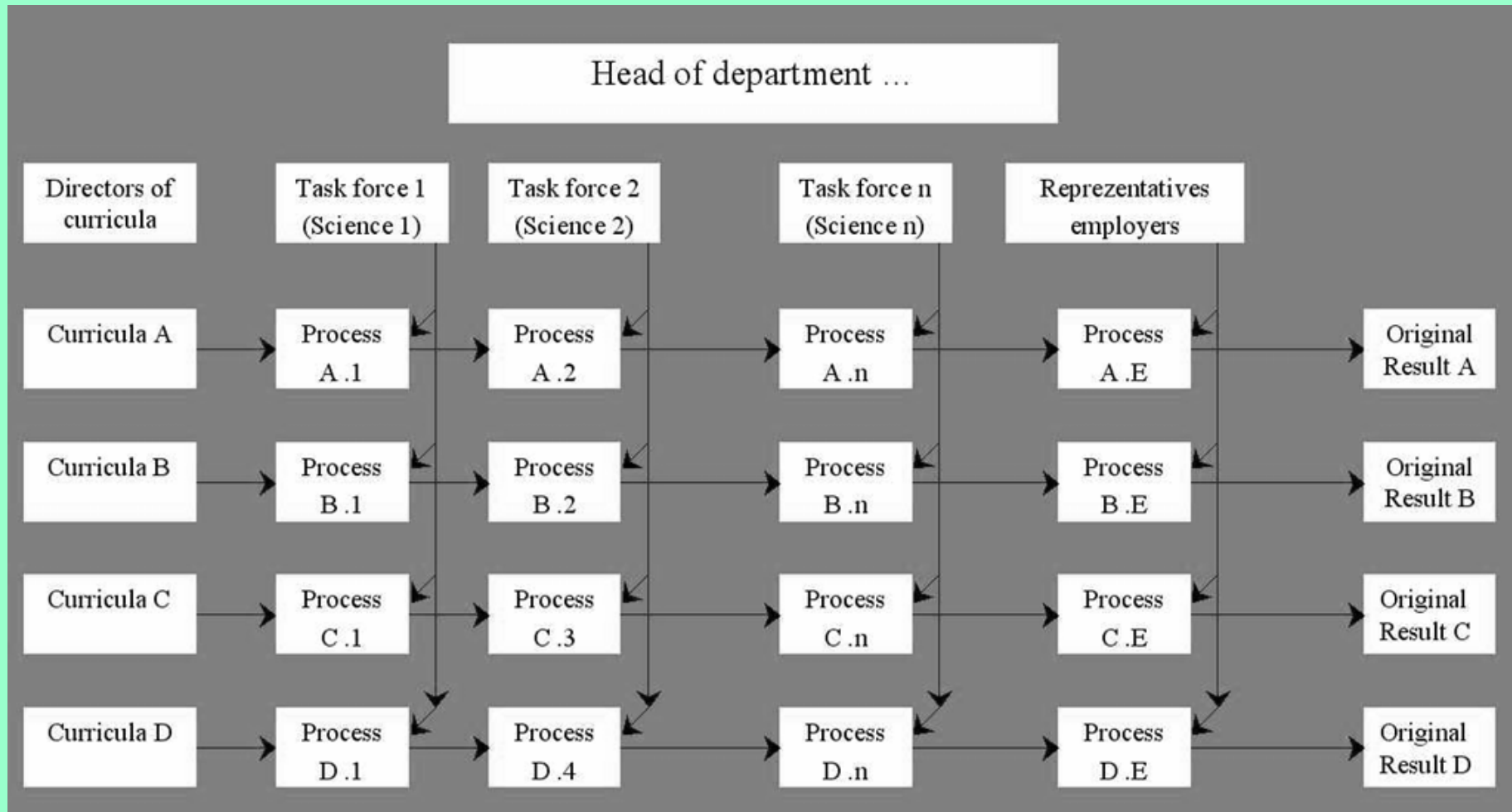


Table 2 Project team versus matrix organization

Matrix organization remains a desideratum, thus we can find the university as a typical example for resistance at changing [6, pg.175].

Conclusion 1/4

Using level descriptors for competence ASSESSMENT (close to Bloom's taxonomy), both educators and students will be able to evaluate their performance in a detailed way and to give answers to questions like: "Which is the degree of COMPETENCE of a specialist who wants to work in a certain field of activity, after graduating a university stage?"

Conclusion 2/4

The professors but also the students must be able to measure the level of the competence after license or master study, like a demand for a specific occupation and role.

Conclusion 3/4

It is a difference to evaluate knowledge and it is more difficult to describe and to evaluate competence!

Conclusion 4/4

Using project management with matrix organization to define the requested competences and only after that starting the curricula design, we believe that the result will be more efficient and close to Bologna expectations.

Thank you!