

EXPLANATORY NOTE ON NAVIGATION MODELS/ TAXONOMY IN AN 'CBA FRAMEWORK

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INTRODUCTION

Integrated Competence-Based Approach ('CBA) is a vision in the field of education based upon the integrated development of competences. Implementing this approach requires to resort to adequate concepts, tools and methods in order to build training programmes within the logic of competences. This approach is founded on a particular taxonomy. The present navigation models meet the need of a taxonomy favouring the introduction of a competence-based logic in building training programmes. The present note contains a glossary.

PRESENTATION OF TAXONOMY

On a didactic level, the two navigation models model in different ways the same logics of construction, mobilization and knowledge integration inside capacities/competence stages, competences/macro-capacities, situation families and the Continuous Integration Objective. The first model starts from knowledge and goes up towards the Continuous Integration Objective (CIO). «The second model, more innovative, starts from the CIO on which it bases its declarative and procedural knowledge. Types of knowledge are organized and this modelling shows the progressive and integrative structuring of knowledge. Complex types of knowledge should indeed progressively become simpler and enrich and complicate long term memory. Pedagogically and philosophically speaking, the second model is more natural and less rigid» (JM De Ketele, 2008).

The present taxonomy, compared to others, shows a different relation to knowledge. This knowledge, underlying the categorized activities from which we started to define competences and capacities, are presented according to a certain progress: construction, mobilization and integration as well as transferability as shown on the transparent strip.

These taxonomy levels refer to the crossing of an analytic and situated logic of the use of the concept of competence:

1. The Analytic Approach of Competences (AAC) is based on the categorization of the activities of a job or a training, on the one hand, in terms of cognitive, reflexive, metacognitive, procedural, psycho-affective and social competences, and on the other hand in terms of observability level of the action verb (P. Charlier, 2003). This way, it is then possible to identify at the same time key competences and stages or capacities for each of these competences. This is how division into competences as written on the disk reveals five categories of competences, which can be adapted to all types of reference guides for professional activities.

2. The Situated Approach of Competences (SAC) is based on the identification of situation families (SF) which give meaning to learning objectives and help to delimit these same objectives in coherence with the needs of the system (society) in which the programme is built.

$$'CBA = AAC \times SAC$$

The added value of taxonomy comes from this crossing logic and from a different relation to knowledge. Types of knowledge are indeed not compartmentalized into impermeable categories anymore, since they are declined inside competences and integrated in SF and the CIO and are thus transferable into other contexts (P. Jonnaert, 2002). Taxonomy levels clearly refer to:

- A type of activity which favours all taxonomy levels, beyond cognitive activities themselves.
- An integration level which favours complexity and the mastery of which increases thanks to «knowledge», «construction», «mobilization/integration» and «transfer». These are the four mastery levels in an 'CBA.

In order to give an account of the concepts of transfer and integration, each level, in both ways of reading, is represented by discontinuous lines, and models, once they are assembled, enable the various concentric levels to turn in relation one to another.

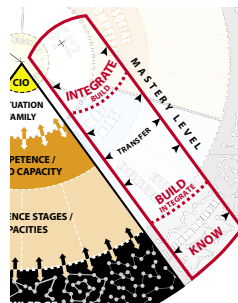
GLOSSARY

Integrated Competence-Based Approach ('CBA): Method for building curricula according to a logic of competence based on a strategic and integrative approach of learning objectives, functions and means in terms of result and process. The position of the 'i' makes it clear that the integration is situated as well on the level of the approach as within the reference guide and the competences.

Capacity: Cognitive, reflexive or meta-cognitive, procedural, psycho-affective or social approach to be mobilized in order to carry out a competence. Acquiring a capacity is thus a necessary resource (and step) towards the development of a competence, in the same way that developing a competence increases the mastery of the mobilized capacities.

Categorization of activities:

- **Cognitive activities:** activities linked to different types of knowledge (theoretical knowledge and cognitive know-hows). They mobilize essentially resources of the mind, of rationality, of logic.
- **Reflexive and meta-cognitive activities:** activities linked to behavioural knowledge of the reflexive type, to a questioning attitude, to reflection on the action, to a new involvement in the action to abilities to change.
- **Procedural activities:** activities linked to gestural know-hows and abilities, to the mastery of techniques. They mobilize essentially resources of sensory perception and motivity.
- **Social activities:** activities linked to behavioural knowledge of the relational type, to communication/interaction skills.
- **Psycho-affective activities:** activities linked to behavioural knowledge involving self-knowledge, stress/emotion management.



Competence: Mobilization of pertinent resources (resources, pedagogical objectives, underlying knowledge) in front of problematic situation families to be solved or in front of complex tasks to be carried out.

The common point between all the existing definitions of the term «competence» is definitely the following: «Mobilization of pertinent resources (...) complex tasks to be carried out». There is a debate among experts on whether competences are capacities or action skills. In the present taxonomy, the difference between the AAC and SAC reconciles both versions which, according to the authors, are both necessary. In the AAC, a competence is a macro-capacity considered as necessary for the mobilization of pertinent resources in order to face a problematic situation family to be solved or complex tasks to be carried out. In the SAC, a competence is a well thought action skill which consists, in a situation, of mobilizing the necessary resources in order to solve a problematic situation or carry out the complex task.

Situation Family (SF): All the professional situations presenting enough common characteristics in order to mobilize the same competences and capacities in the same conditions. These situations are common and must be dealt with by students during their internships. They are representative of the various functions which the students will have to face by mobilizing their various competences.

Learning / pedagogical objectives: All the objectives mentioned in assessment/training units as to be acquired, i.e. the Continuous Integration Objective (CIO), competences, capacities and knowledge to be mobilized in the identified problematic situations.

Continuous Integration Objective (CIO): The Continuous Integration Objective is the result expected from the training. It represents the student's global profile as it is built throughout the progress of learning. The CIO of a training unit is the summary of the situation families contained in this unit.

Type of knowledge: Knowledge units recognized (by the scientific community or experts) as to be acquired in a given area. Cognition and learning specialists make the difference between declarative knowledge which answers the question "What to know?" and procedural knowledge which answers the question "How to know?". Tardif (1992) adds conditional knowledge which, within the framework of situated learning and of a SAC, answer the question "When to know?".

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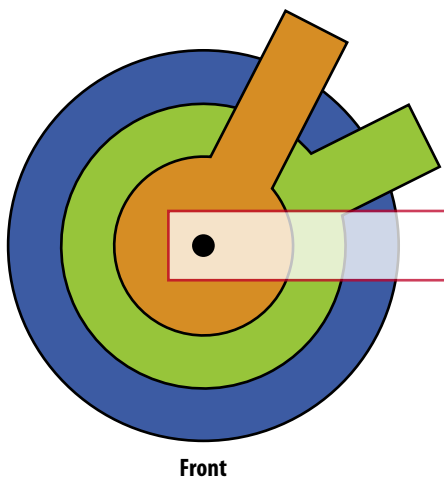
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ASSEMBLING

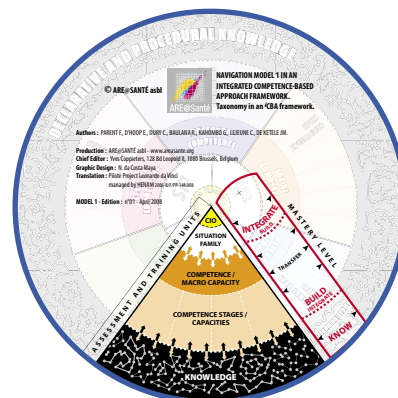
Navigation models are disseminated via e-mail in a PDF format in order for everyone to be able to assemble their models according to the following procedure:

Steps in assembling navigation models

- Dial 1 front
- Dial 1 back
- Dial 2
- Dial 3
- Dial 4 (transparent sheet)
- Central fixing (round paper fastener)



Front



Back