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Perspectives on designing the competence based curriculum

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Abstract

The present paper aims at emphasizing the effects of considering the competence, as the main curriculum organizer in curriculum development, bringing into discussion the curricular architecture that should define this new approach. The methodology of research focuses on a theoretical innovative approach on the ways the rational design model meets the challenges of the competence based curriculum (CBC) design process, the research presenting several contributions to the theoretical and practical development of the field. There are analyzed the different models of defining the competence and there are proposed innovative perspectives on the way that the concept of competence must be addressed as well as the possible implications on the curriculum theory and practice.

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1. Introduction

The use of the competence concept has old roots in the theory and practice of curriculum field that can be traced back to the *competency movement* started in the United States in 1960s-1970s and spread worldwide. Some researches, identifies even earlier links of the concept to the development of *mastery learning* models in the U.S. during the 1920s and suggests that the competence based approaches were concerned with formative vocational education and training, and reflected instructional design informed by psychology: namely, the work of Skinner, hence the association with *behaviorism* (Brown, 1994, cited by Kate, 2014). This way, the word *competency* began

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to be used in association with this model of instruction and learning, and a number of concepts associated with modern *competency based learning (CBL)* came out together with the epistemological shift from input to outcomes.

Authors like McClelland (1973), Gilbert (1989), Grant (1979) turned their attention on the competence concept as representing the link between the work market and the outcomes of the educational systems and on the *competence based education (CBE)* as being the method to bring together these two worlds. The present debates on competence is well justified in the actual educational context that imposes the necessity for the educational systems worldwide to adopt the European Key-competence and the 21st Century Skills models as their priorities

We will adopt a working definition of competence as being a complex kind of learning outcomes that is often placed near other related concepts like outcomes, skills, abilities, personality traits, capacities, knowledge, attitudes, values etc.

In this context, the design of the competence based curriculum (CBC) becomes one of the most debated subjects in the practice communities of experts in education sciences and of curriculum designers. Focusing the curriculum on competences brings with it a new vision on the structural components of curriculum and of the ways they interact. The emphasized principles of CBC represents important resources for teachers who work in this actual educational context.

In Romania, the concept of competence is present in the educational policies documents, from the National Education Law to all the methodological recommendations regarding the curriculum and represents a platform for the design processes for all levels of the curriculum. The curriculum is addressed from a multidimensional perspective (Potolea, Păun, 2002), and is considered a *construct concept* that assures his identity by his double hypostases, as a *paradigm* (as a general model of designing the education and instruction) and as a particular kind of a curricular *project* (as a concrete way of curriculum design for all the levels and learning situations) (Cristea, S., 2010, Soare, 2012). The new paradigm of CBC is laying at the base of all the recent reforms of school programs in preuniversity education system, including Bachelor, Master and Doctoral degree programs. This way, the competence has emerged itself as the reference point in the design, organization and evaluation of any curriculum.

2. Competence mapping

Defining the competence has its origin in *Vocational Education and Training (VET)* which is very concerned by preparing students to acquire the competencies needed in their professions, and in the contemporary society. In the study that Biemans conducted (2004, p. 524), the authors recognize the need for vocational education to be directed at developing competences, and not only to acquire diplomas, the emphasis needed to be on capabilities and not on qualifications. These researchers interprets the concept of competence in a holistic way as integrated abilities and define competence as the capability of a person, or an organization, to reach specific achievements. Personal competencies comprise integrated performance-oriented capabilities, which consist of clusters of knowledge structures and also cognitive, interactive, affective and where necessary psychomotor capabilities, and attitudes and values, which are required for carrying out tasks, solving problems and more generally, effectively functioning in a certain profession, organization, position or role (Mulder, 2001, cited in Biemans, 2004, p. 529).

Other authors like Parry (1998) defines the competence as a cluster of related knowledge, attitudes and skills that fulfill several criteria: a) affects a major part of one's job, b) correlates with performance on the job, c) can be measured against accepted standards, and d) can be improved via training development. On the other side, Spencer and Spencer (1993) include personality characteristics such as motives and traits and list five types of competency characteristics, namely motives, traits, self-concept, knowledge, and skill.

According with the official documents, in Romania, the competence is defined as representing the proved capacity to select, combine and adequately use the knowledge, skills and other acquisitions like values and attitudes in order to successfully solve a certain category of work or learning situations and for professional or personal development. The competence is a central concept which operates at all curriculum levels, all curricular domain and disciplines, and in every disciplinary module that belongs to a discipline structure, becoming, this way, the organizer of the entire curricular architecture, a curricular constant for all the levels, profiles and school programs (Potolea, 2012, p. 35).

In this epistemological context, Mulder (2001, p. 151-152) suggests that it will not be wise to adopt only one perspective on competence, but rather to adopt a working definition from which to proceed. Thus, the following points of departure are of importance:

- Competencies are capabilities, capacities or potentials and can be understood as characteristics of persons, teams, work units or organizations which enable them to attain desired achievements,
- Competencies comprise of integrated meaningful clusters of knowledge, skills and attitudes,
- They form a necessary condition for reaching an achievement; solving problems, executing a job, obtaining a certain result, making decisions and taking responsibility,
- Competencies are neither explicitly nor externally obvious; they are abilities which become apparent by a certain achievement in a specific situation. Levels of competencies in an individual can, therefore, only be inferred by analyzing achievement. They cannot be determined without observing a person putting them to use in practice or in simulated instances,
- To a certain extent competencies are portable from one situation to another and are also transferable in that respect,
- Competencies are concerned with the results and achievements of organizations, work units or individual jobs,
- They are apprehended at certain levels and in many cases can be further developed,
- Competencies can be present both in persons and systems.

Jones (2002, p.7-8) defines competence as a combination of skills, abilities, and knowledge needed to perform a specific task in a given context. They are delimited and hierarchized in order to identify their specific characteristics and of the ways they are linked to the concept of competence:

- *Traits and Characteristics* as the foundation for learning, the innate make-up of individuals on which further experiences can be built. Differences in traits and characteristics help explain why people pursue different learning experiences and acquire different levels and kinds of knowledge and skills.
- *Skills, Abilities, and Knowledge* are developed through learning experiences, broadly defined to include school, work, participation in community affairs, etc.,
- *Competences* are the result of integrative learning experiences in which skills, abilities, and knowledge interact to form bundles that have currency in relation to the task for which they are assembled.
- *Demonstrations* are the results of applying competencies. It is at this level that performance can be assessed.

This approach on competence seeks to differentiate concepts like: skills and knowledge are acquired through learning experiences; different combinations of skills and knowledge that one has acquired define the competencies that an individual possesses. Finally, different combinations of competences possessed by an individual are combined in carrying out different demonstrations or tasks.

On the other side, in Jonnaert perspective (2010, p. 77), the competence presents a series of constitutive characteristics as the following:

- Is associated with a *situation*, a family of situations and with the experience domains of a person or a group,
- The development of a competence is based on mobilization and coordination by a person or a group of a series of *resources* (owned by the person or found in the context),
- Is built after the complete and *socially* acceptable processing of the situation,
- Results after the dynamic and constructive *processing* of the situation and does not confuse with the process itself, but manifests as a *product*, after the processing of the situation,
- *Is not predictable* and cannot be a priori defined, is depending on the person, by his own knowledge, his understanding of the situation, his resources, of the obstacles or his own experiences.

Other researches (B.I.E.F., Gerard, Pacearcă, 2012, p. 15) define competence as the capacity to mobilize an integrated ensemble of resources in order to solve problematic situations, therefore a contextualization of the acquisitions (knowledge, skills, attitudes). There are revealed the general characteristics of competence as follows:

- Allows an original answer in a situation/family of situations,
- Require an efficient answer that is socially relevant (has a sense and utility),
- Is characterized by an integrated answer (the interactive mobilization of knowledge, skills and resource behaviors).

Considering all the diverse perspectives on competence and their effects on designing the CBC, we propose the next methodological landmarks to be used, regardless of the level, domain or the projected learning situation across school curriculum:

- The competence is founded on a series of psychological traits of a person who needs to solve a problem or to act in a designed or randomly situation,
- The competence presents itself as an integrated ensemble of diverse acquisitions acquired in time by students (knowledge, skills, attitudes etc.),
- The potential competences or the competences manifested in action must presents a series of indicators of the presence or the development of the competence after the completion of the educational programs. These indicators must determine the construction of the learning situations and of the training programs,
- The manifestation of the competence is gradual and related with a situation or a family of situations, being dependent of the designed characteristics of these situations.

3. Designing the structure of CBS and the learning situations

We assist today, in curriculum theory and practice at a shift toward a new way to see the design of education and instruction, and that is the Competence Based Education (CBE) models. Grant et al. (1979, p. 6) define it as a form of education that derives the curriculum from an analysis of a prospective or actual role in contemporary society and that attempts to certify student progress on the basis of demonstrated performance in some or all aspects of that role.

Jones (2002, p. 9) proposes three methodological landmarks that should characterize a competence based curriculum (CBC): a) a description of the competence; b) a means of assessing the competence; c) a standard by which the student is judged to be competent.

Therefore, in order to design a CBC, there must be adopted a common vision on the competences that will be acquired by students, and that is because it will determine a shared point of view on the learning that must take place and of the organizing of the context in this respect. The design of the instructional strategies will be linked with the type and structure of the competence and will depend on the way the learning context is shaped, and that must reflect both the work market requests and the lifelong learning principles.

This way, becomes obviously clear the internal connection between *competence and the situation*, between the construction, development and the adequacy of it *in a concrete situation or in a family of situations*, the competence representing the result of a complete processing of a situation by a person or a group, in a specific or given context. A family of situation with common characteristics facilitate the transfer of the competence to all the specific situations that compose it. The mobilized resources in the situation, the present restraints and obstacles, the students' activity and the efficient processing of situation are the other curricular elements that make possible the competence development.

Is built, this way, a new approach of competence that is the *actional-situational competence* as the finality of a new curricular paradigm determined by the *situation centered approach* (fr. *approche située*), promoted by the Observatory of Reforms in Education (ORE) in Montreal (Jonnaert, 2010, p. 78).

As in the case of curriculum (Potolea, D., 2002), the competence becomes a construct concept, the situation-approached competence presented always the following constitutive elements that can be capitalized as *founding elements* of a competence (Jonnaert, 2010, pp. 79-82):

- A situational framework (a situation or a family of situations),
- An experiential framework (the previously experiences of students lived by them in similarly situations with that that must be processed),
- A resource framework (used resources for development of the competence),
- An action framework (the actions undertaken in the designed situation),
- An evaluative framework (the anticipated results, the transformations observed in situation and in students behavior, the success criteria necessary for the social validation of the competence).

Is created, this way, a *conceptual network* that builds the identity of the competence, the methods of design the structure of CBC being anticipated. The situational framework will define the families of situations that will be efficiently processed by students and which have common characteristics that assures the transferability of the competence in all the family of situations. The family of situations is composed from particular situations in which

the student will act concretely by using the available resources and will approach the obstacles and the restraints that will be designed in the situation.

The approach of the designed situation will be facilitated by the existing repertoire of previous experiences (elements of competence - knowledge, skills, attitudes, or even previous competences) or students' actions previously done in similar situations that can be transferred to the actual designed situation in CBC.

The resources that need to be mobilized in the situation can be *internal* (cognitive, affective-motivationally, actional), specific to *situation* (the concrete circumstances that facilitate the processing of the situation, present constraints, the obstacles, the problems) and *external* (the resources that are mobilized outside the situation, the syllabus). The students' actions are being a part of a broader category of actions that can be undertaken in the given situation, contextualized actions dependent of the restraints and by the specifics of the situation that must be resolved and individual actions of efficient processing of the situation, indicators of the developed competence at the end of the situation (correlation of an action with a series of resources, the uses of a method, development of strategies adapted to the situation that can be transferred to other particular situations and families of situation).

In order for students to process the designed situation is necessary to be developed an adequate framework for evaluating the competence. There will be designed individual or collectively indicators for the competent processing of the situation as well as the evaluation criteria for the level of which the processing can be validated by school or by the society. It is quite clear that this context involves the students' honesty that is synonymous to responsibility, to the need for knowledge and training, honesty is a moral figure, a model of intellectual conduct (Langa, 2013, p. 430).

So, the competence becomes the main *organizer* of curriculum guiding and determining the student activity. It is the product of student actions in a particular situation (or a family of isomorphic situations) and, consequently, is unique and cannot be a priori predefined without being adapted. This fact could represent a difficulty of designing CBC that must be further researched.

On the other side, as much the development of competence depends of a unique configuration of prior personality traits necessary to approach/solve the designed situation, as much it departs by the situation/family of situations in which it will be developed, the possibilities for transfer and adaptability being reduced.

In this way, the process of curriculum development is redefined, the learning situations constituting themselves as sources and criteria for competences (Jonnaert, 2010, p. 91). The situations replace the curricular contents in the logic of the curriculum design, the student being considered competent if he will be able to efficiently process the designed situation. The secret of the correct definition of curriculum competences returning to the measure of the understanding of the logic of student actions in a situation that are necessary for competence development.

Conclusions

As the curriculum main and determinant organizer, the construct and multidimensional concept of competence is defined by students potential and available personality traits that facilitate the integrated mobilization of the resources acquired in time by students in unintended or designed learning situation. It aims at solving complex and significant situations. This approach determines an innovative way of curriculum design.

This way we can design a CBC that can assure the connection between work market, the challenges of postmodern society and the school programs. By centering curriculum on competences, the current practices of curriculum design are challenged, drawing the attention of curriculum designers and teachers toward the changing of the curricular determinants that leads to new dimensions of the didactic activities.

The decontextualized and disciplinary contents must be replaced with the design of a complex learning situation in which the students must mobilize various resources previously learned in order to solve situations that make sense for him and for the context he live in. This way, *the sense* is brought back in curriculum design, ensuring a better participation of students and so, better results that ensures them bigger chances of success in the actual, postmodern society.

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