

# CREATIVE APPROACHES IN THE THEORY AND METHODOLOGY OF FORMING AND ASSESSING THE COMPETENCES IN THE EDUCATIONAL SYSTEM

## Habilitation Thesis

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### SUMMARY

In the first part of the Habilitation Thesis, I presented my evolution in academic, scientific and professional career. The significant moments of my university career in Babeş-Bolyai University are the following: I was hired through contest as Lecturer on the 1<sup>st</sup> of October 1998, as Associate Professor on the 1<sup>st</sup> of October 2005 and as Professor on the 27<sup>th</sup> of September 2016. I teach courses and seminars in the field of the Sciences of Education in the *Teachers' Education Programme* (Undergraduate - Level I and Postgraduate - Level II) for the certification of competences in the didactic profession for the students from the Faculty of Geography and from the Faculty of Psychology and Sciences of Education (specialization *Primary and Pre-Primary School Teachers Education Bachelor's Degree Programme* and in the *Curriculum Management Master's Degree Programme*).

In the evolution of my scientific career, the main areas of interest were the following: Didactics of Geography; Training, development and assessment of competences; Pre-service and in-service teacher training; Didactic Methodologies; E-learning. The results of my scientific research, obtained individually or by collaboration, theoretical and methodological aspects with an innovative and creative character, have materialized throughout my entire career in 37 books (27 as single author, 9 as first author, 1 as co-author), 19 chapters, 175 articles (4 articles in WoS indexed journals with  $Fi > 0$ , 5 articles in WoS indexed conference volumes, 48 articles in IDB journals, 47 articles in extenso in the volumes of international conferences, and 70 other papers). I promoted my research results in the Sciences of Education in 43 participations at international conferences and in 43 national conferences.

The ability to coordinate didactic and research activities in the field of the Sciences of Education results from the coordination, in collaboration with other teachers, of the scientific journals *Didactics of Geography* and *Romanian Review of Geographical Education*; 26 collective volumes; 12 editions of the *International Conference on Didactics of Geography, Contemporary trends in teaching and learning Geography*; 4 collections of books in the field of the Sciences of Education. The competence to cooperate with research teams has been capitalized in 9 projects of research and development.

The ability to explain and enable learning and research has been developed and demonstrated through the coordination of a significant number of papers in the Sciences of Education as follows: Bachelor's Papers (4 papers in *Geography* specialization, 74 papers in the *Primary and Pre-Primary School Teachers Education* specialization); Graduation Papers (178 papers in the *Professional Reconversion / Conversion Programme* and 133 papers at Level II of the *Teachers Education Programme*); Dissertation Thesis (35); Methodical-scientific paper for obtaining the I<sup>st</sup> didactic degree (20 papers at the *Geography* specialization, 40 papers in the *Primary and Pre-Primary School Teachers Education* specialization).

My expertise in Didactics and scientific research has been valorised by carrying out research in collaboration with university students, master's students and doctoral students and finalized by publishing papers in the Sciences of Education (6 books, 3 book chapters, 2 papers in WoS indexed conferences volumes, 21 articles in IDB, 15 other papers). An important activity as a reviewer I developed in the *International Conference on Contemporary Trends in Education and Learning Geography* (706 papers) and in the *Romanian Review of Geographical Education* (35 papers).

The relevant aspects of my professional career are: the activity as a trainer in continuous training programmes for K-12 and university teachers; the activity in professional committees (for obtaining the didactic degrees, for equalization of the PhD with the I<sup>st</sup> Didactic Degree, for teaching positions in the university, for the Bachelor's Degree, Graduation and Master's Degree, for K-12 teaching positions, in the working group for the elaboration of the Geography school curriculum for secondary school of the National Geographic Commission) and professional associations (Geographical Society of Romania).

In the second part of the Habilitation Thesis, I presented *the main scientific results obtained in scientific research, in the field of the Sciences of Education*, in the global context of the significant and present scientific achievements, regarding the formation and evaluation of competences in the education system. Our interest in the pedagogy of competences resulted from the introduction of competences as a finality in the Romanian Education System, although there is not a worldwide consensus in defining the notion of competence, and competences theories are considered "a paradigmatic amalgam" (Boutin, 2004). Our contributions are included

in two categories: theoretical and methodological aspects on competences; experimental and constative research on competences.

From the multitude definitions of competences in the literature of the Sciences of Education, I extracted some essential characteristics of competences: the relationship with a family of situations or problem situations; the involvement of action; the mobilization of a set of resources; integration of internal and external resources; transferability; autonomy and responsibility; evolution; completion; level of development; it can be assessed; individualization; complete and impartible. I have synthesized the following definition of the competence: “a *competence* is the complex ability and action (process) of mobilizing, selecting, transforming, combining and adequately integrating a set of internal resources (disciplinary and strategic knowledge, capabilities, skills from an individual’s own repertoire) and external resources, effectively, timely, in order to independently plan and realise a complex task or a group of tasks in a given field, in a category of situations that require a large number of operations and ending with a visible and evaluable result” (Dulamă, 2010a, p. 14; 2011, p. 13).

Regarding the classification of competencies, I have completed the classification criteria in the categories presented by Robert Brien (1997) and I have provided examples of transversal competences and Geography-specific competences. By the degree of use, I differentiate between *virtual competence* and *competence in the act*. Based on the solving strategy criterion, I classify competences in *reproductive skills* and *productive skills*. According to the scientific domain, there are *disciplinary competences* and *transversal competences* (*a-disciplinary, transferable, and non-disciplinary*). In the case of general competences and specific competences that exist in the K-12 curricula of the Romanian Education System, their characteristics indicate a hierarchy, the general competences of a school subject being on a higher level of the hierarchy than the specific competences.

Regarding design, some models of forming competences, my valuable contribution is the presentation of pedagogical interventions that favour the formation of competences, these constituting a chronological approach and being similar to those associated with the learning of procedural knowledge. In organizing the teaching activity in which the forming of competences is targeted, I included two phases: (1) the stage of competence acquisition, which included the cognitive phase and the associative phase, and (2) the stage of competence consolidation, including self-assessment and assessment moments. This model of competence formation and development was used and promoted in several papers (Dulamă, 2010a, b, 2011, 2013).

I proposed a classification of learning situations for forming competences. *By the domain of competence criterion*, there are learning situations of: disciplinary competences; transferable competences (a-disciplinary). *By the type of competence criterion*, there are learning situations of: reproductive type competences; productive type competences (Dulamă, 2007, p. 74). In later works (Dulamă, 2010b), I completed this classification. According to the *activity extension criterion*, there are integration situations for forming: one disciplinary competence; more disciplinary competences; multi-disciplinary competences (Dulamă, 2010b, p. 74). *By the dominant intention*, there are integration situations for forming competences and assessment or just for assessing competences (Dulamă, 2010b, p. 75).

Based on the literature of the Sciences of Education, I presented *the characteristics of an integrated activity for forming competences* (Dulamă, 2007). Roegiers (1997) emphasizes that an integration activity is a didactic situation in which the student is required to integrate his or her knowledge, skills and acquisitions. Such an activity is where the student: is an actor; is determined to mobilize a set of resources and integrate them; is involved in a new situation, not one in which he or she should reproduce something; has a significant character for the student (Roegiers, 1997; Dulamă, 2007, p. 246). The situation or integration activity for forming the competence in which students are involved should be realistic, credible, meaningful and new for them.

By reference to international bibliographic sources, I highlighted the fact that the situation or the integration activity for forming a competence includes: a problem to be solved; an associated context to the problem to solve; the complex task or a set of tasks; resources; the solution of complex task and a set of knowledge-based learning activities; the outcome (Dulamă, 2010b, p. 71). I exemplified these stages in presenting more Geography-specific competences (Dulamă, 2010b).

In *projecting integrated activities for forming competences*, I suggested to go through several stages: choosing or formulating the competence to be formed; clarifying the importance of competence; identifying the set of situations in which the competence is used; detailing the integrated knowledge of competence and procedural approach; choosing the content elements based on which the competence will be formed; choosing the education resources; elaborating the didactic scenario of the integrated activity for forming the competence (performing the activity) (Dulamă, 2010b, p. 77). This methodological approach was taken in exemplifying the way of forming Geography-specific competences in several papers, including those with experimental character. My original contribution is the tabular presentation of integrated knowledge of a Geography-specific competence, the steps to be taken in its formation and the operational objectives correlated with this knowledge (Dulamă, 2010b).

My most significant theoretical and methodological contributions to the *assessment of competences* refer to the introduction in the literature of the Sciences of Education from Romanian of the competences assessment grids (analytical evaluation grids: grid with nondescriptive scale, grid with dichotomic scale, descriptive scale grid; global evaluation grid), designing evaluation grids to assess the level of reproductive and productive competences specific to Geography and their experimentation at university level. These contributions are in particular significant because there are no rigorous systems to assess competences in the official documents.

A large number of experimental researches focused on forming and assessing of competences in the education system. I investigated the forming and assessing of Geography-specific competences to Geography teachers, to Geography students from the Faculty of Geography and to students from the Faculty of Psychology and Sciences of Education, as well as some transversal skills of geographic students.

In many constative researches, I analysed the situation of competences from the official curriculum documents for primary, secondary, high school, and university education. In order to have a correct and profound perception of the competences issue in these documents, I asked, by administering questionnaires, teachers' opinions and interpreted them. Several papers were focused on analysing some curriculum documents – lesson projects – realised by students and teachers, but also providing models and examples of good practice.

In the third part of the Habilitation Thesis, I presented *the main directions for the development of my scientific, academic, and professional activity in the field of the Sciences of Education*. Topics of major interest for continuing, projecting and organising new researches in the Sciences of Education are the following: K-12 and Geography university curriculum; forming competences and assessing their level of development; e-learning; environmental education and sustainable development; education for building territorial / national identity, etc.

My main development directions of scientific activity in the field of the Sciences of Education are: involvement in the activity of a doctoral school, as a habilitated professor; explaining and enabling research; organizing and coordinating teams of researchers and collaborating with other groups of researchers; collecting financial resources for research in this domain; organizing and coordinating international and national conferences and workshops, participating at international and national scientific events; publication of research results in this field; coordination of scientific research and the elaboration of scientific and methodical-scientific papers; increasing my professional visibility as a researcher in the Didactics of Geography and, in general, in the Sciences of Education, at national and international level.

My main development directions of academic and professional activity in the field of the Sciences of Education are: organizing and managing didactic activities; explaining and direct facilitation of learning; explaining and indirect facilitation of learning; the coordination of a series of volumes and book collections in this field.

## REFERENCES

- Boutin, G., (2007), *De la réforme de l'éducation au « nouveau pédagogique » : un parcours chaotique et inquiétant*. Dossier: L'éducation à la dérive; Thèmes: Éducation, Mouvements sociaux, Revue d'idées; 9(1), <http://www.revueargument.ca/article/2006-10-01/367-de-la-reforme-de-leducation-au-renouveau-pedagogique-un-parcours-chaotique-et-inquietant.html> (Accesat 2010)
- Brien, R., (1997), *Science cognitive & formation*, Presses de l'Université de Québec, Montreal
- Dulamă, M.E., (2010a), *Didactică axată pe competențe*, Editura Presa Universitară Clujeană, Cluj-Napoca
- Dulamă, M.E., (2010b), *Fundamente despre competențe. Teorie și aplicații*, Editura Presa Universitară Clujeană, Cluj-Napoca
- Dulamă, M.E., (2011), *Despre competențe*, Editura Presa Universitară Clujeană, Cluj-Napoca
- Roegiers, X., (1997), *Analyser une action d'éducation ou de formation*, De Boeck Université, Paris-Bruxelles