

A SPIRAL JOURNEY: THE QUEST FOR PROFOUND LEARNING

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Abstract: *In a competitive world, where information is accessible and continually increasing, authentic learning has become more than ever a necessity for the development of humankind. Apart from being beneficial for everyone in a distant future, it is also valuable for the “here and now” of each person. The present paper proposes the discovery of viable solutions for ensuring a profound learning based on versatile competences and thus indicates the spiral curriculum as such solution. Hence, this paper’s aim is not only to identify how the spiral curriculum operates in practice, but also to underline its benefits when it comes to planning the competencies’ attainment, a process not deprived of difficulties.*

Key words: *spiral curriculum, competence, learning process, personal development.*

1. Introduction

The European concern in terms of education is the formation of people able to fully function in today’s society, active in the labour market and able to act responsively and autonomously in all situations. Accordingly, “the educational ideal of the Romanian school consists in the free, complete and harmonious development of the human individuality, in forming the autonomous personality and in assuming a system of values which are necessary for the personal fulfilment and development, for the development of the entrepreneurial spirit, for the active participation of citizens in society, for social integration and for employment” (Law of National Education 1/2011 hereinafter referred to as LNE 1/2011). Taking into consideration Romania’s acceptance to comply with the European standards of education and the key competences accepted throughout the EU (primarily meant to ensure equity in education among all European citizens), Romania’s current educational reality is guided by the paradigm of a competences-centred education.

As a result, teachers are concerned with the organization of the learning experiences of students according to this type of goals and even though the modification of the educational goals, more precisely the replacement of the objectives with competences, is considered to be more useful for the overall development of the future generations, the process of organizing the students’ learning proves to be rather difficult since one has to take into consideration the attainment of each and every element of the competency, namely knowledge, skills and attitudes.

Thus, the first issues begin to take shape: is learning in Romania really unfolding

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according to these goals? Are the Romanian students fully equipped with the competences required in today's society? What can be done in order to ensure a profound learning suitable for finding solutions to the more and more complex challenges of a reality in perpetual change?

2. Understanding the Competence

In the attempt to find pertinent answers to these questions it is necessary for teachers to fully grasp the meaning of the term competence. In order to do this, one possibility, and perhaps the more trustworthy for many, would be to seek the explanation of competence in official documents with provisions recognized at a national level. One such important document is, without doubt, the LNE 1/2011. A quick look at it would seem to solve the problem since in article 4 one can find that the competences are meant to be "understood as a multifunctional and transferable set of knowledge, skills and aptitudes" (LNE 1, 2011). However, only an authentic perusal is able to put this definition under question. More precisely, in the same official document, as an annex (often neglected by many) in the form of a list of definitions for the terms and expressions used within the law, at point 14, the competence is presented as "the proven capacity to select, combine and adequately use the knowledge, skills and other assets consisting in values and attitudes in order to successfully solve a certain category of job or learning situations, as well as for professional or personal development under efficacy and efficiency conditions" (LNE 1, 2011). According to this definition, the competence is considered to be a complex concept constituted by multiple elements such as knowledge, skills, values and attitudes. So the following question arises: is one of the competence's components seen as aptitudes (as in article 4) or attitudes (as in the annex)? Therefore, if the same document offers two possibilities of interpreting the competence, in order to solve the discrepancy between these two definitions, one is entitled to seek for further explanations elsewhere.

A source for clarification for this matter is presented within the Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, L 394/10 published in the "Official Journal of the European Union" (2006/962/EC) in which the competence is defined as "a combination of knowledge, skills and attitudes appropriate to the context". Thus, in the attempt to understand the competence an idea is beginning to take shape; namely that the competence may be seen as a coherent set of knowledge, skills and attitudes which enables the person to adequately respond to different situations.

However, the subject is far from being exhausted. The scientific literature offers a myriad of explanations for the competence. Thus, the competence is explained either as "an integrated and functional network constituted by cognitive, affective, social, sensorimotor components susceptible to being mobilized in finalized actions facing a similar situations" (Allal, aa cited in Crahay, 2006, p. 108) or as a "*savoir-agir* (know-how-to-behave), that is an knowledge used for integrating, mobilizing and transferring a set of resources (knowledge, aptitudes, reasoning, etc.) in a given context in order to cope with different problems encountered or to achieve a task" (Le Boterf, as cited in Moreau Nidegger, & Soussi, 2006, p. 49). In other words, it represents a consistent, operative system in which the components interrelate in the best possible ways so as to properly respond to similar, yet different situations thus proving the competences' relevance to the immediate reality.

Throughout the years there have been multiple significances attributed to the competence, especially in the francophone area. In an attempt to grasp the competence's meaning, at one point Jonnaert, interested in the topic of the competence, based on the definitions provided by D'Hainaut in 1988 (the setting into motion of different types of knowledge - *savoir, savoir-faire, savoir-être* - for a person to properly unfold a role, function or activity), Gillet in 1991 (a system of conceptual and procedural knowledge organized in operational schemes utilized for identifying and solving a problem with efficiency), Perrenoud in 1997 (potential resources that are used for solving with efficiency a defined type of situations), Pallascio in 2000 (cognitive, affective, reflexive and contextual dispositions that are mobilized to responsibly respond to a problematic situation) arrives at the conclusion that the "competence makes reference to a set of elements that can be mobilized in order to successfully respond to a situation" (Jonnaert, 2002, p. 31).

These ideas further contribute to the overall understanding of the complexity of the term competence as used in the educational field. It is not a simple notional knowledge (...) but a dynamic knowledge, namely a potential knowledge, which can be mobilized in a great number of different situations of the same type (...). It mobilizes knowledge, procedural knowledge („knowing to do”) and conative knowledge („knowing to be”) (De Ketele; De Vecchi, as cited in Minder, 2011, p. 40). Starting from the idea that this dynamic knowledge comprises three types of knowledge: declarative, procedural and conative, the teachers' necessity to take into consideration the attainment of each of these three components becomes more obvious for the overall accomplishment of a competence.

For those who are patient enough to really understand how a competence's realisation really looks like in practice and sufficiently concerned to ensure authentic learning for their students, a few ideas appear to be important to emphasize. First of all, since the declarative component refers to theoretical and verbal knowledge, it implies the idea of "knowing that". However, it is just a part of the competence and it should not be understood as a goal. Secondly, the procedural component is more resistant to change than the declarative one, and it represents the concrete, visible aspect of the competence. Relying on the action upon the environment, either from a cognitive or a motor point of view, this procedural component refers to a person's "knowing how" and can be associated with the skills required to do something. Last but not least, the conative knowledge, representing the third component of the competence, is just as important as the other two and it can be summed up as "wanting to know". This component implies the will, the affectivity and the motivation of a person in relation to a subject of interest. Even though, each competence has a certain component of the three more evidently displayed, one should be aware that this component is only dominant in comparison with the other two and that it does not interfere with their manifestation, but in fact that the competence truly represents the sum of all these three components.

Thus, since it becomes clearer that each competence represents a complex set of elements and that in order to talk about the attainment of a competence, in relation to a certain subject of interest, one should ensure not only the existence of the necessary knowledge, but also that of the skills and attitudes. Therefore, the teachers are faced with the following challenge: to ensure that their students attain a certain number of competences in a certain amount of time. Nevertheless, for each competence, the teachers need to offer their students learning opportunities so as to make sure that each element of

the competence is really manifesting and is properly measured by the learning objectives of the lesson. Accordingly, throughout each lesson, the teachers should make sure that a variable number of elements of the competences required to be realised by the end of each year are attained by their students. Namely, the teachers should offer their students the opportunity to develop not only their knowledge, but also their skills and attitudes in relation to a certain subject.

Even though his process seems to be a tedious endeavour, it is not only necessary for the realisation of the educational ideal of today's Romanian educational system (and in consequence the alignment with the European educational requirements), but also for the formation and development of young people able to fully function in society and to significantly contribute to its progress. If these long-term aims are not convincing enough for the teachers, then it should be added that all the elements internalized by a person at one point in life (be they knowledge, skills or attitudes) can afterwards be used by one in different situations as a response to certain challenges of real life, thus proving the importance of the competences' genuine attainment.

Also, they represent starting points or even stable support for the formation of new competencies. With each turning back to a competence's element (knowledge, skill or attitude) in order to use it for attaining a new competence, one is contributing significantly to that element's further development. Therefore, learning, apart from implying the idea of new acquisitions, new boundaries being pushed further aside, is also about the establishment of new links among the elements already possessed by a person. Additionally, with each use of that component, it becomes stronger, more flexible, more adaptable and more useful since new types of experiences permanently enrich it.

3. The Spiral Curriculum – A Stop in the Quest for Profound Learning

Due to this relation of continuity established among the competences (either considered as a whole or analysed by means of their components) the spiral curriculum appears to be a viable alternative for ensuring profound and meaningful learning. A concept proposed by Jerome Bruner, in 1959, the spiral curriculum allows the individuals to develop unconstrained. This happens namely because learning is being progressively produced. From a constructivist perspective, the spiral curriculum highlights the importance of the individual's active and responsible participation in one's own process of learning, of the discovery learning, of the intrinsic motivation's augmentation, of the intuitive thinking in learning, of the teacher's role as observant, facilitator, mentor, mediator and motivator, of the individualization of learning and of its relevance for the students' immediate reality, of the optimal structuring of the process of learning and of the collaboration with other people for the cognitive structures' enhancement.

The idea forwarded by Bruner is that "there is no reason to believe that any subject cannot be taught to any child at virtually any age in some form" (Bruner, 1999, p. 47). Since, learning has nothing to do with the learner's age, the teacher's role as mediator between the learner and the learning situation becomes a prerequisite for the authentic realisation of this process. Feuerstein considers that learning is produced as a result of the "interaction of the organism with its environment via a human mediator" (Feuerstein, Klein & Tannenbaum, 1999, p. 3). By making the contents of learning more accessible, the teacher does not only behave as an intermediary between the students and certain learning contents, but also sustains the students' learning efforts according to their actual

possibilities. Just as important for making their students learn and wanting to learn more seems to be the intervention “on the learner’s mind and affectivity, as requirement and shaping of one’s behaviour, with the purpose of arousing the interest for the given task, of offering support, of maintaining the orientation on the line of the intended objectives, of making the students able to succeed” (Cerghit, 2008, p. 235). Therefore, the teachers’ roles to motivate and constantly encourage students to become better, to support them throughout their educational journey in order for them to become more motivated to learn, more responsible and more aware of their competence level are further highlighted.

When striving for spiral learning, it is necessary to stress the importance of the learners’ motivation. Their desire to achieve different aims is crucial for the learning process. The teachers need to correlate the students’ interests and possibilities with the goals set by the contemporary educational system.

First and foremost, learning should be seen as an active process, with a highly individualising character. It is a “personal journey for the teacher as well as for the student, even though there are remarkable common points throughout this journey for many teachers and students” (Hattie, 2014, p. 42). This journey is personal due to the fact that regardless of the set destination, everyone starts somewhere different. All people build new learning on what is already in their possession and thus each step taken for attaining new goals supposes either extension, or deepening of the previous level of understanding and sometimes both.

The spiral curriculum takes into account the age and individual particularities of each individual, the learner “being given the maximum of what one can assimilate at one point and which allows the future psychic development” (Cucuş, 2014, p. 405). The learning experiences proposed to the students should be challenging enough in order to tempt them into the next stages of development, as well as to maintain their motivation for learning. This is actually the zone of proximal development: “the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 38). These progressive steps towards more and more complex elements highlight the importance of the previous components’ realisation, make them more visible and offer a more coherent and complete image of the subjects studied. “Whenever the teachers prepares the ground for the information that they wish to present within a decisive learning experience, they actually help their students make connections between the knowledge that they already possess and the new information” (Marzano, 2015, p. 72). Therefore, the design and implementation of the spiral curriculum proves to be an efficient way of constructing knowledge on the basis of which each individual’s specific skills, capabilities, conducts and values can be developed.

Considering that “it would be wiser to revisit the same issues each year, each time doing it more profoundly and introducing more and more complex situations which would contain new and more powerful aspects of the same concept” (Vernaud, 1994 as cited in Minder, 2011, p. 122), the benefits of the spiral curriculum are once more confirmed. In fact, in the francophone Belgium, this spiral approach resulted in the recognition of the integrating competence, term used for those slowly developing objectives attainable in the long run.

Since learning is a highly individualistic process, the spiral curriculum allows the individuals to maintain their own pace and in this way to realize the meaning of what they

learn. Learning is not something that has to be rushed, nor is it not a road that has to be taken by every student in an identical way and at exactly the same time as the others. Instead, the spiral curriculum allows the redefinition of the process of learning not as a destination, but more as a journey in which each step is taken only after one has fully mastered the previous one. All things considered, the spiral curriculum is useful for ensuring an authentic learning, based on the ceaseless efforts of the teachers to help their students achieve the expected level of performance (expressed as competences) according to their own pace.

4. Objectives

The purpose of this paper is the identification of the spiral curriculum's particularities in praxis. Starting from the idea that the teachers rely on the provisions of the official documents for unfolding their activities, the objective is the critical study of the school syllabus for the subject matter "Personal development" studied in the first three years of primary school so as to identify the continuity elements of the competences as educational goals.

5. Material and Methods

For the present research, the method of the curricular documents analysis has been employed. This detailed examination of the syllabus (understood as main curricular document) of the subject matter "Personal development" is considered to be necessary in order to detect the way in which the officials conceived this prescriptive document. In the same time, this analysis allows the discovery of the possible connections between the competences proposed for one year of study and the subsequent one.

Seen as the subject matter that centres most on the personal sphere, on the relation between the students' cognition and affectivity and on the development of metacognition, throughout the years of study, "Personal development" is thought to encourage the development of a superior set of knowledge, skills and attitudes. All these due to the transferable nature of these competences' components and the support they offer for academic, professional and personal success.

In order to detect the indicators of the spiral learning, the first step is the identification of the specific competences' components, namely knowledge, skills and attitudes. Due to the fact that these elements are hidden underneath written constructs that represent the competences as prescribed formally, the possible relation between these components is extremely subtle, quite individualistic, but by all means possible.

This hermeneutic endeavour, supposed to offer an interpretative model of managing the syllabi when organizing the learning experiences for each lesson, is able to reveal the weaknesses of the competence's design infrastructure. These weaknesses are mainly due to the deficit of through planning of the competences' components and implicitly to the inconsistency between the competences.

Since the connections become obvious only when the teachers undertake a competences' derivation process, in order to do this, it is necessary to decompose each competence in its specific elements. This process, applied to the specific competences established for fulfilment in the course of one year, helps convert the "specific components into performable ones, into <measurable> behaviours" (Petre, 2014, p.

161). Moreover, it offers the operationalization process's much sought-after visibility and coherence as required for the lessons' optimal unfolding. Far from implying that this critical exercise is definitive and universally valid, it is intended to offer a convenient algorithm for decoding the specific competences specified in the syllabi.

4. Results

The results obtained reveal that during the three years of study, at the level of the competences' components, three types of transformations can occur: extensive transformations, in-depth ones and a combination between the two. The extensive transformations generally refer to a type of widening, be it of the conceptual framework of a certain subject, of the range of applicability and/or of the types of attitudes it can trigger. The in-depth transformations imply a through treatment of the subject of interest, an invitation to discover the complexity of a certain matter that was not previously possible. The distribution of these transformations is presented in Table 1.

Transformation of the specific competences for "Personal development" Table 1

Type of transformation		Extensive	In-depth	Combination (extensive + in-depth)
1.1. Personal traits	Knowledge			✓
	Skills			✓
	Attitudes		✓	
1.2. Personal hygiene	Knowledge	✓		
	Skills		✓	
	Attitudes		✓	
2.1. Base emotions	Knowledge	✓		
	Skills			✓
	Attitudes		✓	
2.2. Communication	Knowledge	✓		
	Skills		✓	
	Attitudes			✓
2.3. Interaction abilities	Knowledge	✓		
	Skills			✓
	Attitudes			✓
3.1. Daily schedule	Knowledge			✓
	Skills			✓
	Attitudes		✓	
3.2. Learning	Knowledge			✓
	Skills			✓
	Attitudes		✓	
3.3. Jobs	Knowledge			✓
	Skills			✓
	Attitudes			✓

The analysis of each specific competence and the focus on the type of transformation that occurs reveal that for the knowledge level there are extensive transformations for

the specific competences 1.2, 2.1, 2.2, 2.3 and a combination between extensive and in-depth transformation for the rest of the specific competences, namely for competences 1.1, 3.1, 3.2, 3.3. This can be explained by the fact that commonly the extensive transformations offer precise hints about the vastness of situations in which the data can be used. Since the changes brought to the knowledge component imply (either solely or partially) the extensive sphere, this means that throughout these years of study it is necessary for the learners to be more and more informed about specific topics. Implying the accumulation of information, these extensive transformations make the learner understand things from different perspectives setting a stable ground for the development of skills and attitudes. As mentioned earlier, there are also specific competences whose knowledge component apart from the accumulation of data, supposes the deepening of the known information.

For the attitude component in the case of five out of eight specific competences (1.1, 1.2, 2.1, 3.1, 3.2) there are in-depth transformations registered. The same type of transformation also occurs for the skills component of two specific competences (1.2 and 2.2). These alterations refer to the intervention upon certain ideas or themes of interest with the purpose of offering the learner the possibility to analyse them more thoroughly, to develop a critical way of thinking, to cease to judge only based on first appearances.

Many combined transformations appear in the case of the skills component (1.1, 2.1, 2.3, 3.1, 3.2, 3.3). Since six out of eight skills undergo both extensive and in-depth transformations, this occurrence offers proof that the skills are founded on knowledge (for which, in many cases, the transformation is extensive) and contribute significantly to the formation and consolidation of the attitudes (which in most situations are transformed in-depth). Due to this particular type of alteration, the learners are given the chance to put into practice in the most adequate way what they know in such a way as to contribute to foundation of a way of being characterized by homeostasis.

However, it is not a rule for the components that experience combined transformation to remain in the skill area. They can also cover knowledge and attitudes. Attitudes 2.2, 2.3 and 3.3 represent such examples. In fact, referring to topics such as communication, interaction abilities and jobs it is expected for the anticipated attitudes to be considered modifiable in this way mainly due to the fact that they aim for the promotion of an open attitude towards the others, towards their opinions and choices (different from their own and sometimes contradictory) and the authentic valorisation of the human diversity.

Interestingly enough, the transformations of the competences' components, understood as a set, have an extremely different pattern. In fact, the combination is unique for each set of components apart from those for the competences 3.1 and 3.2 that display the same pattern (combined transformations for the knowledge and the skills and in-depth modification for the attitudes). This similarity can be explained by the fact that these competences refer to the manifestation of a set of knowledge, skills and attitudes that can be utilised by the students for the proper management of the learning situations and the development of an individual learning style. Additionally, both these competences help students gain autonomy in learning and become aware of the learning's role for the human existence.

By deriving the specific competences for the subject matter "Personal development", the present study manages to highlight the transformative nature of the competences' components. In fact, this derivation process is meant to offer teachers a more profound image of the manner in which, each year, the specific competences set for the

educational sector are modified in order to contribute to the formation of people able to respond to the complex challenges of life. Moreover, it ensures that teachers are taking all the necessary steps so as to responsibly contribute to their students' progress. Regardless of the fact that the derivation process is not stressed enough and thus not employed by all teachers, the modifications made visible by this process are not random, but are based on a continual consolidation of the human personality since a coherent set of knowledge, skills and attitudes are put in motion.

Furthermore, since spiral learning is generated by the spiral curriculum, it is based on the constant return to a subject of interest in the attempt to invest it with new meaning, new force and new possibilities of being put into practice. As a consequence of people's perpetual readjustments in terms of comprehension, abilities and way of being, the spiral learning is shaped as a viable solution in the quest for profound learning. This way of constructing learning, as well as shaping teaching, is based on constant preoccupation for the transformative process and the idea that the knowledge, the skills and the attitudes of people are adaptable and offer them countless possibilities of development. It also implies persistent return to a subject of interest and with each stop upon it, its continuous progress due to a new power of scrutiny, a new way of thinking, a new self.

5. Conclusions and Discussion

All things considered, the following conclusions can be formulated: a) the realization of profound learning can be achieved and b) the spiral learning has multiple benefits when it comes to the competences' attainment.

In order to reach profound learning, (which can indeed contribute to people's successful functioning in the present, as well as in the future society) it is the task of teachers to make all the possible efforts to equip their students with authentic and versatile competences, that is with coherent sets of knowledge, skills and attitudes which are to be used for solving with efficiency different tasks. In order to gain visibility of these components so as to properly make them available to their students by means of different learning opportunities, teachers should first thoroughly analyse the competences in order to divide them into components that will help set the lessons' aims.

Next, they must make sure that all these components are interrelated and systematically enriched, intensified, extended, without losing the relevance for the immediate reality. These are in fact prerequisites for maintaining the students' interest in learning and consequently for the much sought after life long learning.

Intended to serve as a model for those interested in the competences' planning process, the critical exercise presented throughout this paper (based on the competences' derivation process) offers valuable information about the way learning is constructed. Additionally, it draws attention to the importance of the lessons' design and the connections that need to be established between the goals set for them since nowadays an authentic and profound learning is not only desirable, but also (and perhaps more importantly) needed.

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