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DIRECTIONS AND KEY SOURCES IN DESIGNING CURRICULUM

Case Study

Keywords

Content organization perspective,
Perspective students characteristics,
Social perspective,
Self-management of learning,
Metacognition

Abstract

This study supports the foundation curriculum focused on skills in three ways: a) content-centred approach; b) centered approach to learning process; c) social interactions centred approach. These approaches correlate, according to the authors, to the model-centred instructional offered by one who teaches (Logocentric training system) the experience and knowledge of the learner (Empiriocentric training system), but also social valences learning (Sociocentric training system). The data collected shows that most students have a traditional training focused on skills of memorization and reproduction of information. It is necessary to change the methodology so that students acquire self-organization skills, Homing, and lifelong learning. Research methods used were observation, survey-based questionnaire and the experiment. After analysing quantitative and qualitative results, we could make relevant conclusions on the role of pedagogical training program to portray the competence of the teacher. The results were reported in the following aspects: theoretical; auto management learning skills; attitudinal-motivational training.

INTRODUCTION

Curriculum – design, development directions

An inventory of prospects from which the definition of the curriculum may be approached is developed by F. Lunenburg (2011, apud Andronache, 2013, p. 10):

a) Curriculum centered on content, perspective common to authors like P. Phoenix (1962), A. Bestor (1956), R. Hutchins (1980) or P. Oliva (1977) in which emphasis is placed on what *it has to be learnt, on the information that must be transmitted to those who learn,* considering that a large number of materials will develop their knowledge and skills;

b) Curriculum as learning experience, perspective found especially at authors such as H. Taba (1962), F. Bobitt (1918), J. Dewey (1938) and D. Tanner (1995) and which supports *the planning and guiding of positive learning experiences,* the finalities of the curriculum should have as a source the systematic reconstruction of knowledge;

c) Curriculum centered on objectives, the prevalent approach of authors likeR. Tyler (1949), B. Bloom (1956), B. Burke (2009) or R. Marzano (2010). The definitions of the curriculum are focussed on establishing and formulating *educational finalities*, that should guide the entire educational process and to which reports all its other components;

d) Curriculum as a training plan, perspective found at authors such as J. Goodlad (1998), J. Valerien (1991) whithin which theoretical approaches are focussed on the importance and role of *curricular products,* in organizing the educational process;

e) Curriculum as *a non-technical approach,* perspective that places curricular flexibility, in the middle of the fundamental elements of educational process, supporting the social substantiation of the curriculum, curriculum for developing critical thinking and curriculum designed in school, based on freedom of educational institutions.

Starting from these three main directions, designed by The International Encyclopaedia of Education (2003, p. 1164-1168, apudAndronache, 2013, p. 9): with regard to the curriculum design (''the contents and organization the school subjects; students and their characteristics and society, as sources for curriculum design''), the present study aims to sustain non-technical approach of the curriculum (Apple, 2001; Greene, 2008; Gilligan, 2010; Pinar, 2012).

f) With all changes the education has experienced over time, the contents and the organization of the curricula continues to be one of the main sources of curricular design. Centered upon the verb ''to know'', upon language, as means of transmitting and aquisition of knowledge, controlled by teacher`s activity, the logocentric model still works today, there are still used expository methods, resulting in a mechanical learning, of verbalist type. In this context, one should not overlook the fact that ''the sources of selection of the content are in a constant dynamic, this being strongly influenced by the quick changes in nowadays societies, under economical, political and cultural aspect etc.'' (Mogonea, 2014, p. 119).

The approach centered upon *students' features, their needs and interests*, on latter learning experiences, promotes a self-organized learning and self-directed one, a training model focused on personal experience. Learning is about implication and the development of all psychic processes, the student learns to identify problems, to look for information, to select them through reporting to some criteria, to organize them, to process them, to express hypotheses, to outline questions, to find strategies for overcoming obstacles and to solve them.

The social factor is as important as the individual one for developing knowledge in improving the students' personality. According to this view, at the basis of designing curriculum is the ideea of preparing pupils to cope with and adjust to the society they live in, **society** being a third important prevailing source in the substantiation of curriculum design.

The competence paradigm – basic principle in curriculum design

The term of competence has often been approached in specialized literature, outlining many perspectives of analyses and definition:

- The competence is a *complex* structure – organised at the intersection of the verbs ''to know'', ''to know how to do'', ''to know how to become along teaching career'' (Chiş, 2005) and containing a possible performance in activity – and dynamic, its efficient manifestation being a function of assimilated experience;

- The competence is the ability to play a part, to solve a sitauation/type of situations, to relate to it or, when we speak of skills, we refer to an intelligence of situations, which is in permanent progress (Jonnaert, 2005, apudJoiţa, 2008, p. 28);

- I. Jinga (2001) understands by professional competence of teachers ''a set of cognitive, affective, motivational and managerial skills, which interacts with the teacher`s personality, giving him the necessary aptitudes for didactic performances which are to ensure the goals achievement, that are designed by the vast majority, and the obtained results to be near the maximum level of the intellectual potential of each of them'';

- Skills are the results of a long process, they are achieved in time, and at the base of their achieving lies former experience of students, experience that should be renewed during educational activities or

during extracurricular activity (Popescu, 2014, p. 55);

- „the ability to mobilize resources (mainly cognitive) to explain, to analyze, to solve a complex situation, and also other internal resources of personality" (Perrenoud, Roegiersand De Keteleapud E. Joiţa, 2010, pp. 57-58);

- „a potential that is cognitive, operational, emotional, attitudinal, which successfully reacts when the situation calls it" (Ştefan, 2006, p.57).

Most theorists of paradigm agree with the next fundamental characteristics that can be associated with the analyzed concept (Ştefan, 2014, p. 20): a) competence is associated with an acting field; b) its components are indivisible (knowledge, skills, attitudes from within it are integrated); c) skills evolve, they change in content and efficiency; d) skills require a continuous process of learning and development; e) skills are interconnected and are specified according to the context in which they are uded; f) skills are being refined by the integration of new experiences of knowledge and action, the key to effective programs of developing skills is the identification of learning experiences to ensure the permanent development of knowledge and abilities associated to the competence.

Skills should assure the teacher's success in classroom, which often takes a virtual form (Mogonea, 2014) and are "neccessary for personal or professional development in terms of effectiveness and efficiency" (Frăsineanu, 2014, p. 71).

Also, there can be outlined some other features of competency, (Ştefan, 2014, p. 21):

a) *It is inclusive:* competence involves the integration of knowledge, abilities, skills, various attitudes;

b) *represents the result, the end of the training:* competence requires knowledge that is sufficient, relevant and organized, associated to abilities and capacities and that are integrated in types of situations. Thus, the development of skills takes time;

c) *it refers to a context of application;*

d) *it is a system of construction or reconstruction*; it develops and may be lost if it is not mobilized for a long time or if contexts, it changes a lot;

e) *it requires the implementation (combined)* of different knowledge, abilities, skills that a person holds at a specific time, in a specific context.

Within this context of the paradigm competence, curriculum design is a basic direction in research and pedagogical action, the aim being to determine the optimal interaction among educational purposes, instructive-educational contents, the teaching-learning strategies, the assessment strategies.

EXPERIMENTAL APPROACH – A PROGRAM OF DESIGNING AND IMPLEMENTING THE CURRICULUM OF THE PEDAGOGICAL DISCIPLINES IN ACADEMIC EDUCATION

Justification of the proposed program

Starting with the premises that teaching is not limited to the transmission of some contents in order to be imprinted in the memory of a passive learner, but responsive, but supposes to teach him to learn, in the present study we aimed to design and implement an experimental approach according to the principle of efficient and independent learning, a *Program of designing and implementing the curriculum of the pedagogical disciplines in academic education*.

The objectives of the training program

Assuming that the didactic professionalization is "a process of building a set of skills which allows mastering the specific situations of a profession" (Maciuc, 2005, p. 312), we have set the following objectives:

1. Changing the students mentality about the specific and the purpose of school, about the teacher's mission and roles, since "efficiency and effectiveness of the systems of teachers' training depend on the conceptual substance which substantiate them" (Ilie, 2011, p. 129).

2. The appropriation by students of a set of strategies, techniques, methods, procedures and instruments of self-management in learning;

3. Adopting a reflexive approach on personal and professional development.

The basic assumption of the study

Designing and implementing a program focussed on facilitating an assumed and self-directed learning, may cause changes at the cognitiv and metacognitiv level, but also at the motivatinal and attitudinal level, concerning the students.

Effective learning has three important features (Bernat, 2003, p.6): is active; is foccused on purpose; leads to measurable results. Effective learning tools are critical thinking and metacognitive strategies. "In most cases, people who have effective learning strategies are able to efficiently manage most of their functioning areas" (Călin, 2015, p. 75).

In the learning process, from the cognitive point of view, it is important to be trained and develop critical thinking. In this case we can call to questions like: *What is this information useful for, how can I put it into practice? How can I correlate the new information with the old ones? What examples can be suggestive for these data? What are the differences and the similarities between elements/situations? How can I generalize an ideea?*

Critical thinking is the instrument of effective learning which helps a person to guide herself in the world of possible alternatives and to be aware of the mechanisms of her own thinking. The most important contribution of critical thinking is that it causes the action, any comprehension being followed by a consequent action. (Bernat, 2003, p.7).

Throughout this approach, we realized that another cognitive skill should be developed, namely metacognition; its adequate evaluation may be a prerequisite in developing student's independence and in assuring success in academic learning. Metacognition includes in its structure: knowledge about knowledge (knowledge about our cognitive resources: own type of thinking, qualities of our memory etc); adjustment of knowledge (self-management of our own cocgnitive resources).

Metacognition may be taught and learned (Figure No. 1). That's why it "should be the subject of an explicit and intentioned learning and not that of an incidental, implicite learning". Here are some metacognitive strategies: identifying "what they know" and "what they do not know" (the awareness of the level of knowledge about the subject, the analysis of what they know about the topic and what do not know and are about to learn), discussions about thinking (discussions about the metacognitive activities envolved in problem solving, and which will help in developing the vocabulary specific to thinking (Blakey, Spence, 1990).

Constructivism promotes the teacher's reflexive competence, and this one, in his turn, may develop reflexive attitudes at his students, may create opportunities for valuing thinking in class, may use and encourage interactive and responsible style (Le Cornu, Peters, 2005).

Harpe, Kulski şi Radloff (1999, p.110, apud Lazăr, 2016, p. 22), draws the following **fundamental characteristics of student's effective learning:**
a) „he has clear goals about what he learns";
b) he has a wide range of learning strategies and knows when to use them;
c) he uses the given resources in an effective way;
d) he knows his strengths and weaknesses;
e) he understands the learning process;
f) he controlls his feelings in an adequate manner;
g) he takes responsibility for the learning process;
h) he plans, monitors, evaluates and adjusts the learning process".

In carrying out the educational process, the teacher's functions have various degrees (Lazăr, 2016, p.22): a) by reference to the learner – *support function*for drawing up a schedule of values (axiology), for capturing and controlling attention, for assuring the reverse connection (the feed-back), shaping the learning experience; b) by reference to social environment - participative function/ contributive to personal development (to enriching the experience of social communities, participating to professional and civic life, taking part in school activities – formal and non-formal); c) by reference to the educational process – *the function of designing/creating, projecting, organizing/ managing the educational process,* assessment, self-assessment.

Stages of the proposed training program
Starting with the premises that the development of cognitive and metacognitive behaviours is carried out gradually, through a better monitoring of student involvement in the learning act, we aimed framing some learning situations to determine the student to willingly engage in study, so as to become the *co-architect* of his own knowledge. The training of metacognition fosters the awareness of his own cognitive act, of his own actions that are chained throughout the independent learning process, assures the identification ofthe encountered difficulties and the mistakes he made, it allows the self-control, self-adjustment of the activity undertaken by students.

Studying the specialized literature and starting from the stages normally crossed through learning process, we considered that we should act in consequence, and therefore, we co-ordinated the student in each phase of the program. The stages of the proposed trainig program were as follow:

I. *Organizing a learning environment* that provides initiative opportunities, responsible involvement, angaged in learning; creating environments that help in motivating students in self-directed learning; starting with the premises the the students responsability is to learn/study, and the teacher has the obligation to awake his curiosity for knowing, we observed that learning through various situations, real or simulated strengthen/ supports the intrinsic-motivation;

II. *Direct familiarization of learners with the training of cognitive and metacognitive skills*involved in independent learning, combining, in the instructive process, the stages that imply self-adjustment with those of guidance.

The specialized literature (Winne, 1995) mentions, among the attributes of the independent learner, the followings: he looks for information and activates skills through which he gathers acquisitions; he is aware of how much he knows; he is aware of the effects of his actions; deliberates about tactics and strategies, he selects them for achieving his goals; has the ability to design realistic purposes; shows monitoring skills: he recognizes if the information has been understood, if the purpose has been achieved, indentifies mistakes, remembers the right paths that lead to progress during previoustask, he evaluates the performances.

Instructional strategies realized within the experiment

The options for didactic strategy applied to experimental classes, the formative activities had the following purposes: active responsible learning, based on student's personal effort; reflexive learning; simulative cases; experimental learning; collaborative learning; individual and group activities, focused on counseling and provision of advice.

As techniques that we have insisted on throughout the experiment, in order to organize the information and facilitate understanding, we can mention:

a) *Taking notes in an organized way* - is one of the first important steps in learning; emphasizing basic information (underlining, using colours, using some signs, as, for example circling key-words) or grouping the material in logical sequences, may facilitate the understanding of subjects;

b) *Using graphical representations* (the information is easier imprinted in memory when calling for graphic organizers; in addition, they are better understood, allowing the establishment of relations between different concepts, their place in a system.

The efficiency of students learning is conditioned, in our opinion, by a number of abilities and skills of the teacher: problematic wording of the questions, so that they create conflicts/ cognitive dissonance and therefore to arouse interest, epistemic curiosity, facilitating the aquisition of new knowledge, starting with their previous experience (cognitive organization); placing the student in different situations, guidance towards critical approach and connecting ideas with reality; correlating theoretical knowledge with the practical one; inserting throughout activity, of some spaces of personal interpretation, of thinking, of building the arguments; group dynamics and the students orientation towards achieving the desired learning objectives.

The proposed model takes into account the idea of social constructionism, being promoted learning based on interchange of information, of cognitive and emotinal experiences, by using some interactive methods, of some learning methods through cooperation, concentrated around the challenge and solving some socio-cognitive conflicts.

METHODOLOGY

The intervention program was conceived and applied to a sample of 180 subjects, students future teachers, enrolled in the psycho-pedagogical module within DPPD – University of Craiova, from the Faculties of Law, Theology and Letters.

In order to achieve the objectives and to validate the hypothetsis of the research, we used the observation, survey, focus-group test, as methods of data collection, the psychopedagogical experiment, as a method of educational intervention and methods of presenting and statistical processing of data (synthetic results tables, graphs etc.)

RESULTS

In order to achieve objective no. 1 – *Changing the student's conception about school purppose, about the mission and the roles of the teacher*, in the proposed experimental program, we debated with students several themes which represent the key point of the training focused on responsible involvement and assertion skills.

The relationship between the objectives of ameliorative program, the types of learning activities and the themes proposed in every type of activity, are found in table no. 1.

Comparative data on changing the student's mentality on specifics and purpose of school and on the mission and roles of the teacher

As a result of questionnaire, during the posttest, 92, 9% of students in the experimental group answered that the main purpose of school is training and skills development of learners, and therefore, the teacher has multiple roles, the main one being that of facilitating and coordinating the learning process. For the control group the response rate is 67,8% (table no. 2). Following the completion of inferential processing (hi square = 12,100 p=.000), we may conclude that the percentage of students that really understands the specific of the school and the roles of the teacher, is significantly influenced by participating in the intervention program.

Comparative data on aquisition by students of some strategies of self – management in learning

Educational activities centered on training students-future teachers intendedto display skills, abilities, capacities to adapt to various situations, to solve different problems, to self-adjust the learning process. Starting with the premises that "efficient memory skills do not always mean efficiency in learning" (Bușu, 2015, p. 27), we focused on developing the following cognitive capacities: *the understanding of essential ideas, critical thinking; coherent expressing of own opinions; metacognition.*

In order to achieve the objective no. 2 of our investigation, we have achieved an average of replies obtained from the items of the evaluation test.

Descriptive processing results show that there are no differences between the control group and the experimental group, in the pretest phase, while during the posttest phase, the subjects from the

experimental group obtained significantly better results, which would indicate the success of the interventional program. The results of the comparison between the experimental group and the control group in the post-test phase are shown in table no. 3. There are registered significant differences between environments, the subjects from the experimental group recording better results for all indicators of cognitive progress: *understanding of the essential ideas*:t= 5,33, p<0,01; *critical thinking:* t= 4,52, p<0,05; *coherent expression of their own opinions*: t=-4,42, p<0,01; *metacognition:* t=5,66, p<0,01;

Data about a reflexive approach of personal and professional development.

As the result of the carried out intervention, we noticed a development of the monitoring capacity of of their own process of personal development through reflection and reflexivity.

Following the collection, the analysis and interpretation of the reflections of students there have been noticed: the awareness of their own learning process; the identification of the encountered dificulties; finding solutions for overcoming jams; proposal of suggestions about personal and professional development; writing down on their own initiative, the outlined reflections drawn during the teaching-learning activity.

We present below some questions of the students that were taken from their reflections expressed in writing: what do I know and what do I have to find out about this theme? What sources can I use to obtain additional information? What are the key-words of this subject? How do I know if I caught the essence of the adressed theme? What mistakes do I make when I'm learning? How should I proceed to achieve my goals?

All these questions, drawn by students, underline the affirmation of metacognition in the process of knowledge.

Data concerning changes in motivatinal-educational plan

During the posttest phase, there were recorded changes at the attitudinal-behavioral level, among subjects from the experimental group (table no. 4). As the result of experimental intervention, improvements occured at the level of the intrinsic motivation of students, of responsible involvement in the learning process, of self-confidence.

In other words, methodology used in the experimental program, focused on facilitating self-directed learning, proves to have beneficial effects, both at the cognitive level, and in the motivatinal-attitudinal plan.

CONCLUSIONS

The general hypothesis was verified and validated through cognitive and metacognitive registered progresses, but also through the noncognitive changes: responsible involvement in the learning process, increasingsel-confidence and self-motivation.

Following the conducted investigation, we can outline some synthesizer ideas, axiomatic directions:

a) the student's attitude towards his own development is very important; the more we insist on highlighting the school peculiarity and its mission (the necessity of cognitive and acting skills, the diversity of the teacher's roles, the need of an integrated knowledge approach, the necessity of reflexive analysis, of the awareness of their own learning process) the students become more preocupied and more interested in their own training and therefore, the responsible involvement grows in this case;

b) students need theoretical training, related to effective learning in order to understand the essence and the need to develop metacognition in order to become aware of and improve their own learning process;

c) stimulating student's motivation by developing self-confidence represents an efficient strategy in working with students;

d) itis necessary to guide the student toward strategies and actions involving the development of the competence of *to learn how to learn*.

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TABLES

Table No. 1
The relationship between the objectives of ameliorative program, types of learning activity and the proposed themes within The Ameliorative Program

TYPES OF ACTIVITIES	OBJECTIVES	APPROACHED THEMES
Debates foccused on theoretical issue of the experiment	1. Changing the students conception about the school specificity and its role, about the mission and role of the teacher;	Need for lifelong education; Competence – desirable acquisition in training students; School mission and the teacher's roles in the formation and assertion skills of pupils/students; The role of metacognition in developing independent learning competence; Steps involved in effective learning; Self-esteem and motivation – attributes of effective independent learning.
Applied activities involving the use of learner-centered strategies and on the development of his skills	2. The acquisition by the students of a set of strategies, techniques, methods, procedures and means of self-controlled learning;	Problem solving, developing support materials for educational activities: sheets, summaries/ abstracts, essays, research projects, establishing possible strategies of (self)learning, cognitive maps or other graphs, various working tools etc.) and by simulating of sequences or didactic activities;
Applied activities focused on self-onitoring their own learning process Verbal or written shaping of the reflections concerning the instructive-educative activity and with regard to their own learning process	3. The adoption of a reflexive approach on personal and professional development.	In order to develop a reflective attitude, of subject/ individual opening towards self-monitoring, we stipulated actions such as: the understanding of the role the reflection, before, during and after learning, in improving self-instruction, in deepening self-knowledge, in prospecting future actions; in practicing and displaying metacognitive strategies; in the awareness of the necessity of displaying cognitive flexibility in independent learning.

Table No. 2
The frequency of the responses for the item about school mission and the teacher's roles in the posttest phase

Response	Gc-percentage	Ge -percentage
School has the mission to equip the learner with knowledge from various fields, and the teacher has the role of transmitting information	32,2	7,1
School has the mission to equip the learner with various skills, abilities, intelectual and practical competences; therefore, the teacher has multiple roles, in order to facilitate and coordinate the learning process	67,8	92,9
	100	100

Table No. 3
Pared Samples Test –The results of the t Test of comparing the averages/ the environments

The understanding of the key ideas	Critical thinking	Coherent expression of their own ideas	Metacognition
5,33	4,52	4,42	5,66
<0,01	<0,01	<0,01	<0,01

Table No. 4
Attitudinal and behavioral changes in the posttest phase – average values

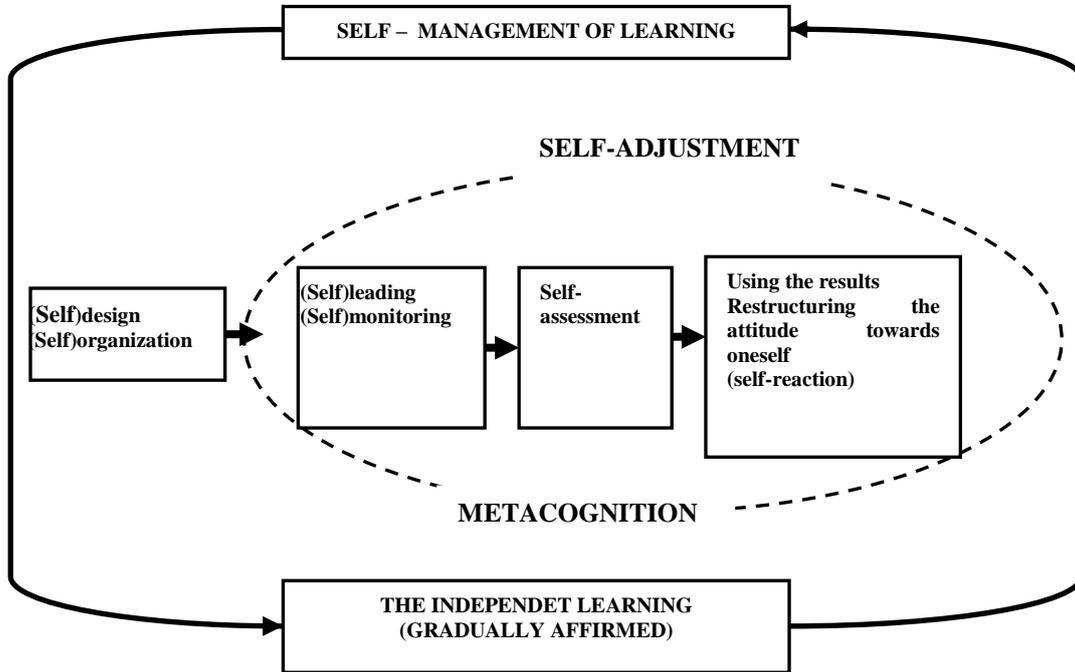| Sample	Intrinsic motivation for their own self-development	Responsible involvement in the learning process	Self - confidence
Gc	3,45	3,53	3,22
Ge	4,33	4,26	3,73

FIGURES

Figure No. 1: *Self-management of learning and encouraging autonomy in learning* (Ștefan, 2014)