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Ecological education and sustainable development. Student opinions

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Abstract

Ecological education is one of the priorities of the contemporary educational phenomenon. This fact is not due to the existence of a "fashionable" trend in the field of pedagogy but the awareness to a growing extent of the reality that our present actions on the planet and our way of relating to its resources will determine the fate of future generations. However, in many countries, the issue of ecological education issues is often in a secondary position in terms of the school curriculum, ignoring the fact that there is a close bond between promoting a way of thinking and action oriented on ecological principles and values on the one hand and sustainable development on the other hand . Considering that the school is the main factor of forming ecological awareness and developing ecologic behavior, our research aims to study the opinions of future teachers in primary and pre-school education regarding ecological issues and how to handle them.

Keywords: ecology, ecological education, sustainable development, ecological awareness, ecological behavior.

Zusammenfasung

Die Umwelterziehung gehört zu den Prioritäten des zeitgenössischen Bildungsphänomens. Dies liegt nicht an der Existenz eines 'Trends' im Bereich der Pädagogik, sondern an dem Bewusstsein in einem zunehmend höheren Maße von der Realität, dass unser Handeln auf dem Planeten und unsere Art des Umgangs mit ihren Ressourcen werden das Schicksal künftiger Generationen bestimmen. Jedoch, in zahlreichen Ländern das Thema der Umwelterziehung wird häufig in sekundären Plan gelassen hinsichtlich der curricularen Angebot der Schule. Oft vernachlässigt man die enge Beziehung zwischen der Förderung einer Denken- und Handelnart, die von ökologischen Prinzipien und Werte beeinflusst ist, auf der einen Seite und der nachhaltigen Entwicklung, auf der anderen Seite. Da die Schule der wichtigste Faktor der Umweltbewusstseinsbildung und der Entwicklung des Umweltverhaltens ist, unsere Studie stellt sich vor, die Meinungen den Studenten, zukünftigen Lehrer für Grund- und Vorschulerziehung, in Bezug auf der Umwelterziehung und der Weise ihrer Ausführung zu analysieren.

Schlüsselworte: Ökologie, Umwelterziehung, nachhaltige Entwicklung, ökologisches Bewusstsein, Umweltverhalten.

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1. Introduction

Contemporary specialty literature devotes ample spaces for the issue of ecological education and the detailed conditions of implementation. In the natural sciences, the term 'ecology' has a quite specific definition as the study of the interrelationships between living organisms and their physical environment (Walker, 2005). Industrial development and the negative effects that it has induced on the environment through pollution have determined a focus on the particular relationship between man and the surrounding world. Thus, while ecology appears to focus on relationships with the natural environment, the notion of human ecology is explicitly interested in interactions between people (individuals and groups) and their environments (Hautecoeur, 2002). Awareness of the fact that, by the nature of actions, people produce imbalances in the environment has prompted specialists in pedagogical sciences to initiate educational programs aimed at accountability, in the sense of changing human attitudes and behavior towards nature and the planet's resources. All of these steps are generically called ecological education.

The general objectives of ecological education are forming ecological awareness and developing ecologic behavior. Ecological awareness is the cognitive dimension of the ecological attitude and concerns the understanding of both the way human activity affects the environment and the impact that pollution and waste of natural resources have in the medium and long term on the future of mankind. Ecological behavior includes a number of skills and abilities guided by the ecological awareness and aimed at protecting and conserving the resources and conditions of the natural environment. We mention in this context the fact that between forming the ecological awareness and modeling the ecological behavior there is a close relationship of interdependence.

Achieving the overall objectives of ecological education requires meeting several previously set specific objectives such as:

- *awareness:* helps students gain a full understanding and sensitivity to the environment and its problems; develops their ability to understand and distinguish incentives, to process, refine and expand these perceptions; contributes to the use of these new skills in several contexts;
- *knowledge:* helps students gain a basic understanding of the functioning of the environment, human interaction with the environment and how environmental problems occur and how to solve them;
- *attitude:* helps students acquire a set of values and feelings of concern for the environment as well as the motivation and commitment to participate in maintaining the environmental quality;
- *skills:* help students acquire the skills necessary to identify and investigate environmental issues and to contribute to solving its problems;
- *participation:* helps students acquire experience in using the knowledge and skills acquired for positive and thoughtful actions that will lead to solving environmental problems (Braus & Wood, 1993) p 19.

Ecological education and its purposes are not an end in itself but they are intended, ultimately, to ensure sustainable development. Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Jepson, 2004).Building the capacity for such change is an essential objective of our education system, particularly to help those who are about to enter employment from higher education or those in employment who are

taking postgraduate or other forms of training as part of continuing professional development programmes (Martin, 2008).

The phenomenon of consumption is also important in the context of sustainable development. People in developed countries are among the world's largest consumers of natural resources and their production and consumption patterns have major environmental, social and economic impacts around the world. As indicated in the 1998 *Human Development Report* (UNDP 1998), for example, 20 percent of the world's population living in OECD countries earns 85 percent of the world's annual income; consumes 75 percent of global energy and more than 80 percent of other resources annually and generates 75 percent of the annual global pollution (Carley & Spapens, 2007, Fien, Cameron & Bentley, 2008).

Because sustainable development deals with the tension between ecological sustainability and economic development, both social and technological innovations come into play. Sustainable development requires innovation—based on new knowledge and technology, on a demand from the market and on educated people able to apply knowledge and technology in a societal context or to translate societal demand to research questions in a design process (Dam-Mieras & Rikers, 2007). This fact induces a double necessity in the plane of educational reality: on the one hand the need for a curricular approach in a consistent, comprehensive and integrative manner of the issues belonging to ecology and sustainable development, and on the other hand, the need to equip future teachers with the knowledge, skills and abilities able to allow treatment of environmental issues in the classroom not only from a multidisciplinary or interdisciplinary perspective but also from a transdisciplinary one. This change of perspective is not just a theoretical one, it involves numerous practical effects. For more than a decade there has been an increasing move towards the inclusion of environmental issues and sustainability in higher education institutions. Recognising that they prepare many of the world's managers, decision makers, designers and teachers and, therefore, have considerable influence over the direction that society takes (Bekessy & al. 2003; Fien 2002), universities are now accepting responsibility for leading society towards a sustainable future (Cortese 2003, Harpe & Thomas, 2009).

However, the presence of concerns regarding ecology and sustainable development in the overall economy of the contemporary educational phenomenon is, unfortunately, quite modest. If media coverage is any indication, the world at large is seriously concerned about our environment, population growth and climate change. There has been little improvement of the well-being of the average person living on earth, and in many countries the gap between rich and poor has grown considerably. Yet, despite the fact that education is seen as a key transformative factor in the improvement of the environment and our future sustainability, and the fact that there has been considerable discussion regarding education for sustainable development (ESD) at a policy level, very few countries and communities have moved to integrate ESD into their educational curriculum, let alone implemented it as the basis of a reorienting or transforming education. We contend that there are three important missing factors that contribute to this apparent lack of action: consensus as to what constitutes ESD, an adequate conceptualization of the role of human agency in sustainable development, and a basis for direct practical application of a well-defined concept of ESD in education systems. In order to develop coherent policies and practice for ESD, educators everywhere must be able to understand the meaning of ESD and its component concepts, articulate the values inherent in those concepts and identify consequent, progressive educational practices (Landorf, Doscher & Rocco 2008). We therefore believe that for the reconsideration of the place and role of ecological education in the contemporary educational paradigm it is necessary to investigate the opinions of students, future teachers, regarding this issue.

2. Major research coordinates

The main objective of our research is to study the perspective that future primary and pre-school teachers have regarding the issue of sustainable development, ecological education and its conditions of efficiency. The group of subjects consisted of 108 students from the "Primary and preschool pedagogy" specialization. The main research method used was the questionnaire based survey. The questionnaire included a total of six items with possible answers and the results were expressed as percentages in tabular form.

3. Presentation and interpretation of results

The first item of the questionnaire aimed to surprise the students' opinion regarding the importance of ecological education in relation to other dimensions of education (moral education, aesthetic education, religious education, intercultural education, health education, etc.). The results are presented via Table 1.

Table 1. : The importance of ecological education in relation to other dimensions of education.

Answers	N	%
More important	19	17.60%
Equally important	82	75.93%
Less important	6	5.55%
Not important at all	1	0.92%
Total	108	100%

As we can see in the table above, the majority of subjects (75.93%) believe that ecological education is as important as the other dimensions of education while 6.47% of the students consider that it is less useful or not useful at all. We also observe that only 17.60% of the respondents are aware of major disturbances that human activity has produced in the environment, disturbances primarily visible through ongoing climate change and they believe that ecological education should play a major role in the context of contemporary education. This fact illustrates that most of the respondents consider ecological education more of an orientation in education rather than a concrete solution for the current environmental problems that mankind presently faces.

As it is known, our beliefs deeply affect our actions. In other words, there is a linear relationship between the intensity of our beliefs regarding the positive effects of an action and the consistency with which we are willing to actually put it into practice. Thus, the second item of the questionnaire aimed to surprise the extent to which future teachers truly believe that ecological education is key to preserving the planet's resources and ensuring sustainable development. The responses to this item are summarized in Table 2.

Table 2. The effective utility of ecological education for the conservation of resources and sustainable development.

Answers	N	%
Very useful	21	19.44%
Useful	60	55.55%
Slightly useful	26	24.08%
Useless	1	0.92%
Total	108	100%

The percentages shown in the table above confirm our conclusions from the analysis of the data in Table 1. We thus observe that only 19.44% of students believe that ecological education is very useful from the point of view of conserving the planet's resources and sustainable development. Although 55.55% of them appreciate the utility of ecological education from this perspective, we cannot fail to notice the fact that 25% of future teachers consider ecological education as being slightly useful or not useful at all, a worrisome fact, in our opinion.

The third item of the questionnaire focused on factors that students consider as the most important in the formation of ecological consciousness and behavior. We present the results recorded via Table 3.

Table 3. The factors responsible for the formation of ecological attitudes.

Answers	N	%
Family	13	12.04%
School	71	65.74%
Friends	2	1.85%
Mass-media	22	20.37%
Total	108	100%

The analysis of data presented in the table above shows that 65.74% of respondents consider that the main responsibility in forming ecological awareness and modeling ecological behavior falls on the school. In the second position, from this point of view, lies the mass-media (20.37%), followed by family influences (12.04%) and the group of friends (1.85%). We notice the fact that students recognize both the importance that the school, as the formal educational factor, holds in the overall economy of ecological education as well as the major influence that the mass-media, as an element of informal education, has on the development of the ecological attitudes of the young generation.

The next item was aimed at capturing the students' opinion on the curricular status that ecological education should hold in school. The results are summarized in Table 4.

Table 4. The curricular status of ecological education in school.

Answers	N	%
Mandatory subject	19	17.59%
Optional subject	39	36.11%
The topics of ecological education to be included as modules in other disciplines	41	37.97%
Studying ecology is not necessary	9	8.33%
Total	108	100%

The data presented in the table above reveals that most of the respondents believe that ecological education should be included as modules in other disciplines such as biology, chemistry etc (37.97%) or that ecological education should have the status of optional discipline (36.11%). The option of introducing ecological education as a mandatory subject was opted for by 17.59% of students while 8.33% consider that the study of ecology in school is not necessary.

The fifth item of the questionnaire sought to identify the subjects' opinions on the relationship between ecological education and other disciplines such as biology, physics, geography or chemistry. The students' responses to this item are shown in Table 5.

Table 5. The status of ecological education in relation to other subjects.

Answers	N	%
Complementarity	78	72.22%
Diferentiation	17	15.74%
Superposability	13	12.04%
Total	108	100%

The vast majority of subjects, 72.22%, consider that between ecological education and the disciplines listed above there is a complementary relationship in that, on the one hand, teaching knowledge and processes specific to these disciplines facilitates understanding the importance that the actions of the human species are exercised on the environmental conditions and on the other hand, ecological education provides the opportunity to address the reality that surrounds us as a whole. However we cannot fail to notice that if 15.74% of respondents consider that ecological education has no relation to the subjects mentioned above, 12.04% believe that teaching ecological education in schools is not necessarily needed because its contents are found incorporated in various forms in disciplines such as biology, physics, geography and chemistry.

The last item of the questionnaire was aimed at capturing the extent to which future teachers believe that teaching ecological education requires a specialized initial training. In other words, we wanted to see not only what the opinion of future teachers is regarding the importance and usefulness of ecological education but also the extent to which they believe that an efficient teaching of this discipline requires the introduction of specialized courses in the initial training program specialized on teaching and learning ecological education . The results are shown in Table 6.

Table 6. The need for special training for the efficient teaching of ecological education.

Answers	N	%
Yes	51	47.22%
No	29	26.85%
Undetermined	28	25.93%
Total	108	100%

The subjects' responses to this item indicate that less than half of them (47.22%) believe that teaching ecological education requires psychopedagogical training and specialized methods. Moreover, we observe that 26.85% consider that this initial specialized training is not necessarily required and 25.93% answered that they are undetermined. We believe that both types of responses indicate in the best case scenario the existence of a superficial attitude or even carelessness towards issues of teaching ecological education in schools.

4. Conclusions

The results obtained following the survey regarding the attitude of the future teachers regarding ecological education allow us to draw several conclusions. First of all, we observe that the vast majority of subjects (75.93%) believe that ecological education is as important as other disciplines of study. However, almost a quarter of them consider that ecological education can contribute only slightly or not at all to conserve the planet's resources. This lack of confidence in the effective usefulness ecological education can be observed in item four, where over 80% of respondents believe that ecological education should not be a mandatory subject. We also observe the fact that although 65.74% of the students consider school to be the main factor responsible for the formation of an ecological attitude in the young

generation, only 47.22% of them believe that their initial training program should provide specialized training in this regard. This fact makes it necessary, in our opinion, both to raise awareness to a greater extent of future teachers regarding the importance of ecological education as well as restructuring initial training programs by providing specialized courses on the issues of ecology and its role in ensuring the conservation of the planet's resources and sustainable development.

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Educational Paradigms in Contemporary Context and Educational Implications to the Potentiality Level of the Preadolescent Students

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Authors note

The teaching and research activities carried out currently as a Lecturer Ph.D., on the major field of education sciences, materialized in teaching / evaluation educational actions (for the initial training of the future teachers), preparation of training materials (courses, guides, etc.), but also in designing and implementing research / development / training projects (especially sighting the continuous training, the primary and secondary education teachers' improvement), and in carrying out researches on topics directly related to certain issues of school education, and also in a scientific contribution materialized in a series of articles, studies published in famous national and international journals, are especially focused on the following *areas of interest*: *General Pedagogy, Curriculum Theory, Classroom Management, Educational Communication, Educational Policies, Theory and Practice of Evaluation.*

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Abstract

The requirements for an education centred on the student and for adapting the school to the learning possibilities of the students are in accordance with the new principles of the contemporary education and pedagogy and with the European educational documents, which are the base of constructing the contemporary educational systems. The idea of the education centred on the student – as person with individual characteristics that need to be valued and capitalized in education – is highlighted by the postmodern educational paradigm and by the constructivist approach of knowledge and education. Post modern tendencies mostly correspond to the constructivist approach in education, especially through the role given to the student concerning knowledge acquisition, and altering the role of the teacher and learning strategies with a strong formative aspect. The study tries to identify a series of educational implications related to the psychic cognitive and emotional - motivational processes specific to preadolescents students under the form of applicable strategies to the educational practice, implications that are subsumed to the requirement of adapting school to the necessities and possibilities of the student, as dimension of the constructivist paradigm.

Keywords: the paradigm of education centred on the student, adapting school to the possibilities of the students, preadolescence, constructivist paradigm

Zusammenfasung

Die Anforderungenfür eine Ausbildung zentriert auf dem Schüler sindinÜbereinstimmung mit den neuen Prinzipien dermodernen Bildung und Pädagogik undmit deneuropäischen Bildungs Dokumente. Die Idee derpädagogischer Bildung auf dieSchülerals Personmit individuellen, differenzierende Zeichen, dieaufeine maximalein der Ausbildungbewertetwerden,wird von derpostmodernen Paradigmain der Ausbildung undvon derkonstruktivistischen Ansatzdes Wissens und Lernenshervorgehoben. Die postmodernen Richtungen sind hauptsächlichentsprechend der konstruktivistische Ansatz in der Bildung, vor allem durch die Rolle der Studierenden in Verständnis. Sie modifizieren die Rollen des Pädagogen und der Lernstrategien mit einem wichtigen formenden Charakter. Die Studieversucht, eine Reihe von pädagogischen Auswirkungenauf diepsychischekognitive und emotional - motivazionale Prozesseder vorpubertären Studenten zu identifizieren Motivationsspezifischunter der Form dergeltenden Strategienfür die pädagogische Praxis, Auswirkungen, dass zusammengefasst werden, die der Schule zur Anpassung an die Notwendigkeiten und Möglichkeiten der Schüler, als Maß der konstruktivistischen Paradigma.

Schlüsselworte: das Paradigma der Bildungzentriertauf der Student, Anpassung der Schulauf die Möglichkeitender Schüler, vorpubertären Alter, konstruktivistische Paradigma

Educational Paradigms in Contemporary Context and Educational Implications to the Potentiality Level of the Preadolescent Students

1. Introduction

The requirements for an education centred on the student and for adapting the school to the learning possibilities of the students are in accordance with the new principles of the contemporary education and pedagogy and with the European educational documents, which are the base of constructing the contemporary educational systems. Also are in accordance with these the other principles and dimensions of the contemporary pedagogy: education for all, partnership for education, stimulating the critical thinking, learning by solving problems, the preponderance of interactive experiences, which generates deep learning, and the preoccupation for forming competencies. The requirement of placing the student in the centre of the educational process, of adapting all activities to his capabilities and interests, is an approach to education proper to the constructivist paradigm, which, by comparison with the traditional paradigm presents a number of significant changes in design, strategy and action.

The paradigm of school adjustment to the demands and teaching possibilities of the student, a characteristic of education in the future, but also of education systems organized according to the network model (Chiş, 2005), prompts for a diversification of learning situations and experiences, and setting them up according to the possibilities and needs of all student categories in order to meet the following principles: "inclusive school", "school for all", "integrated teaching".

The idea of the education centred on the student – as person with individual characteristics that need to be valued and capitalized in education – is highlighted by the postmodern educational paradigm and by the constructivist approach of knowledge and education.

2. Dimensions of the contemporary educational paradigms

Adapting the school, the educational strategies and the entire instructive process to the individual needs of the students, to their learning capacities and particularities are one of the dimensions of the postmodern paradigm in education. E. Păun (2002) highlights the following characteristics of postmodernism in education in a study dedicated to the analysis of theoretical developments in terms of the postmodern pedagogical paradigm:

- learner-centered education, the student being seen as a person with individual, different characteristics that should be valued and used to the maximum (an idea situated at the center of the existential-humanistic paradigm, subsumed to the postmodern perspective);
- upgrading of the subjective-emotional dimension in relation to education, to the subjects' actions and behaviors of subjects who have a unique, situational, contextualized character;
- considering the relationship of education as a teacher-student interaction. Both the teacher and the student are engaged in a process of cognitive and emotional investment, and the teacher works with students so that they develop and acquire the status of being students;

- creating a balance between promoting competition and cooperation in school;
- overcoming the prescriptive normative formalized vision on the curriculum theory and integrating it into the classroom space (cultural space) in order to analyze the cultural contexts in which curriculum is structured and to re-elaborate and to continuously process it.

In the context of post-modern vision on education, on pedagogy, constructivist approach to knowledge and learning has also its place, being considered a post-modern paradigm in education. Orientation towards the individual and his values, subjective way of individual knowledge, personality development in an authentic social context, his own construction of knowledge by developing various meanings and significances, by interpretation, by reasoning according to a cognitive own experience, are some of the constructivist dimensions that are also found in postmodernism.

Post modern tendencies mostly correspond to the constructivist approach in education, especially through the role given to the student concerning knowledge acquisition, and altering the role of the teacher and learning strategies with a strong formative aspect.

Summarizing the references regarding constructivist learning, E. Joița (2006: 62, 65) describes the following dimensions of the idea of centering the educational process on the student, as the main element:

- the students look up the information, process it, and then discuss it;
- the students gain subjective knowledge by asking questions, correlating, forming hypotheses, finding solutions, bringing arguments;
- focusing on understanding, critical analysis, self-interpretation and argumentation;
- encouraging autonomy of knowledge and actions, initiatives and curiosities;
- students shift from the passive attitude of receiving information to an attitude of mental and active involvement;
- the student solves problems by: learning though discovery, searching, formulating, making decisions;
- the students' new knowledge is the result of rebuilding the old one, of integrating the new data;
- the student organizes and performs his/her own teaching by forming the capability to "learn to learn, to know";
- the role of the teacher is to organize the information, problems, assignments, materials, to facilitate, guide, coordinate, offer support, formulate and encourage asking questions, encourage individual responses, debates, negotiations, and to give the final summary.

A series of documents of international educational policies promote and support dimensions of the student-centered paradigm and of a real school adjustment to the possibilities and needs of the student: the Convention on the Rights of the Child, the Dakar Framework for Action at the World Education Forum, the Millennium Development Goals, UNESCO's Medium-Term Strategy, 2008-2013. The need of school adjustment to the various educational needs, to the learning and development characteristics of each child is also reflected by the concept "education for all" launched by Jomtiem at the World Conference on Education for All (1990). Providing a quality basic education, acknowledging

the diversity of the educational individual needs, engaging in a pedagogy that is student-centered, the right of every child to a complete cycle of elementary school, are a few of Jomtiem's recommendations in order for everyone to get a basic education. (Vrăşmaş, 2001: 22).

Flexing and individualizing curricula by adapting the educational offer to the individual needs is one of the priorities of the Romanian pre-university education reforms, representing an essential aspect of the curricular system reformation. Generating a new type of curriculum is characterized by: transitioning from a teacher-centered school to a student-centered school by promoting interactive learning methods, flexing the curriculum, adopting an inter- and transdisciplinary approach to the curriculum, is in accordance with the paradigm of adapting the school to the demands and possibilities of the students, giving all of them an opportunity to identify their interests and to fully use their aptitudes and capabilities.

The national documents for educational strategies, trying a harmonization between internal priorities and the European ones, stipulate the following objectives and lines of action, converging with the paradigm of school readjustment to the student's needs:

- Ensuring equality of chance and growing the participation to education, through the stimulation of participating to compulsory studies, post-compulsory and academic studies (centring the teaching – learning process on the students; ensuring the equality of chance to the admission to the pre-academic studies; eliminating any form of discrimination; specific programmes to prevent and fight the school abandonment);
- Ensuring basic education for all citizens; forming key-competencies (ensuring continuation for the objectives and the content of the curricula for pre-school, elementary school and gymnasium; the usage of modern and interactive teaching methods; promoting modern study techniques and methods, also efficient learning styles as "learn to learn", "learn how to do", "continuous learning";
- Substantiating the educational process on the needs of the students for personal and professional development (analysing the field of interest and the educational needs of the students; developing flexible and individual learning and professional routes; offering school and professional counselling and orientation).

We underline the fact that then national educational strategies sustain and promote the principle of school readjustment to the needs and to the capacities of the students, at the level of objectives and lines of action contained by the official strategic educational documents, trying to create a qualitative education and the insurance of chance equality during the entire educational route.

3. Optimizing the potential of the preadolescents students

Pre-adolescence, as stage in the ontogenetic development, ranging between the ages of 10-11 to 14-15, also known as mid-school period, marks the ending of childhood and the beginning of maturity stages, the beginning of integration in adult society. Its main characteristic is the intense development of personality. It is a period characterized by spectacular changes, which shall include: increased growth process, changes in intense psychosomatic, cognitive development, especially the thinking that goes into developing a new level of mental activity characterized by the ability of interiorization, increasing aspiration towards independence, autonomy and increased self-awareness.

All the changes from the preadolescence (biophysical, intellectual, emotional, moral, social) must be well known by teachers and parents to better integrate them in understanding the preadolescents and

adopting the most adequate solutions in fighting the educational difficulties, especially in the period of entering the middle school. Knowing the age particularities, the specific of this stage in the development of the students, including resources, motivations, adaptation mechanism, psycho-physical transformations and their consequences, will avoid an overstressing the limited possibilities of this stage and will offer an improved understanding of the behavioural manifestations and reactions of the preadolescents.

Knowing the age and individual particularities of the preadolescent students is an essential condition of ensuring the instruction centred on students – one of the dimensions of the constructivist paradigm that rehabilitates the role of the student in education, considering knowledge as specific to the age and also based on an own model where the student integrates, explains and interprets the reality, based on his own cognitive knowledge.

Knowing and respecting the age and individual particularities of the students is one of the classical principles specific to the traditional didactics, which, together with all the others principles, contributes to an optimal achievement of the aims of the instruction process, serving to an instruction centred on the teacher and on the informational content and ensuring an exact, active and guided teaching. From another point of view, researches upon the constructivist approach of instruction identified a series of principles related to modalities of centring the teaching on the student, principles that may be considered specific norms for the application of the general classic principles. Thus, the numerous principles of constructivist instructions may be considered particularizations or application norms to the principle of knowing and respecting the age particularities of the students.

The new particularities of *thinking* influence all cognitive processes, especially the pre-adolescent's learning activity. The diversity of school subjects studied and the increase in the degree of complexity of their content determine a development of the system of knowledge an notions acquired by the pre-adolescent. In order to put the whole potential of the student to value and to organise efficiently the educational activities, it is necessary to identify the cognitive style for each student. The task of the teacher, related to the diversity of learning styles, is to know the students' learning styles, to help them become aware of the characteristics of their own styles and to support them in solving learning tasks, according to each individual's style.

Knowing the varieties of the students' learning styles and recognizing the need to use a wide variety of didactic strategies create the premises for obtaining superior school performances, regardless of the learning style developed (Neamțu, 2003).

Concentrating on the use of predominant didactic methods, at the expense of a variety of methods, which would develop more learning styles, could determine difficulties of school adaptation, especially at the beginning of the secondary cycle, when the students are a forced to adapt to different teaching styles used by each teacher. The use of varied and adapted didactic methods make the chances of success equal.

Taking into consideration the new particularities of the pre-adolescent student's *memory* as well as the new educational requirements which the student confronts once he goes to the secondary cycle, the teacher must permanently train and stimulate a logical memory of the students and create optimal condition which ensure the students' proper learning, avoiding situations in which some students are privileged or disadvantaged. To facilitate the integration of the new knowledge in the system of the existing ones, the following are recommended (Sălăvăstru, 2004:62):

- realising and using schemes to represent the relation or hierarchy of concepts;

- using analogies with similar contents acquired before;
- using pre-established organisers, which represent the ideas presented by the teacher before the system of knowledge which is to be assimilated, having a superior level of abstraction and generality, with the purpose of realising a pre-established orientation, making ideas more accessible, offering a general image on what is next to be learned.

To keep the knowledge its repetition is required, through an active participation of the student, which supposes:

- understanding thoroughly by realising associations with previous knowledge;
- establishing precise and varied goals for each revision;
- solving problems, doing applications, practical work, which require the use of the information assimilated.

One of the conditions of the development of students' *creativity* is stimulating independent thinking, through the use of heuristic didactic strategies, by encouraging students to formulate, analyse and solve problems, discover knowledge. The effects of this type of learning are felt not just at the level of creativity, of the creative solving of problems, but also at the level of the student's entire personality (inter-personal relations, communication, trust in own forces, etc). Using didactic methods such as: brainstorming, Phillips 6-6, panel discussion, the method of creative solving of problems, favour the free association of ideas, by removing critical spirit and using the unconscious' resources to the fullest.

The enrichment and development of language facilitate the social integration of the student, give security, develop thinking, imagination, sensitivity, contributing to the achievement of superior school results. But, an exclusive and obsessive orientation of the pre-adolescent towards reading by the parents and teachers risks to generate a decrease in the interest for learning. In order to favour the enrichment and development of language, it is recommended, both for teachers and parents (Cozma, 2001):

- to orientate the pre-adolescent's desire for reading towards well-known, valuable works;
- to put the student in situations of communication as varied as possible;
- to have patience to listen to him every time until the ending of the message he wants to transmit;
- to encourage him in the desire to communicate his thoughts or narrate events or films;
- to offer a model of neat ways of expressing himself.

Although stimulating educational motivation is considered to be an art, depending on the pedagogical capacity of the teacher (Sălăvăstru, 2004:90), the knowledge and usage of motivational strategies guides the teacher to accomplish some desiderates: highlighting the practical importance of the discipline; expressing the trust in the learning capacity of each student; ameliorating the perception of the student regarding his own potential and competency, using adequate tasks and educational activities; avoiding the involvement of students with learning difficulties into competitive situations to avoid discouragement and demotivation; optimally dozing the intensity of motivation in accordance with the nature of the learning task; involving the student during educational activities through the usage of active – participative, student centred teaching methods, in order to activate the cognitive and operative structures of the student; building a positive attitude for the learning tasks and for a new learning content through the usage of problem simulations; using charts for the learning content to highlight the

relationships between different concepts; using a stimulating progressive evaluation, centred on educational efficacy of the students from one stage to another, especially for students with learning difficulties; evaluating the fields of interest and the preferences of the students, in order to establish connections between these items and curriculum.

4. Conclusions

We underline that the evolution of the instruction process according to the principles of the paradigm of centring the teaching on the student and adapting school to the possibilities and the necessities of the student will help the students to discover themselves and will not try to form them after patterns, instead forming them as autonomous persons, based on their wishes, interests, motivations and feelings. The educators must pay more attention to the emotional motivation and orientation. Valuing inside the educational practice the ideas and the principles of the education centred on the student, the teachers will create complex personalities that are interested in the problems of their fellows, also following their dreams and ideals without pre-established trajectories.

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Intellectual education preschool through integrated activities

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Abstract

Integrated activities lay the stress on the development of critical thinking, on the creation of practical competencies, on the qualitative aspect of education, on positive feedback, on measuring and evaluating competences. It cultivates independence, openness to innovation, positive emotions, self-control. Integration is achieved through a coherent script of the contents which correspond to the involved subject areas. The proposed contents have a common subject which is to be investigated and explained after going through the subjects and after achieving the proposed objectives. The integrated approach is a combination of the teaching/learning contents in an attractive and flexible manner which leads the child`s activity towards investigation, documentation, research and practical application of the information acquired. The success of teaching integrated contents in kindergarten greatly depends on the degree of structuring the projected content as a whole with taking into account certain aims. The natural learning and the rigorous learning represent extremes which must co-exist within an integrated curriculum. Through approaching the activities in an integrated manner, the kindergarten teacher organizes the process of teaching as a director and helps the children understand and accept opinions, emotions and feelings, the teacher encourages them to be partners in the teaching process.

Keywords: integrated activities; teaching integrated contents; integrated curriculum

Zusammenfasung

Durch das Angehen der Aktivitäten in dem Kindergarten in einer inegrierten Form organisiert die Eryieherin das Lehren wie ein Regiseur, indem sie den Kindern hilft, die eigenen persönlichen Meinungen und Gefühle zu verstehen, akzeptieren und zu fördern und sie sollen Partner an dem Lernenprozess sein.

Der Vorschüler/Kindergärtner, indem er die integrierte Aktivitüt durchführt, hat die Möglichkeit die eigenen Meinungen auszudrücken , mit den Anderen zu kooperieren damit sie dann neue Ideen entwerfen, die sie zur Lösung einiger Aufgaben, in der Begründung, benützen können , indem sie dann aktiver werden und so mehr Selbstvertrauen gewinnen.

Die integrierte Behandlung ist eine Verknüpfung der Lehrinhalte in einer atraktiven Form, flexibel, beweglich, die die Aktivität des Kindes zur Nachforschung, Dokumentieren, Forschung und die praktische Einführung des Gelernten , führt. Das Gelingen der integrierten Lehraktivität der Inhalte in dem Kindergarten hängt im grössten Teil von dem Grad der Strukturierung der geplanten Inhalte ab, in einer gesammten Darstellung, indem sie einige bestimmte Endergebnisse verfolgt. Das Lernen in einer normalen Denkensart, einerseits und anderseits, das Lehrnen gemäss einer genauen Einteilung sind Extreme die in dem integrierten Kurrukulum nebeneinander existieren mussen.

Schlüsselworte: İntegrierte Aktivitäten; Unterricht integriert Inhalte; integriertes Curriculum

Intellectual education preschool through integrated activities

Through approaching kindergarten activities in an integrated manner, the kindergarten teacher organizes the process of teaching as a director and helps pupils understand and accept opinions, emotions and feelings, the teacher also encourages them to be partners in the teaching process. Through participating in integrated activities, the preschool pupils have the possibility of expressing personal points of view, of cooperating with other pupils in developing new ideas, in solving tasks, in supporting ideas, thus becoming more active and involved and gaining more self-esteem.

The proposed contents have a common topic which will be investigated and clarified after going through these topics and after achieving the proposed objectives. Thus, the integrated approach represents a successful mixture of learning contents in an attractive, flexible and active way which leads the pupil`s activity towards investigation, documentation, research and the practical application of the learning contents. The success of teaching integrated contents in kindergarten greatly depends on the degree of structuring the projected contents in a unitary manner, taking into account certain finalities. The entire program is achieved through the educational game, the games are not chosen at random, they are rather organised ones, in which the pupil has the possibility of exploring different environments and of achieving different tasks, either individually, or in small groups. The role of the kindergarten teacher is that of organising the activity so as to offer pupils a large range of choices which enables the achievement of the objectives proposed at the beginning of the program.

Types of curricular integration

Specialized literature provides a series of models used for organising and monitoring the integrated curriculum.

a) The branched integration model – the main element of this model is represented by the studied topic, the detailed presentation of the learning experiences is achieved at the first level through the fields of activity included in the curriculum. A second layer includes the instruction experiences structured on different psychophysical individual dimensions: intellectual, affective, social, physical. Having in view the purposes established for these two levels, the teacher chooses the content which pertain to the main topic and which can contribute to the achievement of the purposes.

b) The linear integration model (the hybrid model) – at this level, the curricular integration is achieved via a transfer finality of „development of social behavior" type. Through their complexity and through the integrated specific character, these finalities can represent independent (sub)domains. This model of projection applies for long-term finalities and it is very suitable for projecting differentiated and individualized educational intervention which aim at recouping and development.

c) The sequential integration model – within this model the knowledge pertaining to the same topic is taught in a temporal sequence, yet the approach is different, the teacher facilitates the transfer of the information acquired from one field to another through comments, questions and tasks. The projection on topics, a current requirement in the Romanian preschool education, often highlights this type of curricular integration.

d) The model of infused curriculum – the specific feature of this pattern lies in the fact that it approaches different topics from the perspective of a temporary sphere of interest (for example a complex finality such as understanding the concept of (ir) reversible change, the time-change relationship, etc., the analysis of structures and the comparisons of natural structures with the ones created by human beings). This model can also have a permanent character (for example the study of an optional subject in a foreign language: personal development, in this case the content of learning is taught in English).

e) The model of network integration– represents the integration solution proposed by the Method of the investigation-action projects. Starting from the subject of the project, the children can opt for a network of topics and resources which are related to the main topic. The main field of the topic, as well as the related ones are transdisciplinary and they will be tackled as such. The disadvantage of this model is the fact that its application can increase the risk of multiplying the topic of the project beyond the possibilities of monitoring its solution. The design of the integration network model requires at least two levels of planning:

- The creation of thematic maps in which, starting from the central theme, the sub-themes to be approached are identified;
- The contents that will resolve the project theme will be conducted on categories and types of activities.

f) The polarization model - involves establishing a new area of knowledge (possibly an optional one) around which in order to achieve specific objectives segments of other disciplines are polarized. An example can be represented by the topic „Story time" in which the development of communication skills is achieved through exploiting the contents of the story from the perspective of the multiple categories of activities included in the curriculum.

The specific feature of the didactic game in achieving intellectual education of preschool children through integrated activities

The educational game represents the favorite activity in a preschool pupil`s daily activity. While playing the child interacts with real objects or with their images, transposing certain roles and situations encountered in a family or external environment. The educational game also favours the children`s intellectual development. Within this game activity there take place two categories of changes in the content and structure of the cognitive processes:

- On the one hand, while playing the child acquires new knowledge about the environment, he also acquires various forms of mental actions which have important influences on the development of perception, of the ability to memorize and of voluntary reproduction, generalization and abstraction;
- On the other hand the game favours the development of the child`s imaginative skills, of the capacity of creating systems of generalized images which are typical for objects and phenomena. The game also empowers the child with the capacity of mentally combining these images, the child makes the operations with images as if they are with objects.

The game gives the child the opportunity of reconstructing and thus of reproducing in an intuitive active form, an extensive area of objective reality. For example, with the help of movements, while playing with toys, preschool child actively reproduces the nature and the content of social relations: maternal, occupational, household, etc. This happens when a little girl imitates her mother while taking care of her child and she does the same with her doll feeding her, washing her laundry, taking her for a walk. The data of experimental research reveal the fact that game development according to the principle of developing mental actions undergoes two successive genetic stages. During the initial stage the game actions, by their nature, are deployed to maximum. Yet, to be accomplished by the child, these actions need „material support". During this stage, in order to acquaint the child with new contents, the kindergarten teacher resorts to external game actions with objects. The word plays an important role in this „substitution" and it replaces the desired toy. It is important that the kindergarten teacher knows that the delays in game development are the result of delays in the development of speech. The child lacks the verbal means which could enable the latter to get rid of the material support in his game.

The second change lies in shortening and generalizing the game actions, as these are uttered in a loud voice at the beginning. Thus, for preschool children of 5-7 the external game actions alternate with internal ones, accomplished in the plan of imagination. This moment marks the transition from external

material objects to the beginning of the ideal game, which develops intensively at the preschool age, almost without materialized game actions.

Based on the actions of the game, the child develops his imaginative ability, the ability of developing a plan of representations and of operating this plan of mental images during the game. Based on this the preschool child becomes able to carry out games with themes and rules. During the game the child`s representations become richer and more accurate. The child represents different objects and actions which help him accomplish a certain role in the plan of imagination. On interpreting a role or another the child must represent different people`s actions and attitudes. The child's creative imagination manifests itself in that it completes with new elements the themes suggested by the adults, the child initiates new games, independently seeks the means to achieve his intentions. In this way, the images created by the child`s fantasy become richer in content. For example, pretending to be a driver the child turns a chair into a car, uses a circle for a wheel, moves in the room and transports imaginary objects, travels to different towns, etc. In this game the child does not just imitate a real situation, he creatively completes a previous situation using his previous observations.

During and after the game the child conveys his impressions and opinions, expresses his wishes and signals the deviations from the rules of the game. Thus, during the game the child`s speech develops in close relation with thought and on the other hand, the regulatory function of the verbal system increases. As a consequence, using the game as a means of intellectual education, the kindergarten teacher will act in the following directions:

- Will improve children`s impressions about the environment;
- Will extend the sphere of representations, will depeen, mention and correct their content;
- Will stimulate the children`s reproductive and creative imagination in achieving the game;
- Will activate the children`s thought and the process of communication through which they express their impressions, opinions and wishes to play;
- Will practise verbalizing „game elements”: objects, actions, roles.

Knowing the role the game plays in a child`s life, it is easy to understand the efficiency of using the game in the process of education and instruction. Therefore, it is necessary to involve all the children in the game, paying special attention to those who find it hard to get involved in activities, as the game activates both mental functions and biological ones. Thus, the game has the same role for a child which work has for an adult, hence the important role of the game, as it creates and develops the child's personality. The Swiss specialist in pedagogy, Ed. Claparede, in his work „ Functional education”, from 1973 stated that: „The chid is a human being whose main need is the game... this need to play is something essential to his nature”.

Experimental study regarding the specific contributions of the game in achieving the intellectual education of preschool children through integrated activities

In conducting the experimental study on the specific contributions of the educational game in achieving the objectives of intellectual education we started from the assumption that the game is the main form of activity at the preschool age and as a consequence it has a great value for developing the preschool children`s intellectual education.

The hypothesis which supports our research was formulated as follows: suppose that by using the game in the integrated activities conducted with the middle group in kindergarten, we contribute to the improvement of preschool children`s intellectual education: the development of their thinking process, the development of children`s capacity of investigation, as well as their active participation in acquiring information.

The purpose of the research aimed at during the undergone teaching experiment is to achieve integrated type of learning in preschool education with the help of the educational game, through drawing up a

heuristic methodology; the teacher organizes, mediates and facilitates the integrated learning situations for preschool pupils from Level I - middle group.

The objectives of the research:

- The organization of learning situations and integrated teaching activities with educational and instruction character for Level 1 preschool pupils- middle group;
- Acquainting the children with integrated-type activities;
- Design the training process to organize knowledge in structures and cognitive schemes rather than a quantitative accumulation of knowledge learnt by heart;
- The ensurance of the child`s active and interactive role in the learning process and the achievement of knowledge through the educational game;
- Highlighting the role of the kindergarten teacher as organizer, mediator and facilitator of integrated knowledge with preschool pupils;

Among the multiple contributions the game has in achieving intellectual education we analysed the ones in the field of mathematics, the environment, the education of language:

- arranging groups of objects according to certain criteria;
- determining the place of a number in a series of numbers;
- ordering ascending - descending groups of objects;
- recognizing and naming the known geometric figures;
- identifying similarities and differences among persons using certain criteria;
- recognizing and characterizing different types of animals (wild animals, domestic animals);
- developing the listening skill and the understanding of a conveyed message;
- developing the capacity of speech and expressive communication;

In the experiment presented in the paper, the main independent variable is represented by the educational game, especially its contribution in achieving some of the objectives of children`s intellectual education through integrated activities. The dependent variables refer to the children`s level of instruction and education acquired in:

1. The field of maths skills and knowledge,
2. The field of knowledge and skills in the environmental science,
3. The field of knowledge and skills in the education of language.

The formative experiment

With the aim of making use of the specific contributions the educational game has in developing preschool children`s intellectual education through integrated activities, we conducted three experimental didactic activities which aim at preschool pupils` cognitive sphere and we used the educational game in the process of education.

The presentation and interpretation of the research data

In carrying out our experimental research we started from the assumption that by using of the educational game in integrated activities with kindergarten middle group we contribute to the efficiency of preschool children`s intellectual education: the development of the thinking process, the development of preschool children`s capacity of investigation, as well as their active participation in acquiring information.

Through the educational games within the carried out integrated activities, we had in view to check the children`s knowledge, skills and abilities on specific aspects of the environmental science: winter and spring; to strengthen teamwork skills; to stimulate children's ability to demonstrate what they have learned; to develop children's imagination; to perform simple operations working with the material provided; to identify the position and to properly place objects as shown in the figure; to improve

children`s curiosity, to stimulate their interest to learn spring vegetables; to strengthen their skill to count from 1-5 recognizing groups of objects and the corresponding figures; to stimulate children's ability to prove what they have learned;

From the activities carried out along our experimental research, we concluded that the stimulation of preschool pupils`interest for intellectual education activities is mainly achieved through the use of the educational game which makes the child stay in his world of fantasy and game, yet, at the same time, he accomplishes things which require intellectual effort. The educational games used in experimental activities required children`s emotional involvement, their emotions increased the efficiency of both solving correctly the assigned tasks and of solving the tasks quickly, the children were eager to test their skills, showing availability and pleasure in using the knowledge acquired.

The interpretation of the data within the experimental method implies a series of comparisons and evaluations of the results obtained in the final stage compared to the initial stage, as well as comparing the results of the experimental group and those of the control one. The cumulative results of the initial evaluation and of the final one reveal the fact that, although at the beginning the control group had a slight advantage over the experimental one, after conducting the integrated activities under the form of educational games, the results are in favour of the experimental group.

GENERAL CONCLUSIONS

For studying the specific contributions which the integrated activities through the educational game had in achieving the objectives of preschool pupils`intellectual education, we applied the following activities starting with level one of preschool pupils and continuing with level two:

- Educational games for knowing the environment,
- Educational games for educating language,
- Maths educational games.

Considering the overall results obtained after conducting integrated activities through educational games with children of different age groups, we are fully entitled to state the idea that the game proves to be the most appropriate method for achieving the objectives established for developing preschool children`s intellectual education. As a conclusion of the observations we have made so far, we can formulate the following general conclusions:

- By approaching the activities in an integrated manner, the kindergarten teacher organizes the teaching/learning process like a director, helping the pupils understand, express opinions, emotions, feelings, become partners in the teaching/learning process.

- The following benefits can be obtained by applying the integrated activities through educational games:

- The child`s personality develops in a democratic environment,
- The child`s personality manifests itself in all domains,
- The child learns by working,
- Any topic approached leads to the child`s personalised development,
- The motivation of every activity will be the slogan of the working day.

- The most important conclusion which singles out is that intellectual education must not be achieved through taking over types of activities which are specific to schools, it must be achieved through using and applying types of activities which are specific to kindergarden. Since game represents the activity which characterizes kindergarten the most, it also represents the most effective means of achieving preschool children`s intellectual education.

- Intellectual education must be analysed from the perspective of developing the psychological processes of cognition, this development represents a prerequisite for integrating the preschool pupil into a new form of activity and into a new period, that of a school pupil. From this point of view the educational game has the capacity to act within the factors and characteristics of children`s psychological development, it represents the way in which children's personality is created, manifests and develops itself.

- Among the most important objectives which can be achieved through the educational game, mention should be made of the development of language. A well-organized educational game acts upon children`s vocabulary, by enlarging their active vocabulary as well as on the development of their communication skills, children use language as a primary means of communication during their game. One can notice the fact that the educational game develops a series of skills which are otherwise difficult to develop while performing other didactical activities, these skills include: speed in conceiving the message, correctness of pronunciation, voluntary attention in receiving the message and children`s capacity to participate in the dialogue.

- Of course, the contributions the educational game involves do not come just from the game itself, they involve the kindergarten teacher`s systematic action in designing and achieving the teaching activity in the most efficient way. To this end it is important that the kindergarten teacher does the following things: knows the pupils` age and individual particularities; determines the initial level of preparation and establishes the objectives of the education and instruction process; chooses the most appropriate topics, contents and rules in accordance with the established objectives; continuously evaluates the performances acquired by the children.

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Towards a modern epistemological paradigm of educational management

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Abstract

From the primary significance of management, that of "art to do something together with other people", the concept has developed significantly in intensity and extension by integrating various nuances designed individually to capture the characteristics and implications of the management as a leading activity. Contemporary educational developments are talking about the need to develop a modern epistemological paradigm of educational management, which to extend beyond the classical paradigm and that would consider modern evolutionary trends. In this study we aimed to reveal the lines of force of this paradigm in a comparative approach, in order to highlight the major changes recorded in the scientific approach in contemporary educational management.

Keywords: management, educational management, the classical paradigm of educational management, the modern paradigm of educational management

Zusammenfassung

Von wesentlicher Bedeutung des Managements, die jenige die sich auf " die Kunst mit anderen Menschen etwas zu vollbringen" bezieht, der Begriff hat sich maßgeblich in Intension und Ausdehnung entwickelt, durch die Einbindung verschiedener Schattierungen, jede erstellt zu sein, um die Ausprägung und die Implikationen des Managements als Führungsaktivität zu überraschen. Die heutigen pädagogischen Entwicklungen beschweren sich über die Notwendigkeit der Ausarbeitung eines modernen epistemologischen Paradigmas des pädagogischen Managements, die Grenze des klassischen Paradigmas zu überschreiten und die evolutiven modernen Tendenzen zu berücksichtigen. In diesem Studium haben wir darauf gezielt, die Kraftlinien dieses Paradigmas hervorzuheben, in einer vergleichenden Befassung, die grosse eingetragenen Veränderungen in der wissenschaftlichen Befassung des pädagogischen Managements in Gegenwart hervorzuheben.

Schlüsselworte: Management, pädagogisches Management, klassisches Paradigma des pädagogischen Managements, modernes Paradigma des pädagogischen Managements.

Towards a modern epistemological paradigm of educational management

1.1. Highlights of the evolving management concept

Etymologically speaking, the concept of "management" is derived from Latin, the phrase "manum agere" ("leading hand"); Later, we find the term in French ("manage" - manage) and Italian ("maneggio" - handling). In English we identify a variety of meanings, with educational relevance:

- „to manage" (to succeed, lead, solve, cope, to direct, to prosper, to curb elements for achieving a goal, manage, manipulate, to master, to cope, to find means to..., to govern, to carry out);
- „management" (business/ art of leadership, skills, organization, success in achievingthe objectives, adaptation of optimal decisions in the design and construction of some processes);
- „manager" (leader, administrator, director, coordinator of a team).

A primary definition of management was provided by Mary Follet, one of the main founders of classroom management (mechanical) - "the art of doing something together with other people." Over time, over nearly 19 centuries, this term generated a special polysemantism, since the original meaning and until the crystallized modern significance. Some of the terms commonly used in diachrony are driving, organizing, managing, terms used with various nuances designed individually, to capture the specificity and implications of the management as a leadership activity. Thus the concept of "management" significantly enriched and was remarked as evolving, one with complex "real sphere", with an dynamic accentuated intensive and extensive.

1.2. The complex epistemological status of educational management

We intend to highlight the epistemological status of management, from an overview of management that can be analyzed from several points of view:

a) as an integrated management science of an institution, a company, a church, army, state;
b) as a metascience**,** namely a balanced mix of science and art, configured as a syntetized and unifying theory of:
   - scientific acquisition of some particular science;
   - acquisitions, findings and conclusions from practice, from managerial experience/ leadership.
c) as a transdiscipline, respectively as a border discipline at the crossroads of several scientific disciplines (ergonomics, axiology, philosophy, logic etc.).

Given these general analytical perspectives, we can define management as a pedagogical discipline with a scientific character or a transdiscipline, making up the corpus of paradigms, theories, models, strategies, algorithms, etc., by integrating several acquisitions of particular sciences: axiology, ergonomics, sociology, anthropology, psychology, philosophy, logic, biology. As an interdisciplinary pedagogical science (E. Joița, 2000, 2004, 2010, V.-M. Cojocaru, 2004), educational management is defined and characterized in operational and nuanced ways, depending on the particularities of the educational reality in which it acts, namely macro, meso and micro-level education. Just like the other

pedagogical disciplines, educational management has dual character - theoretical-conceptual and practical us**e,** it simultaneously holding the status of descriptive integrated science, normative theory and practical achievement.

Generically, educational management is a component science of the educational sciences system, which operates with an articulated, coherent and integrated system of the pedagogical axiology's scientific aquisitions, of the philosophy, politics and pragmatics education, all these purchases providing convergent and consensual, reaching the predetermined outcomes in conditions of effectiveness.

Educational management considers the "theory and practice, science and the art of design, organization, coordination, evaluation and adjustment of the elements and resources of educational activities" (A. Gherguț, 2007, p. 20), "an integrative-explicit concept, an attitude, a methodology of action geared towards achieving success in education, which comprises a set of principles and functions, of rules and management methods through which achievement of the objectives of the education system is insured." (A. Gherguț, 2010, p. 20).

So simultaneously and complementary, educational management holds the status of science, art and practical achievement. In support of this we offer the following arguments:

a) Educational management as integrated science:
- has a well-defined subject of its own and precise finalities;
- exploits a scientific language, a methodology and proper research instruments for full knowledge of the investigated educational reality;
- analizes the processes and management decisions and identifies the regularities underlying educational management;
- makes predictions, researching in a prospective and ameliorative manner the managerial phenomenon;
- involves complex steps of gathering information, documentation, and interdisciplinary and transdisciplinary scientific approach and research - both fundamental-theoretical and practical;
- builds a corpus of theories, principles, regularities, models of best practice, elements of savoir, cognitive savoir-faire, practical savoir-faire, basically hinged together by logical deductions and inferences likely to be experimentally verified;
- facilitates interdisciplinary openings, supported by both the specificity and complexity of educational management and by the pedagogical research in the field, which provides fundamental-theoretical and practical investigative horizons, with pluri-, inter- or transdisciplinary character.

b) Educational management as a practical realization:
- has a practical, actional, operational dimension, assuming a system of actions designed to ensure optimal functioning of the educational process and the educational system; incidentally, the concept of practice is of particular relevance in the field of education since it generated a new understanding of learning as involvement in social practices (J. Lave, E. Wenger, 1991);
- studies operational ways of achieving management processes, which are effectively realised in the educational management domain;
- the major purpose pursued by manager is legitimizing and ensuring efficiency of the management processes and the adequacy of the management decisions;

- is necessary to provide functional and mutually shaping inter-connections between the theory and practice of the educational management; the theory is the one that fundaments the practical steps and practice is the theoretical acquisitions' validation space;
- the managerial experience that the manager possesses is a relevant variable in practising specific roles, in the formation and development of management skills, in the whole manager's professional activity.

c) Educational management as art:
- educational management can not be reduced to a sum of managerial practices or requirements and managerial recommendations, but also requires personal investment of: individual reflection and constructive criticism; active, critical, flexible, logical, exploratory, divergent, evaluative, imaginative, creative thinking; self-analysis, self-questioning, retrospective and prospective interrogations; prospective vision, intuition, creativity, and also critical, active and interactive, evaluative, creative, projective practices;
- realization of educational management does not involve a rigid and uniform application of theoretical recommendations, but rather their flexible, creative application, adapted to the educational constellation of variables involved;
- assumes, sometimes heavily, holding capacity of rapid response, timely and adaptability to the situation, namely a dynamic attitude, enabling the manager to adjust the management decisions to the specific educational environment, to solve with speed and efficiency workloads, to ensure the double alternating individual-collective and reflection-action in the managerial act.

1.3. Hierarchical levels in educational management

In the field of education, managerial approaches are complex and integrated in large systems, spread over three correlated hierarchical levels, as shown in Table. 1:

Table. 1

Hierarchical levels in educational management

No. crt.	Hierarchical level in educational management	Decisional level	Educational structures / Courts decision (in the undergraduate and graduate education)	General features
1.	Strategical	Macro-structure (M)	The competent ministry (in both undergraduate and graduate education), at national level	- of superior type – the functions are acting based on educational policies, leadership, decision and control at macro-educational level (macro-system)
2.	Tactical	Mezo-structure (m)	Local decision-making authorities: - County school inspectorates (in graduate education), at county level	- of medium, intermediate type – are particularly exercised the administrative functions at intermediate educational

			- Higher educational institutions / universities (in graduate education)	level (mezo-system)
3.	Operative	Micro-structure (μ)	3.a. Institutional level: Educational institutions: - School organization/ School education unit (in undergraduate education) - College/ Faculty (in graduate education)	- of technical or executive type – the functions of concievement, management, decision and control are exercised at micro-educational level (micro-system)
			3.b. Departmental level: - Department (in undergraduate education) - Department (in graduate education)	
			3.c. Individual level: - The educational institution's/ structure's manager - Teacher (who performs management of the preschool group, the classroom, the group and student groups – in undergraduate and graduate education).	

In fact, the five levels of educational management (national, county, institutional, departmental and individual) are not isolated from one another, but rather are closely interrelated with each other and interdependent, so a two-way "communication" between them is assured, and between educational decisions taken and the check-up. Basically, the transition from one level to another is natural, each level is "fueling" from the previous. Thus, the strategical level is extended by the tactical and then with the operative one, which allows a flow of information and decision both from top to bottom and from bottom to top, as shown in Figure. 1:

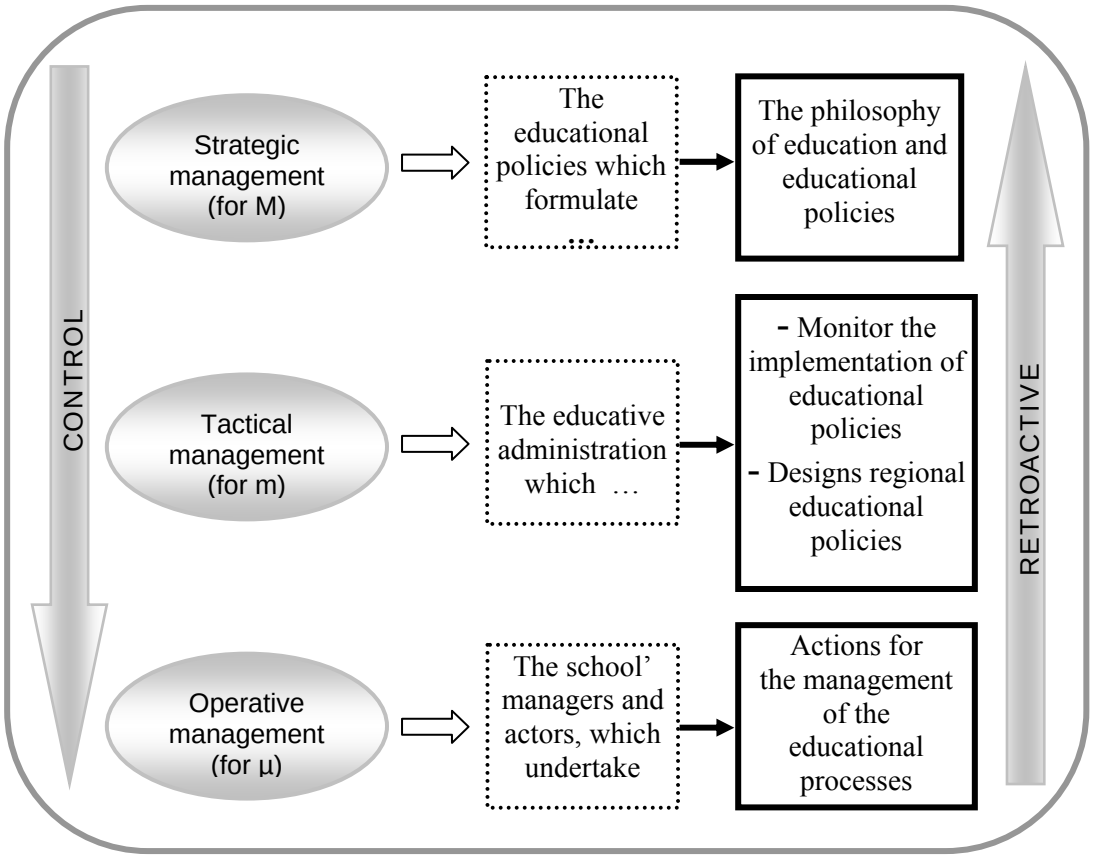

Figure. 1. **Hierarchical levels of educational management and their specific functions**

At the level of the national education system, from the microstructure to the microstructure there is information flow and decision-making continuously to the lower courts (philosophical, political and pedagogical macro-structural decisions) and is pursued the oversight function, there are monitored and controlled the ways the application of educational policies and strategies, leading to the micro-educational level, at which the teacher establishes direct educational relationships with the students and capitalizes educational principles, options and management decisions designed to achieve educational aims. Moreover, from the microstructure level to that of the higher courts and to the macrostructure is performed the function of feedback, or is being generated a flow of information concerning decisions on education (at this level decisions are microstructural), making it possible to monitor, control and assess the quality of educational processes and subsequent regulation of these processes.

Decisions taken at each of these levels require a nuanced process with certain characteristics and appearance depending on the educational aspect, level and on the personality of the decision-maker, phased in approaches linked to other managerial functions, namely:

Analyse ⇨ Identifying and formalizing alternatives ⇨ Choosing an alternative (the educational option) ⇨ Applying the alternative (the educational action*)* ⇨ Monitoring the educational activities ⇨ Evaluating the educational approach ⇨ Evaluating the results ⇨ (Re)evaluating the whole decisional process.

At each of these levels of decision and control, it is advisable to practice a democratic, active, participatory management, to manifest an active and proactive attitude, courage, responsibility and creativity, so that there are degrees of freedom specific to each level and each educational and managerial problem addressed.

1.4. The base of skills held by the manager in education

If education management is simultaneously science, practical action and art, symmetrically, the manager simultaneously holds the following categories of indestructible (inter) related competencies, making up a base of skills, seen as a coherent and articulate ensemble of cognitive and non-cognitive resources allowing for the construction of cognitive pertinent answers to complex problems and situations and not applying simplistic, already made answers:

- scientific skills - which refer to the knowledge and understanding ("knowledge and comprehension") of the scientific theoretical acquisitions of the educational management and their application in solving problems;
- practical skills - which refer to "knowing how to act" ("knowing how to act") in practical situations, in which action is needed, such as: addressing the organization as a whole, identifying the sub-components, the (inter) connections between them and their contributions to meet the finalities at organization-wide; customized transposition of the theoretical procurements specific for the managerial situations; identification of problems; establishment of relevant variables and (inter) relations between them; formulation of possible solutions and their verification; decision making; risk taking; NTIC use etc.
- transversal skills - which refer to the knowing how to be and to become ("knowing how to be and to become") a manager of quality in education by harnessing and developing your own personality traits, through the development of the intrapersonal, and the interpersonal intelligence - related to establishing social relationships with peers (see the considerations about the educational management as art).

Each of the three categories of competences integrates a system of interrelated sub-competencies, with differing relevance based on the characteristics of the practical managerial situation. Forming, developing and refining these skills and sub-skills is a process that builds gradually through sequential, progressive and integrative-systemic accumulations, in operational managerial situations and not in an additive, cumulative and exclusively linear manner.

1.5. Major coordinates of the epistemological paradigm of modern educational management

The current trend is to raise the management at the status of profession, as shown by Korpiaho K., H. Päiviö, Räsänen K. (2007, p. 46), especially since at global scale, educational management represents a real industry (L. Engwall, 2007, p. 28). For this it is necessary to build a modern epistemological paradigm of educational management, which extends beyond the classical paradigm. The main coordinates and characteristics of the two paradigms are captured in Table. 2, where we propose a multi-criteria comparative analysis of them, highlighting the modern educational management's guidelines, how it conceives the processes and the management decisions.

Table. 2

The classical paradigm and the paradigm of modern educational management - multi-criteria comparative analysis

The element of comparison	The attributes of the classical educational management	The attributes of the modern educational management
Education paradigm to which it refers	The analytical paradigm of education (studying parts of the whole).	The systemic paradigm of education (studying the whole).
Types of organizational structures and systems of control	- Rigid organizational structures, insufficiently documented, without clearly defined rules and procedures; - Control is exogenous and predominantly external; internal control is rigid and it is achieved at the end of the curricular process (final control), so without providing sequential control of advancing to the proposed general finalities.	- Flexible, dynamic, organizational network structures willing to perform effort for innovation, always open to new and extreme challenges, like: the evolution of the system of values, acquisitions from the sciences of education, results of the pedagogic research, the general social progress, the dynamic of education in the context of globalization. - Control represents a natural act, integrated in the managerial process; and it is final (realized at the end of curricular processes) and sequential (realized during the curricular processes, to settle the measure of advancing towards the final general purposes). Control is based on a participatory managerial style of the endogenous type.
Educational stake	Informative stake. - To be offered a diagnosis, to quantify in terms of predominantly quantitative perspective the results with which the educational processes work.	- Formative stake. - Formative, qualitative and continuous reviews to be realized, with the role of (self-)regulating and improving the educational processes. - To utilize a grid of strategic priorities.
General characteristics	- Rigidity, bureaucracy, conservatism. - Passive attitude of the institution's employees regarding the decisional processes. - The prevailing programmatic concern to meet the professional requirements and demands of the higher-ups.	- Flexibility, dynamism, and to be anchored in modernism and postmodernism - An active and procreative attitude of the institutes employees in relation to the decisional processes (participatory and democratic management). - The pragmatic concern for efficient solving of the concrete problems from the life of school organization is the priority, in context with valuing the constructivist paradigm.
Educational management's organization	Imposed, rigid, dependent, immutable, controlled.	Own organizing, autonomy (total or partial), self-monitoring, self-management, self-regulation.

The decisional process is characterised by...	- Excessive decisional centralization, autocratic ruling, uniformization. - The predominant decisional models are: ambiguous, political, subjective and formal.	- Partial decentralization, the differences in the managerial processes, professional delegation of tasks and the decisional authority, collective responsibility, self-responsibility. - The management of the organization is interactively exercised, in relation with the members. - The intervention style is non-directive and the standards, regulations and procedures are transparent. - The predominantly decisional models are the democratic and the formal one.
It encourages …	Individualism and the competition between the members of the organization.	- The psychosocial and intellectual exchanges, collaboration and cooperation, establishment of professional, affective and social relations between the members of the organization. - The progressive formation of working teams and the elaboration of managerial projects in a interdisciplinary vision - The accountability and especially the self-responsibility of the members of the organization.
The accent is put on...	- Individual involvement of the members of the organization. - Their actions, achievements and own portfolios.	- The collective implication of the members of the organization in working teams (eventually interdisciplinary) - The development of management projects through professional collaboration (the projects can be of a interdisciplinary nature) - Actions, achievements of collective portfolios
How is the member of the organization viewed?	- As a passive participant in the decisional process, who does not contradict, is obedient and submissive. - We can talk about a conformism of thought and about control of thought by the manager.	- As a active participant in the decisional process, as an authentic (object and) subject of the managerial act, as the authentic actor in this act, who establishes democratic relationships with the manager. - As an individual called to express his ideas and personal opinions, and confront them with those of others, to manifest a active and proactive attitude, and form self-initiatives and put them in practice, to participate consciously and auto-assumed, active and interactive to the collective debates, decisional processes, and also regulation and self-regulation of the managerial activities.

		- As an individual called to exercise active, critical, flexible, divergent, multi-referential and creative thinking.
Managerial documents	- Conceived in the first stage of projecting the educational activities, in a rigid, inflexible manner and rigorously respected.	- Designed by the management team in partnership with the institutional structures and the members of the organization, by promoting an active, interactive, creative and proactive attitude (the documents also have a proactive role, due to the fact that based on them the educational situations are constructed and are generated the experiences of learning).
Attitude towards corporate / professional community	- Weaker attachment to the common values of the professional collective/community. - Prevails the individualism (which is not mistaken with selfishness), weak relationships, little intense, sometimes chaotic and the individual is self-concerned.	- High degree of affiliation to the common values of the professional collective/ community, higher attachment to these values. - The verbal and social interactions and intellectual exchanges are promoted and profitable for all the participants to the decisional process. - It builds collectivism, close collegiality relationships, of collaborations and professional and human solidarity.
Attitude towards change	- The speed at which the new acquisitions are applied is (extremely) slow. - The organizational structures and the control systems are resistant to change, inertial, they being projected to ensure protection from the environments' uncertainties and to ensure the needed stability for the performance of the specific functions. - Change is perceived as a threat, more or less acknowledged. - The school organization does not have a responsible, projective, active and proactive attitude, but a negative one; however, it reacts to the already certain changes that occur at macro-educational and social level.	- The management functions are exercised fluently, coherent and in a resilient, creative and innovative manner, open to the changes within the organization - Change is seen as a natural phenomenon, natural and inherent, demonstrating the vitality of the systems; it is studied, analysed, accepted, tolerated sometimes (when there are no adequate corrective actions). - There are searched and used ways and means to overcome and place under control the resistance to change: promoting communication on vertically and horizontally, the active and interactive involvement of the organization members, accountability and self-responsibility, organization of collective debates, providing support, facilitating various actions, negotiation, etc. - It is realized that change does not always mean progress, so the manifestation of resistance to change may even be necessary.

		- The school organization shows a positive, responsible, projective, active and proactive attitude, exploring and anticipating the changes that exhibit adaptive flexibility in the taken actions.

1.6. Conclusions

The current trend is to raise the management at the status of profession, as shown by Korpiaho K., H. Päiviö, Räsänen K. (2007, p. 46), especially since at global scale, educational management represents a real industry (L. Engwall, 2007, p. 28). For this it is necessary to build a modern epistemological paradigm of educational management, which extends beyond the classical paradigm. The main coordinates and characteristics of the two paradigms are captured in Table. 2, where we propose a multi-criteria comparative analysis of them, highlighting the modern educational management's guidelines, how it conceives the processes and the management decisions.

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