SOFIA UNIVERSITY ST. KLIMENT OHRIDSKI FACULTY OF EDUCATION STUDIES AND THE ARTS DEPARTMENT OF "PRIMARY SCHOOL EDUCATION"

### ABSTRACT

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### **DOCTOR OF SCIENCE**

IN THE PROFESSIONAL FIELD 1.2. PEDAGOGY (PRIMARY SCHOOL EDUCATION)

### POSITIVE TEACHING STRATEGY IN THE CLASS TIME LESSON

Lyuben Vladimirov Vitanov

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This dissertation work is discussed and directed for defence by the Department of Primary School Education at the Faculty of Education and Arts of Sofia University "St. Kliment Ohridski".

The content covers introduction, seven chapters, conclusion and literature. The dissertation includes 286 pages, out of which 12 pages reference with 125 publications in Bulgarian and 163 English. The text includes 131 figures and 12 tables.

The abstract follows the structure of the dissertation.

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#### **INTRODUCTION**

This study develops the idea of a teaching approach defined as a *positive teaching strategy* in the class hour. It includes *selection and structuring of the curriculum, selection of methods of education and the class time lesson management,* as well as *teaching methods for acquiring competencies.* They are linked to dynamic *planning,* which is controlled, evaluated and corrected *by reflective teaching practice.* 

The selection and structuring of the curriculum is related to the selection and arrangement of mandatory topics, tasks and activities, as well as to a number of free to choose once. Although all of them are regulated, in normative documents provide sufficient pedagogical opportunities for planning in accordance with the pedagogical vision of the class teacher, the priorities of the school, the interests of students, the proposals of parents and the community, etc.

*The upbringing and management of the class* includes the overall work of adopting and learning the rules, creating a positive educational environment, supporting personal, social and emotional development, forming an active self-concept, developing the class as a community, solving problems with discipline and more.

The education for acquiring competencies is related to the acquisition of competencies as part of a regulated learning content on a diverse range of topics and activities. They are an important part of the school preparation process.

Positive teaching strategy in the class time lesson has its own *specific characteristics*, based on new pedagogical areas.

An important feature of it is the growth of interaction with the class as a *self-organising community*. The importance and role of the *participation of students* and parents in the process of pedagogical interaction is growing.

The positive teaching strategy supports the specific *organisational structure* of the class time, which is related to diverse goals and expected results. It also often changes the organisation of the school environment, which is structured for discussion and discussion in a circle, in pairs or in small teams. The strategy is more dynamic to respond to the various activities related to non-traditional learning.

All these educational opportunities determine the *important contribution of the positive teaching strategy in the class time lesson* to the acquisition of the competencies provided in the curriculum as expected results – knowledge, skills and attitudes necessary for the successful transition of the student to the next grade, stage of education.

Therefore, in the following seven chapters describe and structure are *important aspects* of the positive teaching strategy: normative frameworks, training and classroom management, education focused on the acquisition of competencies, learning content, teaching methods and techniques, organisational forms and organisation of the learning environment, as well as and analysis of the results of the diagnostic study in the class time.

*The main pedagogical possibilities* of this strategy in the planning, organisation and implementation of effective education, management and socialisation, teaching and learning in the class time lesson are also explored.

The proposed model of teaching strategy has been piloted in long-term educational practice and shows its effectiveness in a study with 3376 students from Bulgaria in various towns and cities: Sofia, Plovdiv, Varna, Ruse, Pernik, Lom, Silistra, Bozhurishte, Ihtiman, Botevgrad, Velingrad, Rakitovo, Svoge, Berkovitsa, Chiprovtsi, Pravets, Radomir, Roman, Batak, Mirkovo, Voluyak, Novi Iskar, Gorna Banya and Maglen.

Higher and statistically significant results were found in all 15 criteria of the study in students from the experimental classes.

#### HYPOTHESIS, OBJECTIVES, TASKS AND RESEARCH METHODOLOGY

#### **Hypothesis**

The positive teaching strategy, which includes the creation and implementation of a more dynamic, free and shared approach to the selection and structuring of learning content, the application of positive approaches to learning and classroom management, a consistent learning process, competence-oriented, and more the broad support of student participation and self-organisation can lead to an *increase in the expected results of the learning, education and socialisation of students in the class time*. They are *realised in four main directions*: basic competencies, transferable competencies, personal competencies and student participation.

#### **Objectives**

*Constructing and adaption of multi-layered positive teaching strategy* in the class time lesson, which includes the creation and implementation of more dynamic, free and shared approach for selection and structure of the syllabus, applying positive approaches for education and management of the class, sequential process for education, oriented towards competencies, as well as more broad support for student participation and self-organisation in primary stages of student's education.

#### Tasks

1. Structuring, systematising and analysing normative, scientific and methodological frameworks, approaches, problems and good teaching practices for the content, planning, organisation and conduct of processes of education and socialisation of students in the class time.

2. Constructing a positive teaching strategy in the class time.

3. Approbation of the positive teaching strategy in experimental research of its possibilities for improvement of the expected results from the education, upbringing and socialisation of the students.

4. Development of diagnostic tools on 15 criteria and 45 indicators for the class time.

5. Summarising, analysing and presenting the results of the pedagogical study in a diagnostic study with 3379 students from across the country.

#### **Object of research**

The education and socialisation of students from the initial stage of primary education in the class time.

#### Subject of research

Exploring the possibilities of a positive educational strategy for raising the results of the learning process and socialisation of the students from the initial stage of the primary education.

#### **Research methodology**

1. Systematisation and analysis of the educational scientific literature. Desk research of wide range of scientific and mythological books, articles, studies and detestation among others.

2. Systematisation and analysis of good educational practices. Research on viable educational experience from Bulgaria, European Union, United States and others.

3. Creating a model of positive educational strategy, build on understanding for more dynamic, unrestricted and shared approach for selection and structure of educational content, applied positive approach for education and management of the class, systematic process in

teaching, competence oriented, as well as more widely support of student contribution and selforganisation of the students in primary stages of educational process.

4. Organising an extended educational experiment. Students have to be included from various of size classes, performance and geographical location schools.

5. Creating a system of diagnostic procedures for examine the results of training, education and socialisation in the class time. Construction of model to study, based on four groups of competency: fundamental, transferable, personal and student participation competencies. Implementing a system of test tasks with closed and open questions as well as structured educational observation in the class time. Structured of 15 criteria and 45 expected results for 1, 2, 3 and 4 grade.

6. Mathematical and statistical processing of research results from the diagnostic study for results of the controlled experimental study. The mathematical processing of results for each criteria and variables for each of the classes. Concluded are the results for each class and groups' competency.

7. Conducted are statistical analysis for establishment of statistically significant differences between controlled and experimental groups. Two statistical methods are applied: Chi-square and t-criterion. Chi-square is used for distributions comparison of different criteria and variables in the controlled and experimental groups. The classic formula of Chi-square is defined as following:

$$x^{2} = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{(f_{ji} - j_{ij})^{2}}{f_{ij}}$$

where  $f_{ij}$  are the imperial frequency, also known as observed frequency;  $j_{ij}$  are theoretical frequencies, also known as expected frequency; *i* is the number of the role; *j* is the number column, *r* is the total number of the rows and *c* – the total number of columns (Haralampiev, 2012: 88).

The theoretical frequencies of the observation were also calculated, assuming that the distributions are not different. The formula used is as following:

$$f_{ij} = \frac{f_i \cdot f_j}{n}$$

where  $f_i$  is the sum of frequencies in the order: *i*;  $f_i$  is the sum of frequencies in the columns,

n is the sum of the observations (Haralampiev, 2012: 88). Further, t-criterion is used to compare the two distribution in percentage of two independent distributions – control and experimental class. The formula used is as following:

$$t = \frac{|p_1 - p_2|}{\sqrt{\frac{p_1(1 - p_1)}{n_1 - n} + \frac{p_2(1 - p_2)}{n_2 - 1}}}$$

Where  $p_1$  is the relative share in first distribution;  $p_2$  is the relative share in the second distribution; n1 is the volume of the first sample,  $n_2$  is the volume of the second sample (Haralampiev, 2012: 78).

#### Chapter One

#### PLACE OF THE CLASS TIME LESSON IN THE SYSTEM OF PRIMARY SCHOOL EDUCATION

#### 1. Basic concepts

The teaching strategy is an approach for selection of educational content, planning, organisation, conducting and managing the process of teaching and learning. It includes many and varied visions, understandings and orientations. The teaching strategy mainly refers to the selection and use of methods and techniques of education and training. However, it must also include the procedures for selection and structuring of the curriculum, which are implemented in the process of planning, assessment and reflective teaching practice.

Several important *pedagogical definitions* of some important concepts for this study are considered and given, such as *"teaching, education and socialisation"*, *"school education system"*, *"school preparation"*, *"state educational standard"*, *"curriculum" and "lesson"*.

#### 2. Nature and characteristics of the class time

Class time lesson is a "temporal organisational unit of activity" (Andreev, 2001: 113) of teachers, students and parents in the process of teaching, education and socialisation.

In the Regulation on Preschool and School Education it is defined as *mandatory "for every class, for every school week"*. It is stated that class time lesson is used for "consistent class development, patriotic education and the building of civic competences, including through student self-government" (Regulation, 2017).

The class time lesson is included in the *weekly syllabus* of classes outside the number of school hours specified in the curriculum (see Regulations, 2014) (Fig. 1).



#### Figure 1.

The Place of the class time lesson in the weekly syllabus

The main characteristics of the class time lesson are described and systematised. The various *normative documents* (educational standards, curricula, instructions, etc.), the *various requirements* and priorities in the class are indicated.

#### 3. Framework requirements for the class time lesson

The planning and conduct of the class time lesson is regulated in the *framework requirements* specified in the state educational standard for civic, health, environmental and intercultural education.

It states that they are building an *"interdisciplinary complex"* that takes place not only in the "process of acquiring all types of training" as well as *"in the class time"* (see Ordinance, 2016).

The framework requirements stipulate that the educational process in the classroom is carried out through "activities, tasks and projects in thematic areas". They are *eight* (see Ordinance, 2016, Ordinance, 2018) which include: *patriotic education and building national self-confidence, tolerance and intercultural dialogue, road safety, protection of the population in case of disasters and accidents and first aid, prevention violence, tackling anger and aggression and peaceful conflict resolution, terrorism prevention and terrorist threat behaviour; cybersecurity, career guidance, e-government and media literacy.* 

The government provided framework requirements also indicate the minimum number of hours for classes and activities in the indicated thematic areas.

#### 4. Rights and obligations of the class teacher

The class teacher has a diverse duties and functionalities as well as complex duties and functionalities to organise and conduct the class.

They are precisely defined by the Ministry of Education and Science (see Regulations, 2014) and can be systematised and structured in several groups (Fig. 2).



#### Figure 2.

Duties and functions of the class teacher

#### 5. Students as main participants in the class

One of the important responsibilities of the class teacher is to *monitor the development of the students* from the respective class in the educational process. This means knowing *not only the academic development* related to the acquisition of competencies as expected results, but also *other aspects* in the development of young students.

The main features and psychological-pedagogical characteristics of the students of the primary school age have been selected, described and systematised, as decisive for the development of many skills, competencies, identity, value relations, etc. This period is especially important for building the self-concept, civic, environmental, health and social culture and behaviour. Many conditions are created for the *development of interests* in the field of science, sports, fine arts and music.

#### 6. Interaction of the class teacher with the parents

Parental involvement in the organisation and support of young students are very important for an effective school community and the class time. Depending on the extent to which the class teacher manages to *engage them in active participation* in the life of the class, many of his initiatives, teaching approaches and positive educational environment depend. Many of the activities can be carried out more successfully with the participation of family members of young students. This approach is also regulated in the normative documents, where it is noted that the school carries out "the process of preparation, training and education of children and students in interaction and cooperation with parents" (Regulations, 1999).

The main directions and possibilities of the interaction of the class teacher with the parents are described, structured in several main directions (Fig. 3).



**Figure 3.** *Main directions of interaction of the class teacher with the parents* 

#### 7. Interaction of the class teacher with the institutions

An important duty of the class teacher is to work with various institutions, which have to do with students. Such are those in the system of the Ministry of Education and Science, the State Agency for Child Protection, municipal services, regional departments of the Ministry of Interior, the regional health inspections of the Ministry of Health among others.

Researched, analysed and systematised are *the relations of the class teacher* with the institutions of the Ministry of Education and Science, the State Agency for Child Protection, municipal services, regional departments of the Ministry of Interior, the regional health inspections of Ministry of Health and others.

#### 8. The class teacher and study documentation

Information and documents in the system of preschool and school education are *regulated* by a state educational standard (Ordinance, 2017). It regulates *the types of documents* in the system of preschool and school education; *the requirements* to the form and content of each of the documents; the documents that are created, processed and stored in electronic form, etc.

The obligations of the class teacher in *conducting and storing* the educational documentation for the class are systematised: diaries, books, student books, notebooks, etc.

#### Chapter Two

#### **TEACHING STRATEGIES IN THE CLASS LESSON**

#### 1. Nature and characteristics of the teaching strategy

The strategy is defined as a "*pre-defined direction*" in the management of an activity that should lead to a successful end (http://talkoven.com), *a common vision and approach* (Andreev, 2001: 195) *of the class teacher for the planning and organisation of the class time.* 

In its essence, the strategy is a *dynamic planning system* (Orlich, Harder, Callahan, Trevisan & Brown, 2010: 4), a "*long-term decision-making model*" (Radev, 2005: 254), *management, evaluation, feedback and changes in the classroom.* Therefore, it is closely related to the specific development, social and cultural competence of students, the priorities of the school and the attitudes of the class teacher for *traditional, innovative, combined or other teaching.* 

#### 2. Components of the teaching strategy

A new, four-component model of teaching strategy has been developed, which includes *selection and structuring of the curriculum; selection of methods and techniques of education, training and classroom management; annual planning; evaluation and reflection (Fig. 2).* 



#### Figure 4.

*Components of the teaching strategy* 

All components of the teaching strategy are described and analysed in detail, with special attention paid to the new component – selection of educational content. It is stated that it *includes the vision of the class teacher for the choice of content*, topics, groups of tasks, etc. The main orientations in the selection of educational content are described – *pragmatic* approaches (Dewey, 1941, 2002, 2006), the *cognitive* concept (Bruner, 1961, 1995), as well as the *humanistic* concept (Rodgers, 2015).

The main types and directions in the selection of educational content in the class are systematised – *regulated*, *free*, *thematic*, *selection by complexity*, *importance*, *spiral selection*, *selection by interests*, *by alternation*, *selection by seasonality*, *etc*.

#### **3.** Types of teaching strategies

Teaching strategies can be *balanced and unbalanced*, *direct and indirect*, *combined*, etc. Important criteria for division by types are the change in the relations "teacher – student", "student – other students", "teacher – didactic environment – student" and others.

*Four* main teaching strategies in the class time lesson are described and analysed: *teacher*-*oriented, student-oriented, interaction-oriented and combined strategy.* 

#### 4. Model of positive teaching strategy in class time lesson

The positive teaching strategy in the classroom is an orientation towards different from the traditional in the classroom *approaches to the selection of the curriculum, education and management of the class, as well as methods of teaching and learning.* 

The strategy includes the creation and application of a more dynamic, free and shared approach to the selection and structuring of learning content, the application of positive approaches to education and classroom management, as well as a consistent process of competence-oriented learning (Fig. 3).



**Figure 5.** *Components of a positive teaching strategy* 

The competent approach is related *to interactive teaching and active learning, actionoriented, research and transformative learning* (Problems and Trends ..., 2018: 7).

Some important dynamic relations between the positive teaching strategy and traditional education in compulsory school preparation are analysed. It is stated that the positive teaching strategy in the class time lesson opens wider educational spaces for selection and structuring of learning content. It is associated with more active and freer choice and structuring of topics, tasks and activities. The selection and structuring of learning content is also built in the process of more systematic sharing of responsibilities with students and parents. Therefore, the class teacher supports student involvement and involves parents in the process of planning, change and innovation in the whole process of education, management, teaching and learning.

Therefore, it can take advantage of the teaching possibilities provided by normative documents for open, dynamic and shared selection and increase them by up to 30% in comparison with the core and elective school classes.

The possibilities of the strategy for creating a *positive learning environment*, positive interaction in the community, development of a *positive self-concept*, authentic self-assessment and self-effectiveness are clarified. Positive approaches include promoting shared adherence to *rules and discipline*, actively developing social and emotional intelligence, and developing skills and attitudes for happiness and well-being. It is based on the stimulation, nourishment and support of *student participation* and self-organisation. Thus, a *positive teaching strategy* increases the space of methods for education and classroom management up to 30%.

Similar opportunities are developed by a *competency-based approach to learning in the classroom*. It expands learning opportunities and *builds on traditional learning with a more skills- and attitude-oriented approach* to teaching and learning.

This *expands the possibilities* of the competence approach to increase its pedagogical space by about 10% compared to the approach to learning content in traditional education (Fig. 6).



#### Figure 6.

*Teaching possibilities for competence approach in the positive teaching strategy in class time* 

*The fourth component* also provides, albeit with a few percent less, also great opportunities for a positive teaching strategy to *change the relationship* between traditional and indirect teaching methods. Thus, student-oriented methods and techniques displace traditional ones and increase their place in the classroom by up to 40%. Opportunities are created for them to occupy up to 60% of the study time with traditional 25% use of student-oriented strategies in education.

However, a positive teaching strategy combines and balances direct and direct teaching methods and techniques. It develops on the concept that student-centred learning does *not replace or shift, but extends and builds* on traditional teaching and learning. Although it occupies a wider pedagogical space in the classroom, indirect learning is applied in a balanced way and is carefully combined with direct teaching methods.

Important characteristics of the positive teaching strategy are described, such as orientation towards *activities and transversality, social orientation* (Educate towards environment..., 2014), *situational learning and authentic tasks* (see Slavin, 2005: 313), *dynamism, innovation* and others.

Positive teaching strategy occupies parts of all teaching methods, mainly from the first three levels of the base of Dale's *learning pyramid* (Fig. 7).



#### Figure 7.

*Pedagogical spaces of teaching strategy in the classroom in a learning pyramid. Adapted from National Training Laboratories* 

#### Chapter Three

#### EDUCATION AND MANAGEMENT IN THE CLASS TIME LESSON

#### 1. Teaching and learning rules

The rules participate in the *constitution* of the school and social life of students. Their knowledge, understanding and observance are an important aspect of a positive teaching strategy in the class time.

A comprehensive concept of the rules and their participation in the *constitution* of school and social life of students has been created and described. Their recognition, understanding and observance are an important aspect of a positive teaching strategy in the class time. It is stated that rules are *a major component* in the class time lesson management and self-organisation. From the effectiveness of their creation, assimilation and observance depends not only the quality of *school's discipline and student behaviour, but also their academic achievement and building successful communities* (Jones & Jones, 2016, Alter, P & Haydon, 2017, Aelterman, Vansteenkiste & Haerens, 2018).

The essence and characteristics of the rules are described in detail in two main directions - *normative and procedural*.

Important stages for the assimilation of the rules are indicated, such as *discussion*, *comparison*, *evaluation*, *inclusion* in a system of other rules and procedures, etc. (Scott et al., 207), as well as basic approaches and actions for adoption and compliance of the rules in school.

#### 2. The development of the class as a community

The functioning of the school as an "*autonomous, active and self-developing community*" is an important goal of the Bulgarian educational system (Ordinance, 2016). Therefore, one of the main goals of the class teacher is to create and strengthen a strong school community in the classroom. It is built in complex but effective interactions between teacher and students, students and classmates, parents and teacher and many others. There is reason to believe that it is an important environment for the development of a number of school innovations (Tsokov, 2011).

The complex processes of creating and strengthening a strong school community in the classroom, as well as building complex but *effective interactions* between teacher and students, students and classmates, parents and teacher are revealed.

An important teaching aspect in the formation of the community is the unification around common values - tolerance, mutual respect and commitment, responsibility, culture of behaviour, justice and others (see Sapundzhieva, 2011).

#### 3. Creation and management of a positive educational environment

The humane education creates a *positive environment* with different learning experiences, *personal experience and joy* of learning, an atmosphere of mutual respect, understanding and cooperation as important characteristics of "self-actualising" individuals (Rodgers, 2015, Maslow, 2010, Patterson, 1973, 1987, DeCarvalho, 1991).

Carl Rogers (2015) points out several important characteristics of humane pedagogy – *personal commitment, self-initiative and self-esteem of the student.* To these must be added the involvement in authentic activities and the solution of real life problems.

One of the main functions of humane pedagogy is the change of the teacher's role, who applies more and more approaches that support the natural development of students. They are also defined by the modern term *"facilitators"*.

The important role of the teacher as a *facilitator* is described as cooperating, supporting (see https://dictionary.cambridge.org). In his position as such, the teacher completely changes his/her approach, teaching methods, communication strategies with students and others. To these are added other functions of the teacher such as mediator, moderator and manager (see Todorina, 2011). This forms more and more complex interactions in the process of teaching and learning between teacher and students.

The relationship between the positive teaching strategy and the *concept of happiness and* flourishing is systematised (Seligman, 2017: 24), (Fig. 8), as well as some of its *core techniques* (Nelson et al., 2001).



#### Figure 8.

Flourish theory PERMA. Adapted from Seligman (2017)

#### 4. Formation of multiple of intelligences in the class time lesson

The development of the student's personality is associated with the application of an adapted and combined approach to the formation of multiple intelligences during the class time. It includes five important intelligences: *interpersonal, interpersonal* (Gardner, 2014), *social* (Thorndike, 1920), *emotional* (Golman, 2011), and *practical* (Sternberg, 2014).

Characteristics are described and the main approaches, activities and techniques for the formation of these intelligences during the class time lesson are indicated.

# 5. Formation of self-concept, self-assessment and self-effectiveness in the class time lesson

The main characteristics of self-concept, self-assessment and self-efficacy as complex multifactorial and multilayered phenomena are considered, which are defined as specially important both for the child's development and for his academic achievements (Marsh et al. 2019: 331 - 353, Stamatov, 2000: 253, Maslow, 2015: 127 - 128, Masselink, Van Roekel & Oldehinkel, 2018: 932 - 946, Bandura, 1977: 198).

The relationships of the self-concept with other important components of the personality – *self-esteem and self-effectiveness* – are described. Many methods and techniques for the development of the self-concept, self-assessment and self-effectiveness are considered.

#### 6. Support for youth participation and self-organisation

The children's participation is also considered, which refers to "informed and voluntary inclusion of children in all matters affecting them directly or indirectly". In many cases in pedagogical theory, it is seen not only as "participation in decision making", but also as participation in given activity and "form of social engagement" (see Thomas, 2007: 199 - 218).

It is also perceived as a "continuous process involving the exchange of information and dialogue between children and adults, based on mutual respect, in which children can learn how their vows and the views of adults are taken into account and shape the outcome of such processes" (Committee on the Rights, 2009).

Child participation is seen not only as a process, but also as a result that has three main components: influence in decision-making and action, mutual respect between children and adults, and joint learning (Tisdall, 2014: 168 – 188).

This approach is based on the "gradual discharge" model developed by Pearson & Gallagher (1983: 51), (Fig. 9).



#### Figure 9.

Model of "gradual release of responsibility". Adapted from Fisher & Frey (2013)

The various opportunities and stages for children's participation and non-participation are also described in Roger Hart's popular *"ladder of children's participation"* model (1992: 8).

Core guidelines and opportunities for supporting children's participation have been developed.

#### 7. Analysis, assessment and prevention of risk factors of the students in the class

There are also some guidelines for the work of the class teacher, directed analysis of socialisation and adaptation, personal, social and emotional development of students. In this process of learning, interaction, play, actions in the school community, etc. a number of problems can occur.

Many of them are related to learning difficulties, emotional and behavioural problems, risky behaviour and children at risk.

#### Chapter Four

#### EDUCATION FOR ACQUIRING COMPETENCIES IN THE CLASS TIME LESSON

#### 1. Competencies and education

The competencies are *symbiosis of knowledge, skills and attitudes* (see European union, 2017), which are selected and analysed in the study of the class time. The new focus in the European educational politics is also described, as some important theoretical concepts that examine the competencies as "motivational predispositions with *three* basic components: *cognitive, affective and conative (predispositions, adjustments)*" (Raven, 2001: 253 – 274).

The basic functions of the competencies approach in the education are described.

#### 2. Model of forming the competencies in the class time lesson

On that grounding a new competencies oriented model in the class time lesson is constructed.

Several of its important characteristics are constructed: *accent on the conveyable competencies, priority on the practical work and transfer, superiority of the active learning, aspiration for development of basic, general learning skills, procedure orientation, integrality, etc.* 

The *model* encompasses a system of pedagogical themes, tasks and activities in the main fields of the interdisciplinary complex of civil, health, ecology and intercultural education. In it there are integrated thematic fields in the class time lesson in which approaches for development of transferable skills as critical thinking, resolving problems, team work, communication, empathy and creativity.

All components of the model are followed, developed but they interact dynamically and in different directions (see Fig. 10).



**Figure 10.** *Model of forming the competencies in the class time lesson* 

The model includes more than hundred expected results like knowledge, skills and relationships. They are oriented towards the development of civil, entrepreneurial, digital, also as personable competence, social competence and competence for acquiring learning skills.

The model is realised in more than 120 themes that contain designed, adapted, systematic and tested activities, methods, technics, games, exercises and tasks with specific aims, activities and didactical variations for appliance in concrete topics during the class time lesson in the primary education.

Selected and adapted are methods, ideas and approaches from Bulgarian and international experience and good pedagogical practices.

*The model* has been applied more than 8 years with 3376 students from Sofia, Plovdiv, Varna, Ruse, Montana, Ihtiman, Pernik, Pravets, Bozhurishte, etc. through a wholesome methodological system (see Vitanov, 2019a, 2019b, 2019c, 2019d, www.pravila.bg)

#### 3. Forming a civil competence

Diverse definitions are existing for civil education which are varying from *the narrow understanding* for "politically-legal aspects in the preparation of the future citizens" (see Kolarova, 2014: 220) to the broad understandings, also including "hygiene and healthy eating" (Balkanski, 1998: 103) or "culture of behaviour" (Zahariev, 2001: 166).

*The broad definition* connects civil education mainly with *the socialisation* (Legurska, 2018:52, Kolarova, 2014: 215) and "the student's preparation for their roles and responsibilities as citizens" (Kerr, 1999). It gives ground to many authors and teachers to talk about education for *democratic citizenship* – "process of personal growth and preparation of the young person for social appearances, dialog and cooperation based on respecting human rights, on the built personal moral position and knowledge and following of the laws of our country same as the mechanisms and principles of the contemporary democratic society" (Valchev, 2003: 8).

This approach is realised also through the *four* basic target categories for civil education in the countries of the European Union (Fig. 11).



#### Figure 11.

Conceptual frame for civic education. Adapted over European Commission (2017: 9)

*The main competencies* are selected and systematised – knowledge, skills and attitudes towards civil education in the class time.

On that base are suggested fundamental methodical approaches, methods, activities, tasks, techniques, etc. for forming civil competencies in the class time, oriented towards the child's rights and responsibilities, effective and constructive interaction with the others, democratic citizenship, solidarity and cooperation, and so forth emotions and behaviour.

#### 4. Forming critical thinking

In the economics of knowledge, teaching and assimilation of information, facts and procedures are important but not enough. That is why the skills for critical thinking, resolving problems, the ability for collaboration and creativity are perceived as important means, with which to apply the learned in practice so that new ideas, new theories, new products and new knowledge to be created (European Council, 2018). Furthermore, critical thinking, creativity, initiative, resolving problems, etc. have important roles in all key competencies (European Councils, 2012).

Systemised and analysed are definitions, the essence and the characteristics of critical thinking. It is characterised as an approach *and process of identification, analysing, synthesising and assessment of information for receiving applicable knowledge and deciding what should be done and what should be believed* (Slavin, 2005: 342, Liu, Frankel & Roohl, 2014, Herbert, 2017). It is connected to the analyses of arguments, drawing conclusions by using inductive or deductive reasoning, *judgment or estimation* and making decisions or solving problems (see Lai, 2011), as also the skills to *ask and answer questions, interpreting and explaining, substantiation, explanation, etc.* (see Lai, 2011).

Except these and other cognitive components, the critical thinking includes also *attitudes and dispositions* which are connected with sincerity and unbiasedness, fairness, reasonableness, curiosity, desire to be informed, flexibility, *understanding the others 'viewpoints, etc.* (Facione, & Gittens, 2013, Lai, 2011). In this way in it analytical, creative and practical elements are created (Sternberg, 2014: 450).

There are examined basic approaches, methods and techniques of education in critical thinking in several directions: skills to understand multitude of viewpoints, skills in reasoning and analysis, data interpreting, finding out of knowledge and usage of sources, media literacy, creativity, making assessments, understanding of the modern world, asking questions (European Union, 2017: 9).

#### 5. Forming media competence and understanding for digital management

The media competence is the ability to "decode, evaluate, analyse and produce as printed, so digital media" (Aufderheide, 1993). It is directed towards abilities not only to "understand but also to create multimedia messages" – creative decisions, communications, messages, opinions, positions, portfolio, presentations, etc. (Vasilchenko et al., 2017). That is why the media literacy is "focused on specific knowledge and янсввя that can help for *critical understanding and use of the media*", also as "abilities to access, analyses, evaluation and communication of messages in different forms" (see Jeong, Cho & Hwang, 2012).

Media literacy is closely related to critical thinking not only for receiving messages but also to create meaning" (Kellner & Share, 2005) and "own messages" (Hobbs, 1998).

Main approaches, topics, tasks and activities for forming media literacy are structured: *awareness and technical competencies; analysis and critical practice; evaluation and creation of media content.* 

Activities to form understanding about electronic management are described.

#### 6. Violence prevention, anger and aggression management. Peaceful resolving of conflicts

Different definitions and understandings of aggression and violence are examined as in the regulatory documents, so in the scientific literature. It is shared that understanding that aggression is one of the *most significant risks for the health and the achievements* of the students and the social atmosphere in school. In its character it is *a conduct, directed towards causing harm to one or more people* (Stamatov, 2001: 325), and "violence is a *form of physical* 

or psychological violence, violation or abuse, lack of care or careless attitude, maltreatment or exploitation, including sexual violation" (Convention, 2014).

The basic forms of aggression and violence are described. On that ground methodical approaches and activities for coping with anger and aggression and peaceful resolving of conflicts are systemised and organised.

It is shown the basic meaning of the whole school approach addressing violence prevention such as applying the concept for "support of personal development of the child and the student", "construction of a positive organisational climate", "achieve of positive disciplinary" and "development of the school society" (Mechanism..., 2017) (Fig. 12).



#### Figure 12.

Elements of a comprehensive school approach to violence prevention

#### 7. Education in initiative and entrepreneurship

Traditional entrepreneurship is defined as *economic activity* to start a new or to renew existing enterprise so that profit can be achieved. Like that the entrepreneur identifies possibilities, plans, organises, coordinates, ensures funds and takes a series of risks to begin running a business.

However, in the last few years a trend has emerged to extend that definition. As that entrepreneurship is connected more and more with *activity, independence, determination, taking initiatives, orientation towards operations, creativity, etc.* (see European Commission, 2016:22).

All basic characteristics of the initiatives and the enterprise as key competencies. On that ground are grouped important expected results, topics, techniques and activities for their forming in the class time. They are oriented towards *forming entrepreneurial attitude of self-confidence, forming attitude of initiative, forming entrepreneur abilities for creativity, forming abilities for planning, initial career orientation, forming abilities for business communication and teamwork, evaluation of possibilities, etc.* 

#### 8. Forming of health competencies

The healthy lifestyle and *the encouragement of prosperity* for all people are defined as the main aim of the programme for sustainable development of European Union and the UN's global sustainable development framework (European Commission, 2016, United Nation, 2015).

That is why in the research many normative documents, educational policies and scientific studies for health competence.

It is indicated that the complexity of human behaviour, however, demands the approaches of health education to be directed towards *three* key influences over change of behaviour:

knowledge of behaviour; dispositions connected to behaviour; abilities necessary to activate the behavioural adaptation (Gilbert, 2017: 3).

Attention is turned towards understanding and forming health literacy as part of the wholesome literacy, which includes *a system of knowledge, motivation and competencies*. It gains important meaning for the world's healthcare and the policy for sustainable development (Kickbusch, 2013).

Important aspects of the *physical activity* are described, defined by the World Health Organisation as *"key for the development* of the personality, encouraging psychic-physical well-being".

The main topics, activities and methods for forming health competence is systematised in several basic directions: *psychological health and personality development, physical development and capacity, personal hygiene and eating* (Regulation, 2016).

#### 9. Education in disaster and accident protection and first-aid help

The disaster is categorised as "considerable disturbance of the normal functioning of the society, provoked by natural phenomena and/or people's activity and leading to negative consequences for the life or health of the nation, property, economy and the environment". Its prevention, seizure and overcoming "exceed the capacity of the service system of ordinary actions of society's protection" (Law, 2020). The disaster is connected with three important elements: danger, vulnerability and risk.

Basic definitions and understanding for the teaching of this competence in the class time lesson are structured. The essence and basic characteristics of disasters and giving first-aid help are systematised. It is pointed that *school education* has an *essential role* in the process of diminishing the risk of disasters. Studies show that it can "increase the perception of the risk by the children", to improve their level of steadiness, to increase awareness, including in the family and society. Like this the *readiness is increased* for faster and better reaction in case of disaster and accident, the education is oriented towards "the preparation phase for disaster" (Torani et. al., 2019).



#### Figure 13.

Main topics for disaster and accident protection

The main directions of the education in disaster protection are systematised, grouped in *three* basic fields (Fig. 13).

#### **10.** Education in transport safety

The education in road safety is thought to be an important part of the state policies for *transport safety*. It contributes to *correcting the behaviour* of the participants in the traffic and it is an important factor to diminish the number of the deaths in traffic accidents. The education

in transport safety is defined as an essential part of an *integrated approach* to traffic safety (European Transport Safety Council, 201: 5).

Many countries include education in traffic safety in all educational levels of the school education as implementation of an undertaking commitment signed by them convention of the UN Economic Commission for Europe for road traffic.

Important attention is taken to clarify the essence and characteristics of that, important part for the class time, competence. Basic expected results are selected and arranged in the determinate by the curriculum (see Curriculum, 2018a, 2018b, 2018c, 2018d). In them *eight* main thematic directions are pointed out (Fig. 14).



#### Figure 14.

Main thematic directions in traffic safety in the class time lesson in primary education

The main approaches, topics, tasks and activities for traffic safety in the class time lesson are described in several basic directions: *traffic surroundings, rules and culture of behaviour on the road, as also orientation on the road.* 

#### 11. Prevention of terrorism and behaviour at terrorism. Cybersecurity

Basic definitions for terrorism are analysed like "*deliberate crime*", which can cause "a serious harm to certain country or international organisation", *violation* over the human life and the physical sanctity of a given one, *kidnapping or taking hostages*, causing substantial destruction of public sites, systems, infrastructures, etc. (European Union, 2017).

The basic understanding of cybersecurity is systematised as a system of "*precautionary measures* for defence of IT systems and their users from unauthorised access, attacks and damage so that it is guaranteed the confidentiality, the integrity and availability of the data" (European Court of Auditors, 2019). The cybersecurity includes "*prevention, uncovering, reaction and restoration from cyber incidents*".

On that ground the basic expected results, topics, methods and techniques for education for terrorist prevention and cybersecurity are constructed.

#### 12. Ecological competence for sustainable development

In the last years the ecological education gains *new priorities* and perspectives. Nature is looked at in a broader *plan* by including in its important problems of the man created and *social surrounding*" (see Hanisch, 2014: 662). The ambitions of ecological education are broadening so that we "*learn how to live and to act with full awareness of our surroundings*" (Environmental Education, 1997: 9). It includes all local and regional problems so global

problems, connected with "water, mobility, consumption, supplying, garbage, location, energy, climate, biological diversity, solidarity, health, etc." (Educate towards environment, 2014).

That is why in the research the basic definitions and characteristics of *ecological intelligence and ecological education and sustainable development* are systemised. The education of sustainable development "gives the students the possibility to make *informed decisions and responsible actions* for the wholeness of the *environment, economic viability and the just society*, for the present and future generations by honouring the cultural diversity" (Issues and trends, 2018: 3). Like this the ecological education grows over the limits of teaching and learning of knowledge and the forming of skills for environmental protection. It is integrated in a more broad process of education, directed towards the social and economical phenomena like "the effective consumption of natural resources, supporting the ecosystem and responsible attitude between the members of society and the business community" (Issues and trends, 2018: 7 - 8).

On that ground the basic approaches of ecological education are developed, directed towards *conservation of air and saving water and energy, planting and maintenance of clear environment, organising separate littering in the class and also initiatives for protecting of the environment.* 

#### 13. Intercultural competence. Tolerance and intercultural dialog

The European politics defines the intercultural approach as an important educational priority. Furthermore – *"solidarity, honour for every person* in spite of his/her ethnic, religious or cultural origin and encouraging cultural diversity" are defined as "essential circumstances" for development of affiliated democratic societies (Portera & Grant, 2017: 10).

Although it is not defined as a key competence, intercultural literacy is an essential part of the European qualification frame. It occupies important elements from the civil competence and separate parts from the multi-language competence. The intercultural competence includes a system of *knowledge* for "the European integration and familiarity with *variety and cultural identities* in Europe and the world". Here is also included an understanding for a "multi cultural and socio-economical dimensions of the European societies and for the way that the national



#### **Figure 15.** *Fields of intercultural education*

cultural identity contributes to the European identity". It also includes *skills "in argumentation and constructive participation in society's activities*" (European Council, 2018).

To them it could be added *"evaluation of the cultural diversity*, interest and curiosity towards different languages and multicultural communication", as well as "honouring the individual language profile of each and every person". This "includes honouring towards the mother tongue of individuals belonging to minorities and/or to immigrant families as well as recognition of the official language or languages of the respective country as a common frame for interaction" (European Council, 2018).

On that basis the main approaches, topics, tasks and activities for intercultural education are developed in several main groups (Regulation, 2016) (Fig. 15).

#### 14. Patriotic education and setting up national self-confidence

The patriotic education is connected with the *attitude and the feeling towards the motherland* and the kinship. In turn the kinship is connected with the past as well as with the present and the future. It is characterised with *belonging, attachment to traditions, the folklore and the nature of the homeland, the aspiration towards their preservation and development* (see Chavdarova, 2018: 202).

Like that the patriotic education is connected with knowledge and skills that develop in a spiral way from the family through the society to the motherland.

The patriotic education and the development of national self-confidence are main priorities in the class time. They are an important part of the *compulsory thematic fields* in all school grades. Part of the knowledge, abilities and the attitudes are formulated in the framed requirements of intercultural education. They are the basis for structuring the main expected results and development of topics and approaches for patriotic education in the class time. They are priority directed towards *traditions and contemporaneity*, *preparation for celebrations as well as national and European identity*.

#### Chapter Five

#### METHODS AND TECHNIQUES IN THE CLASS TIME LESSON

#### 1. Essence and characteristics

The educational methods "set up the *procedural side* of the technological method of the education" (Andreev, 2001: 195) and in that way they "put in motion" the process of teaching and learning. They can make the mastering of one and the same educational content *less or more effective* and because of that it is very important for the successful work of the class teacher.

The educational methods are the *way, the manner*, in which the process of the pedagogical work is carried out in the class time. Most frequently they are defined as *consecutive, conscious, purposeful and systematic actions of teachers and students in their collaborative activity and interaction for reaching the targeted aims of the education* (Orlich, Harder, Callahan, Trevisan & Brown, 2010: 4).

The educational methods include in themselves *a system of rules and activities*, which are defined as *devices* (Chavdarova-Kostova and others, 2018: 349), procedures (Landøy et al., 2020:141) or *techniques* (Sternberg, 2014: 615, Andreev, 2001: 195, Petrov, 2001: 213, Vitanov, 2015: 117 - 18).

The main characteristics of the educational *techniques* are described as *concrete*, *independent and completed actions* of the teacher and the student (Petrov, 2016: 214). In most cases the techniques include *procedures* and an appointed manner to assimilate or abide by a rule, to accomplish an action, something to be applied or realised in the classroom (Orlich et al., 2010: 4). Also it is indicated that the techniques are a *sequence of actions* of the teachers and the students, who are logically and hierarchically ordered, so that the efficiency of the pedagogical work is guaranteed (Landøy et al., 2020: 141, Radev, 2005: 254).

#### 2. Fundamental methodical groups of education

Following the orientations and priorities, the methods and techniques of education in the class time, they can be subdivided in *four* main groups (fig. 16).



**Figure 16.** *Main methodical groups of education in the class time* 

#### 3. Direct methods and techniques of education

The direct methodical groups of education contain several *basic methods and techniques* that include such important goals as attracting the attention of the students, structured presentation of the teaching content, actualisation of knowledge, exercising, deriving desired behaviour, giving feedback, evaluation, etc. (Borich, 2017: 252 - 283). Like this a group of *seven direct methods* of education in the class time lesson is formed (Fig. 17).



**Figure 17.** *Direct methods and techniques of education in the class time* 

The essence and basic characteristics of those methods of education in the class time lesson are described. Some of their important peculiarities and specifics of application in the class time lesson are appointed.

It is elaborately developed the didactical variations for the application of the *presentation*: popular science and fiction story, the explanation, the description and the reading.

Important characteristics of the *discourse and question-answers session* are systematised. Most frequently the questions are grouped around the cognitive levels of the students, openness of the questions and the volume of the answers, etc. (Fusco, 2012, Marzano et al., 2001).

It is developed the cognitive groups, open and closed questions, well and amorphously formulated questions, the questions with one or multiple answers, defined as divergents, as well as the important group of the questions with a collective answer.

It is examined the potentialities of *the individual work* with the textbooks that gives the student an opportunity to practice, to apply, to learn better or to exercise the acquired. Only in a separate cases it should be used for acquiring the new study material (Sternberg, 2014: 623).

Variations of work with *short texts, illustrations, schematics and pictures*, the activities for individual work, etc. are developed. Concrete work techniques are appointed.

In the study it is said that the use of *electronic didactical resources* gives a possibility to include the students in main or additional activities, connected with "the use of educational situations during which the students are occupied with discussions and solving real problems from humans life" (Tsanev, 2019: 22 - 23).

The class teacher can use successfully *asynchronous activities* which includes "sending different types of educational e-resources for self-preparation; sending worksheets or online exercises for individual work and examination of knowledge; creation and sending of students ' different electronic artefacts, etc.". *Synchronic activities*, by means of the video conference, consist of "teaching the main educational content by the teacher; evaluation of the knowledge (as "live" questions and answers in the virtual classroom or through a specific instrument in real time); conducting different discussions with the students (Aleksieva, 2021).

Didactical variations of electronic resources in the class time lesson as picture galleries, audio and video materials, games, tests, etc are structured (see pravila.bg).

The demonstration is a broadly used method through which the class teacher shows, writes out and describes objects, didactical materials, behavioural rules, procedures, activities, etc (Andreev, 2001: 232).

Her basic types and variety of didactical variations as *demonstration of objects and rules* in real environment, demonstration by the students, demonstration of objects and rules in virtual environment as well as demonstration through visualisation.

The possibilities of the exercise as a broadly used direct educational method, which includes conscious repetitive activities by the students led by the teacher, are also developed. They are directed toward actualisation, reassertion and broadening off the knowledge and abilities, rules and procedures. The exercises can be systematised in several groups (Andreev, 2001: 235 - 236, Petrov, 2016: 230 - 231) that are developed for the class time lesson: *activities based on a model, variational activities and the commentary activities in the class time*.

The didactical possibilities of the *instructions* as a specific method of education which is connected to the presentation of requirements, rules, procedures, etc. are described (Radev, 2005: 328). In many cases they are directed to save *behaviour* and because of that they are not connected with explanations.

Like that the teacher instructs the students for the dangerous behaviour in games, the evacuation in case of disasters or accidents, the right usage of easily flammable or poisonous products, giving first aid help in case of freezing, etc.

#### 4. Indirect teaching methods and techniques

Those methods overcome the low efficiency of the direct methods during the *teaching of concepts, models and abstractions* (see Borich, 2017: 284). The indirect methods and techniques are successfully managing with the difficulties of the traditional education in forming some types of thinking, in cases of a student's passive role, for the depth of rationalisation and cognitive understanding, in the cases of mechanical conveyance of knowledge, etc. (see Stenberg, 2013: 629 - 630).

The indirect methods of education often are defined as a *key element* of the so-called open education (Mircheva, 2013: 41). In it, it is crucial "the participation of the students" through "giving the opportunity for independently planned and managed studying". Like that comes to the fore "children's curiosity, their aspiration to ask questions so that they come to know more about a given field" that "serve as motives to learn".

"Open education" is "a crossing point on the net of definitions as "free work", "weekly curriculum", "daily plan", "project work", "education in a workshop", "work/studying page by page", etc. Like this it is "getting near to the notion of an open to the experience and action "school of life" (Mircheva, 2013: 39).

The indirect educational methods in the class time lesson are structured in several groups (Fig. 18).



#### Figure 18.

Indirect educational methods and techniques in the class time

The study directs the younger students to *observe and note down* different objects, phenomena, activities, behaviour, movement, rules, procedures, etc. The students learn skills to plan and *carry out small researches* and structured observations.

In the process of the research planning, observation, collecting information from different sources, writing out, comparing, analysing, shaping, presenting, etc. is implemented.

Its didactical variations as observation and writing down, thematic and biographical researches, study-interview, as well as the research, directed towards the student.

With the methods of *visualisation and classification it* is implemented an *active use of illustrations of the education*, understanding of connections and dependencies, learning facilitation of the educational content, increasing the sensory experience for objects, processes and phenomena from the surrounding environment.

The students are included in activities of *arrangement, classification, comparison, analysis*, collecting information, writing down, drawing, drafting, defining priorities, etc.

For this purpose, the main didactical variations for their application in the class time lesson are described: *schematics and technical drawings, tables, charts and pictograms, mental maps* (Buzan, 2010), *associative cloud, Euler-Venn diagrams, flashcards, photographs, etc.* 

Important place is separated for the indirect method *resolving problems* in the class time. It gives the possibility of the teaching approach to be changed from theory to practise in which the *students are actively included* so that the educational content can be better understood. Like that they are placed in a situation of an *active practical work of solving an authentic activity* (see Priemer et al., 2020). During the resolving problems, the students use their own knowledge and skills in an *unfamiliar situation during which they cannot use familiar algorithms and procedures* (see Carson, 2007).

The basic didactical variations as presenting problems and problematic situations, finding out and defining problems, finding out mistakes and particularities, formulating of various problems, generation of ideas and formulating of hypothesis, brainstorming (Osborn, 1979), anticipation, observing, explaining (Palmer, 1996), building walls (see Active Learning, 2007: 18), etc.

The essence, basic characteristics and didactical variations for the *work with cases* in the class time lesson are developed.

Important place is made for the project work in the class time. This indirect educational method, developed by John Dewey and William Kilpatrick as a strategy to overcome

conservatism in education, *getting near to the student's interests* and their inclusion in *authentic practical sensible activities* (see Condliffe et al., 2016: 6).

The project base education has strongly expressed *integral character* (Andreev, 2001: 239). In the work process the students carry out *observations, collect information from different sources, examine, analyse, describe, talk over, plan, discuss, draw, play, calculate, elaborate, shape, present, etc.* Those activities can be individual or in teams so that they encourage active participation and interaction, the drive for success and self-endorsement as well as the social responsibility, implemented through co-activities and sharing of knowledge and understanding. Doing this the students are included in *significant school experiences* (see Kokotsaki et al., 2016), resolve real tasks, act actively and responsibly, mature intellectually and morally (Andreev, 2001: 239).

Variations of practically oriented projects, projects for "learning through uncovering, projects massages, social oriented projects as well as projects for transfer of knowledge and abilities.

The specialities of *the practical activities* in the class time lesson are described. In those activities they *learn*, acquire not only cognitive and practical abilities but also *social competencies*. Like that they get near one authentic environment which is "so important and real as the one of the home, the neighbourhood or the playground" (Dewey, 2006).

Because of that versions of such activities as elaboration of useful products, elaboration of didactical materials, elaboration of products for games, elaboration of products for a gift and exchange, elaboration of designs and models as well as team practical activities, etc. are developed.

#### 5. Methods of Interaction

The methods of this group are oriented toward the *active interactions* between the students, between the teacher and the students as well as the students and the didactical environment. They include unusual for the traditional teaching and learning situations, activities and methodical projections. The methods of interaction are connected as with the *exchange of ideas so as with the planning* and conducting of *activities, directed by the students*.

The methods of interactions include several groups, priority used in the class time lesson (fig. 19).



**Figure 19.** *Interaction methods* 

Active asking of questions and exchange of information and opinions is an effective educational method (Valchev, 2006) in the class time. Some of its important variations as a discussion, deliberation of message in fictional and popular science, discussion over ethical texts, over texts with possible choice, debate, etc.

*Personalised didactical message* is a technique using *messages from famous*, national or regional authoritative personas – singers, sportsmen, writers, journalists, TV anchors, artists, businessmen, civil servants, etc. Those messages are included not only in their works and products but also in their *public appearances and behaviour*. Events, statements, situations, news *about the beginning of discussion* on a specific topic. For instance, prevention behaviour from infectious diseases, healthy lifestyle, nature protection, etc. Such messages can be planned by recording and presenting in front of the students experience, advises, rules, etc. by famous people in the region – parents, popular older students, etc.

Main place is left for *team work, cooperative and collaborative studying* (Slavin, 2015, Gillies, 2003, Johnson & Johnson, 2013).

Its main characteristics and pedagogical possibilities, variations for application in the class time lesson are described as pair work, studying together, team work on achievements (Slavin, 2005) *and puzzles* (Aronson, 2011).

Many techniques for team work such as acquaintance, intimacy, unification and motivation (Valchev, 2006: 71 - 85), plan and organise, my (our) achievements and efforts, techniques 5 - 1 - 4 (Wondimu, S., 2010: 154), decorate in a team, common drawings, concentric circles, aquarium (Gjurova and others, 2006: 59), SWOT analysis, creative table (see Active Learning, 2007: 19).

The essence, characteristics and the specific didactical means of the class time lesson are developed. The game is used in education and because of its resources to *engage* the student and the class teacher in a "specific school experience" as well as for the "transfer" of educational content towards the students (Maier, 1989).

That is why game variations are developed in different groups: *role-play games, game dramatisation, simulation games, cinema games, improvisational games, business games, board games, didactical, cognitive games, entertaining drawings, competitive games, games for changing the activity and short break* (Valchev, 2003, 2006: 75 - 82), etc.

*Work over productive questions.* One of the important tasks of the class teacher in the process of active learning is to encourage the students *to ask questions* for what they would like to find out, what they are excited about, fuel their curiosity and their interests.

The main aim of writing down is to select and use questions that would direct the students towards research, small projects, studies, discussions, etc. Like that one question asked by a student becomes productive because it is a beginning of activities, connected with teaching a concrete topic or problem and for an active studying from the whole class.

Important method of interaction is participation in *socially useful activities in society*. The participation of students in such activities is an efficient form of education and is often used as an important method for civil and ecological education.

Socially useful activities give the possibility of students to participate in *volunteer socially useful work and initiatives* that have a *real contribution* for the development of society. Like that they develop better understandings for the social interactions and problems and for the possibilities of the personal contribution. In the work process they improve their *self-confidence and engagement*, their skills of critical thinking, resolving problems and constructive participation in the society's life (see Elyer, 2002, Levkoe, Friendly & Daniere, 2020).

The diverse possibilities and variations of socially useful activities in the class time, distributed in several groups: *activities in advantage of social groups and societies, activities in advantage of natural and social environment, initiatives for change and common activities,* 

# plant or adopt a plant, celebration board in the class, spring cleaning as well as projects of the society.

Striving to free *more time for discussions, understanding and transferring* of knowledge as well as the active learning in the class, creates new methods and approaches of education. One of them that gains growing popularity is the "Reversed classroom" (November & Mull, 2012).

In this method, the *students are preparing in advance on a topic*, as they learn the educational content most often with the help of audio-visual means – video materials, presentations, electronic resources, etc. Like this *they are trained* to take part in *active discussions, to ask more questions* and to communicate between each other as they exchange information over the topic, etc.

Variations of application of this method in the class time lesson are described that include *preliminary studies, investigating and presenting the educational content, observation, watching video materials, preparation of questions as well as presentation of ideas and decisions.* 

#### 6. Evaluation in the class time lesson

The methods of this group are an important part of the class time lesson education. They include methods and techniques of evaluation and reflexion.

Evaluation is an important element of the educational process in the class time. It has always been hard enough and often neglected as wholesome pedagogical phenomenon. The main problems are connected to diagnostics of personal development, the diverse knowledge, skills and attitudes, the necessity of the creation not only of test-like activities but also structural observations, problematic situations, cases, etc. that are hard for making and implementing.

By its essence the evaluation is a broad pedagogical process and a system which is directed not only towards tracing the personality development of the students. It is also directed toward what, how many and in what time period (Sternberg, 2014: 710) they have learnt the competencies as expected results from the education, towards the educational content, strategies and methods of education, etc. (Andreev, 2001: 245).

The evaluation implements important functions in the process of teaching, education and management of the class. They are connected to the realisation of constant feedback, management and control, checking (Radev, 2005: 446 - 447) and planning an eventual correction in the work or the additional education and consultations.

The basic types of evaluation are described – evaluation of the development of the students, the organised structural observation of the class teacher, the portfolio of the student and the class as well as the achievements of the students.

Furthermore, all specific forms and methods of evaluation in the class time lesson are systemised – the verbal examining, the surveys, the test tasks, the observation, the cases and situational games.

An attention is also paid to the authentically evaluation during which the students tasks from real life are given, which include knowledge and abilities that are used in authentically environment.

#### 7. Preparation of the student's characteristics

In it the class teacher makes an *estimation of the growth of the student* in *two* domains: *the educational process and for following the school's discipline.* 

Since there are not exactly defined criteria, pointers or instructions for the making of those characteristics, at school different *approaches and variations* are used for its preparation. Because of that within the study several criteria and pointers for the preparation of the student's characteristics are developed. Those are *attitudes towards the education and the school*,

keeping the school discipline, personality skills and abilities of the student, competence oriented characteristics of the student.

#### 8. Reflection of the students in the class time lesson

The reflection is a process of consideration and realisation by the students of their role, achievements or difficulties, possibilities, perspectives, etc. in the educational process. It is directed towards realisation "of the personal cognitive activities and their own personality" (Vasilev, 2006: 265).

The reflection goes through *two phases with several stages*, described by Graham Gibbs (1988). *Firstly*, the student describes and evaluates the happening, what he/she thought and felt, what has been good and what has been bad in his/her activities. In the *second* phase of reflection the *realisation of the experience and the possibilities for change* are executed. It includes *analysis, conclusions and planning of future more successful activities*. Like this *six* stages are formed in the reflection of the student (Fig. 20).



#### Figure 20.

The basic types of reflection are described: *reflexive description, cognitive reflection, affectionate reflection, reflection of activity, progress and evaluation, reflexive analysis and conclusion, reflexive planning as well as current and final reflection.* 

The basic techniques and reflexive questions towards the students in the class time lesson are systematised.

Stages in the process of the reflection of the students. Adapted from Graham Gibbs (1988)

#### Chapter Six

#### ORGANISATION AND PLANNING IN THE CLASS TIME LESSON

#### 1. Organisational forms of education

Organisational forms of education are *regulated interactions between teachers and students, dynamic construction of the units of the learning process, variants of pedagogical communication* and others. (Radev, 2005: 406 – 407). Organisational forms of training are realised as frontal, group and individual (see Petrov, 2016: 191).

In *frontal* forms, the class teacher works simultaneously with *the whole class*, teaches everyone, sets tasks for everyone, controls and evaluates the overall work in the class. In the *group approach*, he works with *individual groups*, small teams or couples and often acts as a facilitator, supporting the relatively independent work of students. In the case of *individual* forms, the class teacher *sets individual tasks*, research, independent work, etc. They are also related to additional work, conversations, consultation, discussion, etc.

Traditionally, organisational forms of education are divided into *classroom lesson*, *classroom non formal lesson; extracurricular and after school*.

#### 2. Forms of classroom teaching

The lesson and the class work are the main forms of learning in the classroom. They have *many general but also specific features and components*. In the class time, the lesson are developed as a balanced organisational form, which is used in most of the topics and classes. Thus, in contrast to the teaching of general subjects, the relationship between the lesson and the learning activities, which occupy a place of basic organisational form in the classroom, changes (Fig. 21).

The essence and the main characteristics of the lesson and the curriculum in the class time lesson are systematised. Their structure and specific features are indicated. Some *guidelines for teaching new learning content* are also described.

Some important types of training sessions are structured, such as those with priority of *new knowledge and practical training*.



#### Figure 21.

The lesson and content in the class time lesson

#### 3. Classroom non-formal forms of education

The main forms in the class are described, such as *seminars, excursions, research work, etc.* (see Andreev, 2001: 304, Petrov, 2016: 203). Basic approaches and examples for pedagogical work are given.

#### 4. Extracurricular and after school education

Some *mass, collective and individual* (see Andreev, 2001: 307, Petrov, 2016: 205) forms of education are also systematised. Specific approaches and examples of work are given.

#### 5. Planning work in the class time

Planning is an important part of a class teacher's job. It is the *fundamental* for implementing *an effective teaching strategy* during the school year. Planning is usually *annual* or planning a *specific lesson, activity, event,* etc.

It is very important for planning to be *dynamic*, *including changes* that occur in the process of teaching and learning, changes in the social and community environment and more. They are possible and effective with a well-organised and conducted reflective pedagogical practice of the class teacher.

Planning can be done not only as a fragmentary process of class preparation, but as a *comprehensive pedagogical activity*, which includes *three* main components: *long-term planning*, *preparation for the specific class hour and assessment*, *reflection after class or other period of study time*. (Orlich et al., 2010: 106) (Fig. 22).



#### Figure 22.

*Classroom planning during the class time. Adapted from Orlich et al. (2010: 106)* 

The main directions and features for the preparation of the annual plan of the class teacher have been developed, which includes the selection and *organisation of the topics, the expected results, the methods and techniques of work, etc.* 

The main problems of lesson planning and preparation of a short and effective syllabus are also systematised.

#### 6. Reflective practice of the class teacher

Planning and experience are not always enough for successful pedagogical work in the class time. Sometimes it is necessary to *change established and working approaches* in order to achieve *better results with a specific class* or a group of students, with individual students, parents and community. In these cases, reflective practice is an invaluable tool, which is an important part and irrevocable practice of effective class teachers.

Considerations and characteristics of *reflective practice* are described, such as *repeating a looping process of teaching, reflection and self-assessment, consideration of change or new content and didactic technologies and application in the following topics and activities* (see Maura, 2012, Finlay, 2008). Organising this approach enables the *class teacher to transform* 

from a transmitter of knowledge and competencies into a 'facilitator of created meaningful creation'' (see Costa & Kallick, 2008: 222).

The process of reflexive practice is described in detail, which is based on the concept of Donald Schön (1987) as a reflection *during* the pedagogical work and a reflection *after its completion.* (*Fig. 23*)



#### Figure 23.

*Reflective pedagogical practice adapted from Donald Schön (1987)* 

#### 7. Planning and organisation of the classroom environment

The organisation of the physical environment in the classroom is an important element of classroom planning and management. An attractive, well-lit, comfortable, colourful classroom contributes to establishing positive and desirable behaviours, helps improve student achievement, and increases their motivation and interest in learning (Jacobsen, Eggen & Kauchak, 2009: 54 - 55).

The design of the classroom environment includes the arrangement of desks, tables, cabinets and other furniture, storage of materials, arrangement of walls, landscaping and decoration, design of various spaces and more.

The basic concepts for planning and organising an innovative classroom environment, the basis of the understanding of *universal education design* are described (see Ford, 2016: 25 - 33).

Ideas for creating an *accessible educational environment* are also described, as well as creating areas in the classroom such as a "green corner", a "mini-library", a "place for reflection" and others. Shelves, soft flooring, poufs, inflatable armchairs, etc. can be used in the creation. The zones can be *relatively permanent*, but they *can also be created depending on the upcoming activity*, for example, creating a play area in front of the board, a simulation play area – in front of the door, etc.

Ideas for creating interactive walls in the classroom environment are also described.

#### Chapter Seven

#### EFFICIENCY ANALYSIS OF THE MODEL OF THE POSITIVE TEACHING STRATEGY IN THE CLASS TIME

#### 1. Organisation of the educational research

*The diagnostic study* was conducted with 3376 students from the cities of Sofia, Plovdiv, Varna, Ruse, Pernik, Lom, Silistra, Bozhurishte, Ihtiman, Botevgrad, Velingrad, Rakitovo, Svoge, Berkovitsa, Chiprovtsi, Pravets, Radomir, Roman, Batak, Mirkovo, Voluyak, Novi Iskar, Gorna Banya and Maglen.

The participating students were in the first, second, third and fourth grade and came from classes with various sizes and schools with various ratings. They were distributed in different settlements – the capital, large, medium and small cities, as well as small villages. The schools in Sofia were also selected to be of different sizes and ratings.

To establish the results of the application of the model of positive teaching strategy the approach of *controlled research* was used. Therefore, students were divided into *control and experimental groups* and diagnosed at the end of the experimental transformational study period.

Selected criteria were applied in order for the two groups to be as close as possible in terms of composition, location, size, rating of the school, etc.

#### 2. Diagnostic procedures

#### 2.1. Quiz questions

The diagnostic study included two groups of fourteen questions for each class.

Twelve of them had three possible answers. Two of these answers were correct and one was incorrect.

The diagnostic toolkit also includes two open-ended questions. The first required free writing (free answer or short self-summary), and the second involved the task of completing five sentences.

#### 2.2. Structured monitoring

The diagnostic examination was complemented by *organised structured observation of students in six areas* during the period of the transformational study. They were evaluated and the results were summarised on a three-stage scale.

#### 3. Criteria and indicators of the diagnostic examination

#### 3.1 Main groups of criteria

Evaluating the effectiveness of the model of positive teaching strategy during the class time lesson included *diagnostics of the acquired competencies and elements of the personal development* of the primary school students. These competences were organised into *four* groups: *core and key competencies, transferable competencies, personal competencies* and *competencies for student participation* (Fig. 24).

When designing the criteria, key expected results were selected to evaluate the effectiveness of the positive teaching strategy.



Figure 24.

Criteria of the diagnostic examination

3.2. Criterion and indicators for examining the core competencies during the class time lesson

These include criteria and indicators for *civic*, *health*, *environmental and intercultural competence*. They are completed by knowledge and skills related to expected results in the thematic areas: protection from disasters and accidents; first aid; traffic safety; patriotic education; prevention of violence, anger and aggression management and peaceful resolution of conflicts; prevention of terrorism and behaviour in the event of a terrorist threat; cybersecurity.

Nine criteria and 27 indicators for first, second, third and fourth grade are described.

*3.3. Criterion and indicators for examining transferable competencies during the class time* 

These include a study of *critical thinking*, *initiative and entrepreneurship*, *as well as teamwork skills*.

*Three* criteria and 12 indicators for first, second, third and fourth grade are described.

#### 3.4. Criterion and indicators for examining personal competencies

The criterion in the different classes are oriented towards self-concept, *self-assessment and self-effectiveness during the class time, as well as the motivation of the students for learning and participation.* 

Two criteria and 8 indicators for first, second, third and fourth grade are described.

#### 3.5. Criteria and indicators for examining student participation and self-organisation

They relate to students' desire for personal participation in the life of the class. One criteria and three indicators for first, second, third and fourth grade are formed.

#### 4. Analysis of the results on the core and key competencies during the class time lesson

The core and key competencies in the class time lesson are diagnosed by the standard of civic, health and environmental education, as well as the main thematic areas in the set of requirements for the class time.

The results are mathematically and statistically processed for each class.

#### 4.1. Analysis of civic competence

The summarised results of the diagnostic study of students in grades 1-4 manifest that in all grades those from the experimental classes show higher results in all indicators. The largest group of them (58.38%) are in the high levels of the criteria, in contrast to the students in the control classes, who are 39.31%. A small part of them (4.59%) and 37.03% showed average

results. The students from the control classes form 8.74% of the low and 51.95% of the average level of the indicator, respectively (Fig. 25).



#### Figure 25.

Development of elements of civic competence in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 103.18, at p = 0.000). There is a statistically significant difference between the relative shares at the low level (t = 4.14, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 7.87, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 10.16, at p = 0.000).

The established difference of 21%, confirmed by the statistically significant differences between the control and the experimental classes at all levels of the indicators in the criterion, shows high efficiency of the applied methodology according to this criterion.

#### 4.2. Analysis of disaster prevention and first aid competencies

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results on all indicators.

About 3.24% of them made significant mistakes in their knowledge and understanding of disasters and accidents and safe behaviour. The students from the control classes are almost twice as many -7.71%.

The situation is similar at the intermediate level, where a significant part of 51.34% of the students from the control classes fall. The students from the experimental classes are about one third in this level -32.55%.

The results of the positive strategy implementation are most significant in the data from the high level of knowledge and skills of students on this indicator. Thus, the students from the experimental classes are more than half and reach 64.21%. The difference between them and those in the control classes (40.95%) is about 23% (Fig. 26).



#### Figure 25.



There is a *statistically significant difference* between the two distributions (The value of chi-square is 156.16, at p = 0.000). There is a statistically significant difference between the relative shares at the low level (t = 4.81, at p = 0.000). There is a statistically significant difference between the relative shares of the intermediate level (t = 9.99, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 12.43, at p = 0.000).

The established difference of almost 24%, confirmed by the statistically significant differences between control and experimental classes at all levels on the indicators in criterion, *shows the high efficiency* of the positive teaching strategy model on this criterion.

#### 4.3. Analysis of traffic safety competencies

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results on all indicators. This is best seen at the high level, where 66.20% of students successfully solve problems related to knowledge and skills for safe behaviour on the road, unlike the results of the control group which is significantly lower -47.28%.

At the low level the experimental students are 4.13%, which is almost twice less than those in the control classes -8.05% (Fig. 27).

In the intermediate level, the students from the control classes occupy a main part with 44.66%, while those from the experimental classes are less -29.66%.





There is a *statistically significant difference* between the two distributions (the value of chisquare is 104.54, at p = 0.000). There is a statistically significant difference between the relative shares at the low level (t = 4.06, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 8.06, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 10.05, at p = 0.000).

The established difference of *almost 20%*, confirmed by the statistically significant differences between control and experimental classes at all levels on the indicators in the criterion, shows the *high efficiency* of the positive teaching approach on this criterion.

#### 4.4. Analysis of health competence

The summarised results of the diagnostic study manifest that in all grades students from the experimental group show higher results on all indicators.

In the low level they are 1.36% which is seven times less than those in the control classes -7.13%.

The main part of the control classes (47.77%) occupy the intermediate level, while those from the experimental classes are around 20% less – 27.04%. The difference is also significant at the high levels of this indicator. The students from the experimental classes are 71.59%, and those from the control classes 45.10% (Fig. 28).



#### Figure 28.

Development of elements of health competence in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 224.99, at p = 0.000). There is a statistically significant difference between the relative shares at the low level (t = 6.74, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 10.85, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 13.93, at p = 0.000).

The established difference of *almost 26%*, confirmed by the statistically significant differences between control and experimental classes at all levels on the indicators in the criterion, shows the *high efficiency* of the positive teaching strategy during the class time.

#### 4.5. Analysis of elements of ecological competence

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results on all indicators. Thus, they make the fewest mistakes and occupy a small share of the low and intermediate level on this indicator -1.59% and

26.77%, respectively. In contrast, those in the control classes are much more numerous at these levels -7.14% and 45.37%.

The didactic possibilities of the positive teaching strategy are best seen in the high level, where differences of 24% are reported. The students from the experimental classes were 71.64%, while those from the control classes were 47.48% (Fig. 29).



#### Figure 29.

Development of elements of ecological competence in grades 1-4

There is a statistically significant difference between the two distributions (the value of chisquare is 197.92, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 6.44, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 10.08, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 13.00, at p = 0.000).

The established difference of almost 24%, confirmed by the statistically significant differences between control and experimental classes at all levels on the indicators in the criterion shows the high efficiency of the positive teaching model during the class time.

#### 4.6. Analysis of the terrorism prevention, cybersecurity

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators. At the low level they are 2.73%, which is almost twice as less than those in the control classes -6.11%. The main part of the control students (48.60%) occupy the intermediate level, and those from the experimental classes are 29.50% (Fig. 30).

Significant differences of 22% remain at the high level on this indicator. The students from the experimental classes are 67.76%, and those from the control ones are 45.29%. (Fig. 31). There is a statistically significant difference between the two distributions (the value of Chi-square is 147.13, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 4.04, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 10.23, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 12.00, at p = 0.000).



#### Figure 30.

Development of elements of terrorism prevention, cybersecurity in grades 1-4

The established difference of *almost 22%*, confirmed by the statistically significant differences between control and experimental classes at all levels on the indicators in the criterion shows the high efficiency of the positive teaching strategy during the class time.

#### 4.7. Analysis of intercultural competencies

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results on all indicators. They are best seen at the high level, where 62.90% of the students successfully solve tasks related to intercultural knowledge and skills. Those in the control classes are significantly less – 39.25%.

In the low level, although being relatively numerous -8%, the experimental classes are almost twice as less than those in the control classes -14.57%.

In the average level the students from the control classes are 46.18%, while those from the experimental classes are -29.09% (Fig. 31).



#### Figure 31.

Development of elements of intercultural competence in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 155.60, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 5.20, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 9.19, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 12.68, at p = 0.000). The established difference of *almost 24%*, confirmed by the statistically significant differences between control and experimental classes at all levels of the indicators in the criterion, shows the high efficiency of the positive teaching model during the class time.

#### 4.8. Analysis of patriotic education

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators. At the low level they are 3.27%, which is less than those in the control classes – 5.52%. The main part of the control students (40.60%) occupy the intermediate level, and those from the experimental classes are 42.62%.

The implementation results of the positive strategy can be seen in the data from the high level of the elements of patriotic education. Although not so great, there is a difference of nearly 16% between the students in the control classes and the experimental ones. They are respectively -70.11% and 53.88%. (Fig. 32).



#### Figure 32.

Development of elements of patriotic education in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 78.84, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 2.73, at p = 0.006). There is a statistically significant difference between the relative shares at the intermediate level (t = 7.66, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 8.71, at p = 0.000).

The established difference of *almost 17%*, confirmed by the statistically significant differences between control and experimental classes at all levels of the indicators in the criterion, confirms the effectiveness of the used multi-layered teaching strategy during the class time.

#### 4.9. Analysis of anger and aggression management

The summarised results of the diagnostic study show that in all grades students from the experimental classes show higher results on all indicators. They are the best in the high level of the indicator, showing a result of 69.49%. Thus, in the low and intermediate levels, the students from the experimental classes occupy 4.07% and 26.44%, respectively. In contrast, more than half of the students in the control classes show knowledge and skills related to the low and intermediate levels (9.00% and 46.95%). Thus, 44.04% occupy the high level of this indicator (Fig. 33).



#### Figure 33.

Development of elements of aggression management in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 189.08, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 4.91, at p = 0.000). There is a statistically significant difference between the relative shares of the intermediate level (t = 11.10, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 13.67, at p = 0.000).

The established difference of *almost 25%*, confirmed by the statistically significant differences between control and experimental classes at all levels on the indicators in the criterion, confirms the high efficiency of the used multi-layered teaching strategy during the class time.

#### 4.10. Summary analysis of the core competencies results during the class time

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators of core competencies in class. They form lower percentages in the low and intermediate levels (3.67% and 29.41%) and therefore show higher results in the high levels of this indicator – 66.92%. This reveals the successful approbation of the positive teaching strategy. The differences with the control classes, which are about 22%, are also high. This group reaches 8.22% in the low, 47.05% in the intermediate and 44.73% in the high levels (Fig. 34).

There is a *statistically significant difference* between the two distributions (the value of chisquare is 143.33, at p = 0.000). There is a statistically significant difference between the relative shares at the low level (t = 4.73, at p = 0.000). There is a statistically significant difference between the relative shares of the intermediate level (t = 9.43, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 11.80, at p = 0.000).

The established average difference of almost 22%, confirmed by the statistically significant differences between control and experimental classes on all criteria of the main competencies during the class time, confirms the effectiveness of the used multi-layered teaching strategy during the class time.



#### Figure 34.

Development of the core competencies during the class time lesson grades 1-4

#### 5. Analysis of the result on the transferable competencies during the class time lesson

Transferable and key competencies are diagnosed, which include criteria and indicators for critical thinking, initiative and entrepreneurship, as well as teamwork skills.

The results are mathematically and statistically processed for each class.

#### 5.1. Critical thinking analysis

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators. Thus, the students from the experimental classes make the least mistakes in the critical thinking tasks and occupy a relatively small share of the low and intermediate level on this indicator -9.38% and 28.59%. In contrast, those in the control classes were more than twice as many in the low level and 10% more in the intermediate level -20.56% and 39.05% accordingly.

The didactic possibilities of the positive teaching strategy are best seen in the high level, where differences of more than 20% are reported. The students from the experimental classes are 61.58%, while those from the control classes are 40.39% (Fig. 35).



#### Figure 35.

Development of elements of critical thinking in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 138.79, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 7.48, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 5.72, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 11.29, at p = 0.000).

The established difference of *almost 21%*, confirmed by the statistically significant differences between control and experimental classes at all levels of the indicators in the criterion, confirms the effectiveness of the used teaching strategy during the class time.

#### 5.2. Analysis of initiative and entrepreneurship

The summarised results of the diagnostic study manifest that in all grades the students from the experimental classes show higher results in all indicators.

Although they are a relatively high percentage in the low level (11.70%), the number is almost twice lower than the one of the control classes – 20.12%. The main part of them occupy the intermediate level (44.70%), where those from the experimental classes are 37.35%. Differences of 15% remain at high levels on this indicator. The students from the control classes are 50.95%, and those from the experimental ones are 35.19%. (Fig. 36).



#### Figure 36.

Development of elements of initiative and entrepreneurship in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 126.53, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 9.47, at p = 0.000). There was no statistically significant difference between the relative shares at the intermediate level (t = 0.42, at p = 0.672). There is a statistically significant difference between the relative shares at the high level (t = 8.48, at p = 0.000).

The established difference of *almost 15%*, confirmed by the statistically significant differences between control and experimental classes at all levels of the indicators in the criterion confirms the effectiveness of the used teaching approach during the class time.

#### 5.3. Analysis of teamwork

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators.

A small part of them (5.72%) showed low results, while the main part of them occupied the high level of the studied elements of teamwork skills, with three times more than those of the control classes -16.38%.

Despite the fact that at the intermediate levels according to this indicator the results of both groups are close -30.16% and 37.54%, 20% more students from the experimental group fall into the high level. They are 64.12% compared to 46.09% in the control classes (Fig. 37).



#### Figure 37.

Development of elements of teamwork in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 135.66, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 8.33, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 4.04, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 9.55, at p = 0.000).

The established difference of *almost 20%*, confirmed by the statistically significant differences between control and experimental classes at all levels of the indicators in the criterion confirms the effectiveness of the positive teaching strategy during the class time.

5.4. Summary analysis of the results of the transferable competencies during the class time

The summarised results of the diagnostic study manifest that in all grades, students from the experimental classes show higher results in all indicators of transferable competencies during the class time.

More than half of them (58.88%) are diagnosed in the high levels of development of transferable competencies, which is significantly more than those in the control classes – 40.56%. Thus, only 9.09% and 32.03% of them are in the low and intermediate levels compared to the students from the control classes, which are 19.02% and 40.43% (Fig. 38).



#### Figure 38.

Development of transferable competencies during the class time lesson in grades 1-4

There is a statistically significant difference between the two distributions (the value of chisquare is 127.01, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 8.38, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 3.38, at p = 0.001). There is a statistically significant difference between the relative shares at the high level (t = 9.73, at p = 0.000).

The established average difference of almost 18%, confirmed by the statistically significant differences between control and experimental classes on all criteria of transferable competencies during the class time lesson confirms the effectiveness of the used overall teaching strategy in the classroom.

#### 6. Analysis of the results on personal competences during the class time lesson

The diagnosed personal competencies include criteria and indicators for self-concept, self-assessment and self-efficacy, as well as motivation to learn.

The results are mathematically and statistically processed for each class.

#### 6.1 Analysis of the self-concept, self-assessment and self-effectiveness

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators. Although a not small enough percentage (14.01%) showed low results, the main part of them occupies the intermediate (39.68%) and the high level (46.27%) of the studied self-concept, self-assessment and self-efficacy elements.

Thus, from 7% to 10% differences are formed between the students from the two groups, which is a reason to determine the effectiveness of the positive teaching approach. The results of the control classes in the three levels are 22.67%, 37.68% and 39.65% in the high level, respectively (Fig. 39).

There is a *statistically significant difference* between the two distributions (the value of chisquare is 38.03, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 5.68, at p = 0.000). There was no statistically significant difference between the relative shares at the intermediate level (t = 1.01, at p = 0.273). There is a statistically significant difference between the relative shares at the high level (t = 3.51, at p = 0.000).

The established difference of almost 7%, even though being the lowest for the studied criteria and indicators so far and somewhat methodologically disappointing, is statistically significant between control and experimental classes at all levels of indicators in the criterion and confirms, although insufficiently, high efficiency of the positive teaching strategy during the class time.



#### Figure 39.

Development of elements of self-concept, self-assessment and self-effectiveness in grades 1-4

#### 6.2. Analysis of learning motivation

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators.

The effectiveness of the applied positive teaching approach is best seen in their high results on this indicator -62.27%, which are about 20% more than those in the control classes -36.82%. Almost 10% is the difference in the low levels, where the students from the experimental classes are 8.04%, and those from the control classes are almost twice as many -15.76%. The difference at the intermediate levels is similar -29.69% for the experimental and 41.75% for the control classes (Fig. 40).



#### Figure 40.

Development of learning motivation in grades 1-4

There is a statistically significant difference between the two distributions (the value of chisquare is 115.80, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 5.95, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 6.52, at p = 0.000). There is a statistically significant difference between the relative shares at the high level (t = 10.50, at p = 0.000).

The established difference of *almost 20%* is statistically significant between control and experimental classes at all levels of the indicators in the criterion and confirms the high effectiveness of the positive teaching strategy during the class time.

#### 6.3. Summary analysis of the results of the personal competencies during class time

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show higher results in all indicators of personal competencies during the class time. They show 12.02%, 36.38% and 51.60% on the low, medium and high levels of the indicators, respectively. In contrast the control classes show 20.36%, 39.04% and 40.60%, respectively (Fig. 41). This confirms the effectiveness of the applied approach, although the results are not as high as the hypothesis suggested.



#### Figure 41.

Development of personal competencies during the class time lesson in grades 1-4

There is a *statistically significant difference* between the two distributions (the value of chisquare is 61.81, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 5.76, at p = 0.000). There is a statistically significant difference between the relative shares at the intermediate level (t = 2.69, at p = 0.007). There is a statistically significant difference between the relative shares at the high level (t = 6.97, at p = 0.000).

The established average difference of *almost 12%*, confirmed by statistically significant differences between control and experimental classes on all criteria of personal competencies during the class time, *confirms the effectiveness* of the overall teaching approach used during the class time, despite some fluctuations in the hypothesis.

# 7. Analysis of the results for the student participation and self-organisation during the class time lesson

Student participation in the school community is diagnosed, and *the results are mathematically and statistically processed for each class*.

#### 7.1. Analysis of student participation and self-organisation

The summarised results of the diagnostic study manifest that in all grades students from the experimental classes show relatively higher results on all indicators. A relatively small part of them (12.86%) showed low results, as the main part of them belong to the intermediate (41.79%) and the high levels (45.35%) of student participation in the school community. They are ranking higher than those in the control classes, which report 23.68%, 45.44% in the low and intermediate levels and only 30.88% in the high levels of the indicators (Fig. 42).



**Figure 42.** *Development of student participation in grades* 1 - 4

There is a *statistically significant difference* between the two distributions (the value of Chi-square is 82.86, at p = 0.000.). There is a statistically significant difference between the relative shares at the low level (t = 7.07, at p = 0.000). There is no statistically significant difference between the relative shares at the intermediate level (t = 1.59, at p = 0.122). There is a statistically significant difference between the relative shares at the high level (t = 7.64, at p = 0.000).

The established average difference of *almost 11%*, confirmed by the statistically significant differences between control and experimental classes on the criterion, confirms the effectiveness of the multi-layered teaching strategy used during the class time, although it does not live up to the growth expectations of the hypothesis.

#### 8. Comparative analysis of competencies during the class time

The analysis of the obtained results by groups of competencies showed again the effectiveness of the applied multi-layered teaching approach during the class time.

8.1. Analysis of core and transferable competencies

The data show that this methodology has the strongest and most successful influence on the development of core competencies related to the integrated complex of civic, health, environmental and intercultural education. Students in the experimental classes acquire much better the knowledge, skills and attitudes related to the main thematic areas examined during the class time. Although not as good as the initial study predicted, the development of transferable competencies is very good (Fig. 43).



#### Figure 43.

Development of core and transferable competencies in grades 1-4

The data is also confirmed as statistically significant. In the experimental group there is a statistically significant difference between the two distributions (the value of chi-square is 66.87, at p = 0.000.). In the control group there is a statistically significant difference between the two distributions (the value of chi-square is 69.19, at p = 0.000).

In the experimental group there is a statistically significant difference between the relative shares at the low level (t = 7.60, at p = 0.000). In the control group there is a statistically significant difference between the relative shares at the low level (t = 8.39, at p = 0.000).

In the experimental group there is no statistically significant difference between the relative shares at the intermediate level (t = 1.74, at p = 0.082). In the control group there is a statistically significant difference between the relative shares at the intermediate level (t = 4.03, at p = 0.000).

In the experimental group there is a statistically significant difference between the relative shares at the high level (t = 5.53, at p = 0.000). In the control group there is no statistically significant difference between the relative shares at the high level (t = 1.91, at p = 0.056).

A known but insufficiently clear statistical correlation was found between core and transferable competencies. They were measured by the Cramér coefficient. This resulted in a range from 0 to 0.791 for the experimental group and in a range from 0 to 0.774 for the control group.

The results of the diagnostic study give sufficient grounds to believe that the hypothesis of the study is fully confirmed for the development of core competencies and very well confirmed, although with some lower results of 5 - 8%, for the development of transferable competencies.

#### 8.2. Analysis of core and personal competencies

The data show that this methodology has a more successful effect on the development of core competencies, but also shows very good results for the development of personal competencies. Students in the experimental classes increase the scope of their self-concept and improve their self-esteem and self-effectiveness (Fig. 44).



#### Figure 44.

The data is also confirmed as statistically significant. In the experimental group there is a statistically significant difference between the two distributions (the value of chi-square is 119.99, at p = 0.000.). In the control group there is a statistically significant difference between the two distributions (the value of chi-square is 51.51, at p = 0.000.).

In the experimental group there is a statistically significant difference between the relative shares at the low level (t = 9.43, at p = 0.000). In the control group there is a statistically significant difference between the relative shares at the low level (t = 7.19, at p = 0.000).

In the experimental group there is a statistically significant difference between the relative shares at the intermediate level (t = 3.76, at p = 0.000). In the control group there is a statistically significant difference between the relative shares at the intermediate level (t = 3.26, at p = 0.001).

In the experimental group there is a statistically significant difference between the relative shares at the high level (t = 8.64, at p = 0.000). In the control group there is no statistically significant difference between the relative shares at the high level (t = 1.68, at p = 0.094).

A known but insufficiently clear statistical correlation was found between core and personal competencies. Using the Cramér coefficient, a range from 0 to 0.734 was obtained for the experimental group, and a range from 0 to 0.795 – for the control group.

Development of core and personal competencies in grades 1-4

The results of the diagnostic study give sufficient grounds to believe that the hypothesis of the study is fully confirmed for the development of core competencies and very well confirmed, although with some lower results of 5 - 8%, for the development of personal competencies.

8.3. Analysis of the core competencies and student participation competencies

The data show that this methodology has a more successful effect on the development of core competencies, but also shows very good results for the development of student participation. The students from the experimental classes increase the scope of their participation, are motivated for common activities, actively participate in various projects in the student community, show empathy and initiative (Fig. 45).



#### Figure 45.

Development of core competencies and student participation competencies in grades 1-4

The data is also confirmed as statistically significant. In the experimental group there is a statistically significant difference between the two distributions (the value of chi-square is 260.92, at p = 0.000.). In the control group there is a statistically significant difference between the two distributions (the value of chi-square is 100.02, at p = 0.000.).

In the experimental group there is a statistically significant difference between the relative shares at the low level (t = 11.21, at p = 0.000). In the control group there is a statistically significant difference between the relative shares at the low level (t = 9.60, at p = 0.000).

In the experimental group there is a statistically significant difference between the relative shares of the intermediate level (t = 9.05, at p = 0.000). In the control group there is no statistically significant difference between the relative shares at the intermediate level (t = 0.68, at p = 0.494).

In the experimental group there is a statistically significant difference between the relative shares at the high level (t = 15.17, at p = 0.000). In the control group there is a statistically significant difference between the relative shares at the high level (t = 6.45, at p = 0.000).

A known but insufficiently clear statistical correlation was found between core and personal competencies. Using the Cramér coefficient, a range from 0 to 0.634 was obtained for the experimental group, and a range from 0 to 0.771 - for the control group.

The results of the diagnostic study give sufficient grounds to believe that the hypothesis of the study is fully confirmed for the development of core competencies and very well confirmed, although with some lower results of 8 - 10%, for the student participation.

#### CONCLUSION

1. The addition of a new content element to the teaching strategy - an approach for selection and structuring of the curriculum, can become a basis for constructing a common vision and system of methods and techniques of education, teaching and learning during the class time. Therefore, it is as important as the procedural side of the teaching strategy.

2. This approach changes the components of the teaching strategy, which are structured in four main themes: selection and structuring of the curriculum; selection of methods and techniques of education, teaching and classroom management; annual planning; evaluation and reflection.

3. The positive approach to teaching, education and socialisation during the class time lesson represents a shift towards an approach of educational content selection, teaching and classroom management, as well as methods of instruction and learning, different from the traditional ones.

4. The positive teaching strategy includes the creation and implementation of a more dynamic, free and shared approach to the selection and structuring of the curriculum, the application of positive approaches to education and classroom management, as well as a consistent process of learning oriented to competencies.

5. The dynamic and shared selection and structuring of the curriculum can be used more systematically during the class time lesson and can be significantly increased by more than 25%.

6. The positive approaches to teaching and classroom management can be used more consistently and occupy wider pedagogical spaces in the class time.

7. The competence-oriented approach to learning could be increased up to 10% in the class time.

8. A more balanced approach to student-centred learning can be effectively applied during the class time. Thus, indirect teaching methods and techniques can displace traditional ones and their use can be increased by up to 40% during the class time.

9. Teaching and learning rules can become a key component in classroom management and self-organisation when a shared teaching approach is applied.

10. In the classroom, a more systematic approach can be successfully implemented to form part of the multiple intelligences, in particular: inter-personal and intra-personal (Gardner, 2014), social (Thorndike, 1920), emotional (Golman, 2011) and practical (Sternberg, 2014).

11. The formation of self-concept, self-assessment and self-effectiveness during the class time lesson can be significantly increased so as to overcome the existing difficulties in primary school age. The proposed approaches, methods and techniques are suitable for achieving this increase.

12. Activities to support student inclusion and self-organisation can also be significantly increased.

13. The created competency-oriented model successfully integrates 15 diverse competencies, structured in four groups: core competencies, transferable competencies, personal competencies and competencies for student participation and self-organisation.

14. The proposed system of more than 100 expected results such as knowledge, skills and attitudes, 120 topics, about 320 tasks and activities, can be used in planning, organising and conducting the class time.

15. The proposed approach of structuring the teaching methods and techniques during the class time, such as the interaction of direct teaching methods, indirect teaching methods, interaction methods and methods of assessment and reflection, shows that this approach

can be successfully applied both in the creation of theoretical models, as well as in organising the daily pedagogical work in the class time.

16. The system for active involvement of the students' reflection and the reflective teaching practice of the teachers showed high efficiency.

17. The positive teaching strategy has been successfully tested for more than 8 years in a number of schools in Sofia and the country through a comprehensive methodological system.

18. The evaluation of its effectiveness showed higher, statistically distinguishable results on all 15 criteria and 45 indicators in the diagnostic study conducted with 3379 students, organised in four groups: basic and key competencies, transferable competencies, personally significant competencies and competencies for student participation.

19. The highest distinction in the development of core competencies was found. Almost 20% of the students from the experimental classes (66.90%) are at the high levels in all 9 criteria.

20. Although not so high, positive results were found in the development of transferable competencies and personal competencies, where respectively 56.90% and 54.30% of students from experimental classes show high results on all 5 criteria.

21. The lowest results were found in the development of competencies for student participation and self-organisation. Only 44.70% are in the high levels of the criterion, although this is 15% more than those from the control classes.

22. This gives reason to believe that despite the different possibilities of the positive teaching strategy, it is effective for the development of the whole set of goals and various competencies, as expected results of the class time's curriculum.

23. The results of the diagnostic study give sufficient grounds to believe that the hypothesis of the study is fully confirmed in its part for the development of core and very well, although with some lower results for transferable, personal competencies and competencies for student participation and self-organisation.

*The positive teaching strategy*, which is *competence-oriented* and *balanced*, on one hand, *direct and indirect* teaching and learning, and on the other – creation of a positive educational environment and student inclusion and participation, was successfully implemented and tested in the initial stage of education.

More than 3300 students took part in the *immediate practical work*, working on structured topics, tasks and activities in the weekly class time lesson throughout the school year. The development of the strategy was examined in *two sets of graduates*. Thus, the students worked for a *complete period* of four years.

In the process of work, *adjustments were needed* both in the curriculum and in the teaching methods and techniques. They were driven by changes in the standard for civic, health, environmental and intercultural education and included a reduction in the minimum number of road safety lesson and the addition of new thematic areas related to e-government and media literacy, terrorism prevention and terrorist treat behaviour; with cybersecurity.

Topics and content were *restructured*, especially in the first grade, where road safety classes were reduced by six hours. This made it possible to include more diverse tasks and activities in the class time. *Conditions have been created* for more activities related to indirect teaching methods and techniques. Thus, the strategy has developed as a relatively complete product that is effectively implemented in many school communities.

The results of the approbation show that *this approach is preferred* by many class teachers due to its systematic and balanced approach to traditional and student-oriented education, teaching and socialisation. The creation of a positive educational environment also developed very well, which was additionally associated with an increase in student participation and inclusion.

The successful approbation of the strategy was confirmed by several main criteria: *academic achievements, motivation and student participation, personal development, activity and initiative, critical thinking, positive self-esteem and reflexivity, etc.* 

The students from the *experimental classes* manifested *higher results* with statistically significant differences in most of the criteria. The *main competencies* developed *most successfully* during the approbation period. *Although not as much as expected, transferable and personal competencies have developed, as well as competencies for student participation.* 

The diagnostic research and the statistical processing of the results give grounds to believe that the model and teaching approach to educational content selection, methods and techniques of teaching, described in this research, is an effective positive teaching strategy for the class time.

#### CONTRIBUTIONS

1. A new component of the teaching strategy has been added, developed and structured in detail – the approach for selection and structuring of the curriculum. It can be defined as an essential part of the process of planning and organising of the pedagogical process during the class time. The selection and structuring of the curriculum is the basis for constructing a common vision and system of methods and techniques of education, teaching and learning during the class time. Therefore, it is meaningful and just as important as the procedural side of the teaching strategy.

2. A model of teaching strategy has been developed with four relatively independent components: selection and structuring of the curriculum; selection of methods and techniques of education, teaching and classroom management; annual planning; evaluation and reflection.

3. An innovative model of the positive teaching strategy for the class time lesson has been developed, with approaches for selection of educational content, education and classroom management different from the traditional, as well as new methods of teaching and learning.

4. A new approach for implementation of the positive teaching strategy has been constructed, which includes the creation and application of a more dynamic, free and shared approach for selection and structuring of educational content, the application of positive approaches for education and classroom management, as well as consistent competence-oriented learning process.

5. The main characteristics and teaching technologies for the development of all components of the positive teaching strategy for the class time lesson are described.

6. A quantitative model for the new priorities of the positive teaching strategy during the class time lesson has been developed in relation to the approaches of teaching and learning in the compulsory school hours.

7. A concept has been constructed for making teaching and learning rules a key component in class management and self-organisation by applying a shared teaching approach.

8. An approach to the formation of part of the multiple intelligences, such as interpersonal, interpersonal (Gardner, 2014), social (Thorndike, 1920), emotional (Golman, 2011) and practical (Sternberg, 2014), was systemised during the class time.

9. An innovative competency-oriented model for classroom education has been developed, based on core, transferable, personal competencies and competencies for student participation and self-organisation.

10. The model is implemented in more than 100 competencies with the expected results. The include 120 topics constructed, adapted, systematised and tested occupations, methods, techniques, games, exercises and tasks with specific goals, activities and didactic options of application in specific topics during the class time lesson in the initial stage of education.

11. Bulgarian and international methodologies, ideas and approaches, as well as good teaching practices, have been selected and adapted.

12. An innovative approach for structuring the methods and techniques of education during the class time lesson is proposed, such as direct teaching methods, indirect teaching methods, methods of interaction and methods of assessment and reflection.

13. The positive teaching strategy was tested over a period of eight years and evaluated by an extensive diagnostic study with 3376 students from all over the country. Its effectiveness on 15 criteria was mathematically and statistically confirmed.

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