Capitalisation of Dynamic Games with Didactic Content in Primary School

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Abstract
The article presents the theoretical-practical significations of the researchers in the field of education sciences, which allows the capitalisation of dynamic games with didactic content at the primary education level. This encompasses the dynamic games classification according to different criteria, the description of the structural components of the dynamic games with a didactic content; the motivational component; and the operational component. The realised study presents the forms of motor activity within a class lesson and the insertion of the latter in lessons by different subjects.

Keywords: dynamic game, didactic content, motivational component, operational component, the dynamic position, the physical minute, dance break.

According to Pajet's theory, the movement game initiates the progressive process of child socialisation. This game type appears within the pre-operational stage (age 2-7/8) and develops from simple movement games to dynamic games with rules that help the child to overcome the initial egocentrism, develop the ability of group collaboration/cooperation, and allow them to accept common behaviour norms. The dynamic game with rules implies body actions done systematically and consciously with physical improvement impact and motor skills development. The dynamic game mostly satisfies the child's needs for movement and action.

The essence of the dynamic/movement games, as an important activity at the early, school age, can be expressed through the following ideas. The activity of various analysers, fully exploited in movement games, creates favourable opportunities for brain function training; this fact positively impacts knowledge assimilation and creates premises for further successful acquisition of learning competencies [5, p.140].

The dynamic games can be classified depending on age and other features:

- by the degree of child mobility within the game (low-mobility games, medium-mobility games, high-mobility games etc.);
- by content (games with rules, sports games).

The dynamic games with rules are divided into:

- games with a subject: in their case, the children's fantasy is trained in order to reflect a life or fairy-tale episode in a conditioned form; e.g. children imitate the movements or behaviours of an animal (a cat, a bird, a wolf, a bee etc.) in the situation presented via the subject;
- games without a subject: can capitalise competition elements (e.g. "Who will get faster"); relay race games ("Who will pass the ball faster?"); games with objects

(balls, circles, pops etc.); traditional entertaining games (e.g. hide-and-seek, playing blind, playing tipcat etc.); these games involve motor games rules which are attractive for the children.

The sports games (e.g. basketball, football, table tennis/ping-pong) represent dynamic games with rules, without subject.

The capitalisation of dynamic games in the pedagogical activity in primary school requires a special collection of games for developing diverse pedagogical impactful issues for the given period of school experience. In this sense, the specialised literature suggests groupings according to certain criteria:

- according to the degree of complexity;
- according to the types of movements mainly involved/used (games with elements of general development exercises, games implying running/jumping/throwing etc.);
- according to the physical conditions mainly manifested (games for speed, force, movements coordination etc. development);
- preparatory games for specific sports;
- depending on the relationships between players (games in which the players do not have contact with the "opponents", games with limited contact, and direct contact games);
- according to the motor density nature (high, medium, low-mobility games);
- taking into account the period of the year;
- according to the way of organisation (break-time games, during-the-lesson games, after-school programme games etc.) [5, p. 141-142].

In specialised literature, the concept of ***dynamic game with didactic content*** is often encountered. Kovaliko suggests the following definition: "initiated and conscious activity which involves two tasks concomitantly: physical development and cognitive development. The completion of the first task requires active motor actions from the players while the execution of these actions depends on their creativity and initiative (e.g. run rapidly to the target, throw quicker and precisely at the target, catch up with the opponent or run from him as quickly and dexterously as possible). The other task implies solving certain cognitive problems as the consolidation of knowledge and abilities acquired in other educational subjects: mathematics, languages, sciences (getting acquainted with the environment)" [5, p. 142].

Thus, in the process of a dynamic game with a didactic content, the pupil must acknowledge the unity of the two types of involved activities (motor and intellectual), for example, he has to make up words while throwing the ball to a mate, has to select images/pictures within a relay race, has to calculate/count while jumping the hopscotch etc.). He needs to understand, that these game actions, not only train him to run, to jump, to throw a ball correctly and beautifully etc., but also help him study, for example, to make up words according to the requirements, to classify animals according to given criteria, to study addition and extraction etc. inspired by epistemic curiosity (cognitive interest), the young student will carry out the motor activity with bigger motivation. And vice versa, inspired by the joy of motion, the pupil will realise the cognitive activity more effectively and with a smaller intellectual effort.

As it follows, we will present the description of the *structural components of the dynamic game with didactic* content developing Kovaliko's construing of the concept [5, p. 140-145] and realising specifications for primary school.

- *The motivational component* involves the development of the internal motivation for learning which is the basis of cognitive interest development:

- explanation of the game purpose (strategic (for a year) and tactic (for a lesson)); explanation of the game tasks;
- the main elements of the game, expressed through interdependence, mutual assistance/help, individual and collective responsibility, communication, and collective assessment; it is important to take into account the fact that starting with the age of 7, children develop the social behaviours actively, display interest for common actions, tendencies of self-affirmation among the peers;
- principles of activity within the game, expressed through awareness and activism; planning; gradualism – from familiar games to unknown ones; respecting the psychological and physical features specific to the age; accessibility and individualisation; systematisation in consolidating knowledge, aptitudes and acquired abilities; connection to life;
- the game subject (if it is supposed), which includes setting the objectives for the players and the development of the subject.

- *The operational component* presupposes students learning to organise common cognitive-motor activity according to the game task (simultaneous, cognitive and motor) to be able to process the ongoing:
  - pedagogic requirements regarding the organization (preparation for the game; players' organization; game process management; summarizing); pupils' physical and psychical development features dictate the games' organisation methodology to the teacher; children better remember a visual-intuitive explanation, they do not like to stay too long out of the game when it is not finished yet;
  - didactic/teaching materials, inventory: a) according to the purpose of the activity: for exercising, cognitive, creative; b) according to the degree of the effort (physical and intellectual), volume of the involved information, the degree of abstractness of the actions);
  - methodological tools (for example, working techniques on speech development; working techniques with didactic materials; individual and group working techniques; attention management techniques etc.);
  - pedagogic tools (success stories; surprise, expectation effect; self-affirmation conditions; encouragement and sanctions; pupils' actions and behaviours assessment);
  - interdisciplinary educational content (PE and mother or a foreign language; mathematics, sciences, history etc.);
  - nature of players' interaction (with no division into teams; divided into teams; with transition from a team into another);
  - manifestation of the motor qualities within game actions;
  - game intensity: low – up to 130 beats/min.; medium – circa 130-150 beats/min.; raised - circa 150-170 beats/min.; high - from 170 beats/min.

Numerous researchers proved that low primary school pupils need permanent movement in order to counter the tiredness from classes and out of class. Ludmila Ursu and Ion Bencheci have conducted a review of the main psychological-physiological features of the early primary school child which determine the need for physical and psychic stimulation in the process of learning activities progress in class:

- *"Superior nervous activity features*: the instability of the basic processes and the prevalence of the excitement processes; enhanced exhaustion in conditions of increased efforts; the difficulty of development of new conditioned connections (more repetitions are necessary); the fragility of newly developed connections and their loss;
- *analysers features*: insufficient stability and increased sensibility to the external influences, determined by the development of other functions of the vision in the conditions of completing the binocular vision development (spatial perception); incompleteness of the audial analyser quality (the audibility threshold is lower, as well as hearing acuity);
- *muscular-skeletal system features*: the insufficient development of the skeleton, of the ligamentous-articular apparatus and the muscles (muscular groups of the spine); the insufficient development of the vessels elasticity; increased excitability of the respiratory centre (rapid break of the respiratory movements rhythm), which creates premises for inflammatory diseases of the upper respiratory tract" [1, pp. 22-26].

The appearance of fatigue in early primary school pupils during classes can manifest itself through the following: "the pupil's work productivity decreases (the frequency of mistakes and the time for tasks realisation increase); the internal inhibition weakens (the motor anxiety and attention distraction can be noticed)". Thus, "the low school age pupils learning success is directly dependant on the presence and the quality of motor activity at the lesson" [1, pp. 22-26].

The authors mentioned above present the forms of motor activity in a lesson as well:
- *"The dynamic positions change*: the body position changes in space during the lesson; can be realised both, unintentionally and intentionally, being mediated by diverse factors: the layout of the demonstrative materials in different places of the classroom; changing the place during the team activities etc.; even in the case of the intentional realisation, the pupil does not perceive this form of motor activity consciously.
- *the physical minute (the minute of physical education):* a short break for the realisation of a set of physical exercises made up in order to prevent fatigue and to eliminate the adverse effects on health and learning activity;
- *the dynamic break*: any movements that ensure the activity type changes and capitalises the motor activity at the lesson; „a complementary activity with a double psycho-pedagogical need: relaxes the pupil and exercises certain psychophysical capacities; is connected to the word, gesture, movement significance" [idem].

Obviously, out of these forms, we can refer to the category of game dynamic activities (ludic) only the dynamic breaks, which "represent organised forms of motor activity at a lesson, having an intentional character, being projected by the teacher as lesson events and perceived by the pupils as such". In this connection, we can enter the well-known concepts of *rhythmic*

dynamic breaks and *dynamic breaks in the form of songs accompanied by movements or dance*.

It depends on the teacher's creativity to insert the approached content at a lesson during the dynamic breaks. An example of a creative approach in this respect is offered by the researchers Ludmila Ursu and Ion Bencheci, introducing a new concept:

"*Dance break*– a form of motor activity organisation at a lesson in the classroom, which:
- is designed by the teacher and realised by the pupils in the context of the temporary abeyance of the learning activity;
- is based on dance movement;
- is destined for improving the psychophysical and emotional conditions necessary for the low school age pupils learning activity success" [1, pp. 22-26].

The suggestions for the forms of organisation in the classroom can be as follows:
- *"The choreographic minute* deals with the execution of certain positions or dance movements, singular or combined in small groups, with or without musical support or rhythmic scheme through counting, claps etc.
- *the choreographic break* implies the interpretation of the music of a short dance with a simple dance scheme; it is advisable to capitalise on the dance movements trained within the dance minutes; as a musical support a video sequence, representing a dance interpreted by children or by animate characters can be used;
- *A dancing break* presupposes a free dance activity, created spontaneously by each child in the context of individual reception of the emotional message of a suggested musical piece, which can be consolidated in a syncretic way and through stimuli of a different nature (image, video sequence, word etc.)" [idem].

We have proposed some examples supporting the integration of the approached contents in classes with dynamic game aspects.

BALL GAME *MOUTHFUL OF WATER!* (adapted after the game „Не собьюсь" [7])
Competences units:
- **Romanian language and literature:** Identification of the consonants, vowels and syllables within the words.
- **Physical education:** Application of the motor acquisitions in game conditions; involvement in group motor activity; Accepting security rules in motor activities; Supporting interpersonal relations in motor activities.
- **Game tasks:**
- To take part in group motor activities, manifesting implication and readiness to help their peers;
- To name the sounds of the Romanian language, including vowels.

Gameplay:
1. The players are arranged in a circle and name the sounds of the Romanian language alphabetically, passing the ball to their neighbours clockwise.

2. It is prohibited to name the vowels. In these cases, the player shouts, "Mouth full of water" and passes the ball to the neighbour.
3. If the player names a vowel or drops the ball, he is excluded from the game.

DYNAMIC BALL GAME EVEN ODD
(adapted after the game *Iarna-Vara/Winter-Summer* [6])

Competences units:
• **Mathematics:** Application of the addition and extraction operations and their features for the composition and decomposition of the natural numbers 0 – 10; finding out certain numbers; Reception of some elements of mathematical language connected to the concept of a natural number.
• **Physical education:** Involvement in group motor activity; Accepting security rules in motor activities; Supporting interpersonal relations in motor activities.
• **Game tasks:**
- To take part in motor group activity, sending and catching the ball, getting involved and showing readiness to help their peers;
- To create exercises which have as response even or odd numbers.
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Gameplay:
1. The game is played outside. The players get arranged in a circle.
2. The teacher gets into the middle of the circle. He hits the ball heavily on the earth and names a pupil and the word "Even". The rest of the pupils run away as the named pupil has to catch the ball and pass it to the teacher. After passing the ball to the teacher, as the rest of the pupils stop still, the pupil has to make up an exercise that has as a result an even number. If the rest agree, they say YES, if they disagree, they shout NO.

After this, the pupil throws the ball at the player standing closest to him. If he fails, he runs again after the ball and all the rest are running away. Taking the ball, he shouts "Even" once again and the game continues. If the pupil catches the ball, he leads the game, shouts "Odd" and the game goes on.

BUNNIES AND BEES
Competences units:
• **Sciences:** Recognizing the diversity of forest plants and animals, the decorative outdoor plants.
• **Physical education:** Application of the motor acquisitions in the game; Accepting security rules in motor activities; Supporting interpersonal relations in motor activities.
• **Game tasks:**
- To imitate bunny's hops if a wild/forest plant is named;
- To imitate with their hands the bee's wings movements and to buzz if a decorative outdoor plant is named.
Gameplay:
1. The game can be used at the evocation and Meaning realization stages.

2. The teacher trains the class to imitate the bunny and the bee movements.
3. Then he pronounces the names of the wild/forest plants while the pupils must hop like bunnies, if a decorative outdoor plant is named, they do like a bee.
4. The line that did not make any mistakes and behaved themselves is the winner.

Conclusions

Based on the study, we can draw the following conclusions:

1. The educational valences of dynamic games with didactic content in primary school are determined by the mutual potentiation of motor and intellectual activities. The pleasure of the motor activity within the game motivates the pupils to realise the intellectual tasks requested by the game and vice versa, the cognitive interest stimulated by the intellectual activity within the game motivates them to execute the game's motor activity.

2. The dynamic games with a didactic content are registered in:
   - *the category of interdisciplinary games,* integrating the acquired achievements by the pupils within the subject of Physical Education and other school subjects;
   - *the category of educational technologies for a healthy lifestyle* increases the capitalisation of motor activities organised within the didactic process.

3. In primary school, the dynamic games with a didactic content can be realised as follows:
   - dynamic breaks;
   - didactic games;
   - ludic activities/didactic games within the days of cross-disciplinary activities;
   - dynamic breaks/ludic activities/dynamic games during the breaks;
   - outdoor games/indoor games within the afterschool programme;
   - ludic activities/games within the extracurricular activities.

4. The design and the conduct of dynamic games with didactic content demand a creative approach to their professional competencies from the teachers.

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