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Theoretical article

Training students in developing and applying innovative teaching strategies

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Abstract

This paper aims to highlight several theoretical and practical guidelines for training students to develop and apply teaching strategies. The first part of the paper provides conceptual clarifications related to the strategies applied in class, referring to definitions, constituent elements of strategies, and parameters to be considered when developing teaching strategies. We believe that any student preparing to become a teacher needs a solid and clear theoretical foundation to be able to correctly apply specialized concepts. The practical model we propose in the second part of the paper focuses on undergraduate students majoring in Pedagogy and Primary and Preschool Education. Within the course and seminar activities, we create contexts for students to develop and apply original teaching strategies, encouraging them to propose innovative, alternative, and creative ways of carrying out the educational act. Being in the initial training stage, it is important for students to start investing early in the development of the professional skills necessary for a teaching career, with a particular emphasis on the applicability of knowledge. Thus, under the guidance of the teacher, students are familiarized with working structures and are oriented towards researching different possibilities for combining teaching methods, discovering different educational resources, and then sharing examples of good practices with their colleagues.

Keywords:
teaching strategies; teaching methods; educational resources; professional skills; mutual learning

1. Introduction

The concept of strategy, with educational determinations, generally refers to an "intentional way of carrying out and improving actions taken in order to achieve a specific goal" (Bocoș et al., 2019, p. 408). At the micro-educational level, we will refer to strategies designed and applied in micro-pedagogical terms, namely teaching strategies. These are short-term strategies established for the purpose of carrying out specific and clearly defined instructional and educational activities. Teaching strategies can be defined as "systems of methods, procedures, teaching tools, and forms of organizing teaching activities, integrated into a systemic vision in unified and coherent operational structures, which aim to build learning experiences, develop skills, abilities, and competencies, and streamline the instructional-educational process" (Bocoș et al., 2019, p. 409).

2. Theoretical foundation

In preparing students to create and apply correct, coherent, and relevant teaching strategies adapted to a specific educational context, current guidelines in general didactics and curriculum theory are utilized. Developing a teaching strategy is a complex process that requires solid theoretical knowledge, planning skills, flexibility, adaptability, and multiple analyses from a psycho-pedagogical and didactic perspective. Training students as future teachers in this area is necessary because the teaching strategies they will apply can have a significant impact "on learning, on student engagement and progress" (Albulescu, 2024, p. 71).

In the context of theoretical and practical training activities, in courses and seminars, students are taught how to harmonize different constituent elements of teaching strategies. By strictly referring to the micro-educational plan, students, guided by the teacher, search for, propose, combine into logical structures, and put into practice:

- teaching methods and procedures to be applied by teachers/student teachers, and pupils.
- teaching materials that can be used following the proposed teaching methods and procedures, as well as educational resources that can be a source of knowledge and inspiration in this context.
- ways of structuring, organizing, and presenting instructional and educational content; possibilities for configuring learning situations and tasks.
- forms of organizing student activity.
- methods, techniques, tests/instruments for assessment and self-assessment.

In addition to these elements, students are encouraged to reflect on and integrate into their teaching strategies aspects related to the types of learning experiences they anticipate for their students, their learning preferences (preferred ways of learning), motivation for learning, and the direction and monitoring of learning. In accordance with the views of specialists in educational sciences (Bocoș & Jucan, 2019), the essential elements that students prepare to include in their efforts to design, apply, evaluate, adjust, and develop teaching strategies are: the type of learning experience, teaching methods and procedures, teaching materials, and forms of organizing student activity.

3. Practical training of students to apply original teaching strategies

Students are challenged through theoretical and practical tasks to propose teaching strategies applicable in primary education, are guided by the teacher to find alternative teaching strategies and possibilities for creating combinations of teaching strategies, imagining diverse learning contexts, and considering the diversity of personality traits found in a class of students. With lists of teaching methods, solid theoretical foundations associated with them, and databases with references for various educational resources at their disposal, students create and apply teaching strategies, first in seminar activities and then in teaching practice internships in schools. The aim is for teaching strategies to be creative and innovative, adapted to specific instructional and educational situations.

The actual activity we propose to students each academic year starts with selecting a teaching method from a list that brings together multiple classifications on this topic. The selection of a teaching method depends on certain criteria (Catalano, 2019), which we promote among students as valuable benchmarks in designing the overall teaching strategy. We refer to criteria such as: the type, volume, or degree of difficulty of the content selected for a teaching sequence, the teaching resources available to them or that they create, the personality of each proposing student/future teacher, the age characteristics of the students for whom the instructional-educational activity is prepared, the educational goals pursued, the reference to certain learning situations (concrete pedagogical contexts), the form(s) of organization of student activity, or the anticipated assessment strategies.

For example, second-year undergraduate students propose their own teaching strategy, suitable for a certain age group/class, at the primary education level (thus, they also refer to the particularities of the students from the perspective of the learning process), formulate short-term educational objectives (operational, specific, measurable), in line with the competencies in the curriculum documents and the chosen teaching methods, select, adapt, restructure, and present the content related to the subject of a lesson/discipline, integrate various educational resources, justifying their necessity, create opportunities for differentiation and personalization of instruction, and supplement with continuous and formative assessment practices. Therefore, they choose the method (independently or in consultation with the teacher), and the teaching strategy developed by each student is put into practice in the context of an effective teaching sequence, carried out within the framework of collective seminar activities. The proposing student has the opportunity to practice a certain teaching method, to test the application of teaching methods and the use of teaching aids, to interact with their colleagues in a similar way to classroom interactions, to receive feedback, guidance, and practical suggestions (from the teacher and colleagues), and to self-evaluate.

It is basically about developing professional skills in practical contexts (learning by doing), through sharing and mutual learning, which is considered an effective way of developing teachers, both in initial training and throughout their teaching career. From the early years of their academic training, students specializing in Pedagogy and Primary and Preschool Education are taught that one of the most effective ways to improve teachers' professional skills is through collaboration and, more specifically, mutual learning. This promotes the exchange of good practices, mutual support, and collective problem solving, which can ensure the improvement of teaching practices (OECD, 2020; Ungurășan, 2025; Vescio et al., 2008).

Both in the stages leading up to the application of teaching strategies and when providing feedback on them, students are guided to comply with two main categories of fundamental construction parameters (Albulescu, 2008, 2024), namely:

- parameters related to the teacher's activity (selection, processing, and presentation of informational content; adoption of appropriate teaching strategies in approaching new learning

tasks; provision of the necessary resources and an optimal environment for learning to take place).

- parameters associated with student learning activity, with the skills that are trained in the learning process, if the adopted strategy is applied (cognitive logical-methodological operations – identification, classification, comparison, analysis, synthesis, interpretation, evaluation; attitudinal methodological aspects – attention, interests, motivation, interaction, desire for achievement, etc.).

Thanks to the explanations provided and the clarifying conversations that take place in the Theory and Methodology of Instruction courses and seminars, contextualized according to the teaching sequences that students support, they progressively discover and learn that teaching strategies offer them the opportunity to come up with new solutions and possibilities for combining different teaching methods and procedures, teaching aids, and forms of organization. Thus, students are encouraged and stimulated to have creative, flexible, and innovative approaches, being aware of achieving educational goals through different teaching strategies or in various combinations. Proposers of teaching strategies must constantly pay attention to the learning tasks created for students, their particularities, and the educational goals and content pursued.

The success of teaching sequences is evaluated and assessed based on various criteria, including compliance with teaching principles, correct use of curriculum documents, teaching transposition and curriculum integration, the creative and innovative nature of the methodological system and teaching resources, the relevance of teaching and learning activities in relation to previously formulated educational objectives, etc. With regard to objectives and their formulation, students are guided to follow Mager's procedure and, complementarily, to be guided by the 4C Technique (Lemov, 2021), namely 4 criteria in formulating an effective objective for a short-term activity – the objective must be controllable (have a size and scope that can be included in a single lesson/teaching sequence), quantifiable (measurable), created first (designed to guide the activity, not to justify how a particular activity achieves one of the objectives), and most important (focusing on what is essential, most important in the activity). Throughout the processes of designing, applying, and developing teaching strategies, students are guided to discover the teaching strategy as a concept-construct that "integrates one or more basic methods approached globally in a complementary or compensatory manner" (Cristea, 2019, p. 209).

4. Results

Activity 1 – student A. I.

Curriculum area: Counseling and guidance

Subject: Personal development

Grade: 2nd grade

Unit: Exploring the universe of emotions

Lesson title: I know and can control my emotions

Lesson type: Review and systematization of knowledge

Specific skill: Expressing basic emotions in various contexts

Educational objectives:

O1. Identify contexts in everyday life in which emotions are expressed through behavior, based on previously acquired knowledge.

O2. Classify positive and negative emotions, based on previously acquired knowledge.

Teaching strategy:

-teaching methods: conversation, brainstorming, explanation, exercise, exit tickets.

-teaching materials/ resources: worksheets, textbook, short film, writing instruments.

-forms of organization: frontal, individual.

Activity:

-*The students' attention* is captured through a brainstorming game that stimulates their creativity and imagination, based on the requirement in the textbook, followed by group discussions.

Figure 1

Requirement and template for the brainstorming moment

Note (text below the image): Imagine that overnight, a witch has stolen people's ability to feel emotions. Describe what a day in your life would be like if neither you nor the people in your life could feel any emotions.

-*Updating and systematizing knowledge* begins with watching a short film that establishes the theoretical aspects and targeted content – emotions

and their reflection in behaviors. This is followed by a guided dialogue about the emotions and behaviors we show in everyday life (based on examples from the short film).

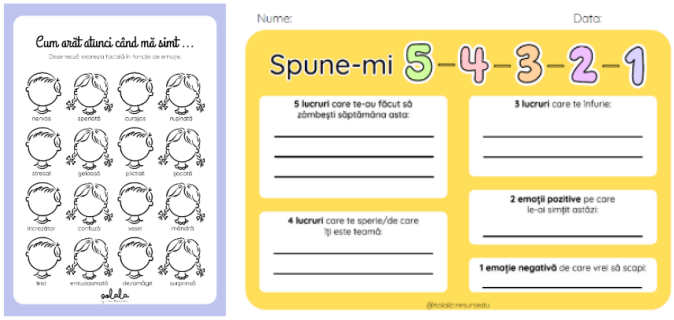
Figure 2

Short film: https://manuale.edu.ro/manuale/Clasa a II-a/Dezvoltare personala/Uy5DLiBDb3JpbnQgTG9n/#p=25

Next, students complete the worksheet *How I look when I feel ...*, matching emotions with facial expressions, and then match behaviors triggered by certain emotions (and even how they can be improved).

Figure 3

Worksheets: How I look when I feel… & Tell me 5-4-3-2-1!



-*Assessment and feedback* are provided by applying the exit ticket method, in the formative assessment sheet, *Tell me 5-4-3-2-1*! This method involves two stages: data collection and its use in future teaching activities. In the context of this activity, only the first stage is covered.

5 things that made you smile this week

4 things that scare you/that you are afraid of

3 things that make you angry

2 positive emotions you felt today

1 negative emotion you no longer want to feel

-The teaching activity ends with the handing out of exit tickets, and in the next activity conclusions will be drawn and any misunderstood concepts will be explained.

Activity 2 – student A. A.

Curriculum area: Mathematics and Natural Sciences

Subject: Natural Sciences

Grade: 4th grade

Unit: Planets of the Solar System

Lesson title: The Solar System

Lesson type: Review and systematization of knowledge

Specific skill: Using criteria to order and classify bodies, phenomena, and processes

Educational objectives:

O1. Identify at least 5 previously learned characteristics of the Solar System.

O2. Create a crossword puzzle, in pairs, using an online application (https://puzzlemaker.discoveryeducation.com/criss-cross) based on previously acquired knowledge.

O3. Complete the crossword puzzle created by the other pairs in a maximum of 10 minutes.

Teaching strategy:

-teaching methods: conversation, explanation, computer-assisted instruction, demonstration, exercise.

-teaching materials/ resources: computer, video projector, digital textbook, QR code, web applications - pair generator (https://www.classtools.net/random-group-generator), online crossword puzzle (https://puzzlemaker.discoveryeducation.com/criss-cross).

-forms of organization: frontal, in pairs.

Activity:

-*The students' attention* is achieved by displaying colorful images related to the lesson topic, the Solar System.

-*Announcing the theme and objectives* creates the context for the activity and highlights the direction that the proposing student wishes to take. For this reason, students are informed that they will work in pairs to create and complete a crossword puzzle on the topic of the Solar System. Students must work as a team and demonstrate cooperation throughout the exercise.

-*Reviewing and organizing knowledge*. To effectively organize their knowledge about the solar system, students will work in teams, using an online generator, which can be an efficient and fair way to

create diverse groups and promote collaboration. This allows students to work together, share their knowledge, and develop teamwork skills.

The first step in using the computer-assisted instruction method as productively as possible is selection, so the online tool chosen for this lesson is https: //www.classtools.net/random-group-generator. It eliminates subjectivity from the team selection process, ensuring a fair distribution of students. It also promotes collaboration and interaction among students, as they will work with classmates they would not necessarily have chosen themselves. This helps them develop communication skills and learn to work with different personalities. To use it, you need to access the link that leads to a user-friendly and easy-to-use interface. The teacher must enter the names of the students and set the parameters, i.e., the number of teams they want to form. The application randomly generates students into teams in less than 5 seconds.

After forming pairs, students are informed of their working partner and are asked to access the online crossword puzzle creation platform using a QR code generated with the help of the https://qr.io/?gad_source=1&gclid=Cj0KCQjwhfipBhCqARIsAH9msbmLTx platform. Creating a QR code with the crossword puzzle for the solar system lesson that is accessed during class can be an effective way to provide additional resources or interactive information to students. Using a QR code during class provides quick access to additional content or information relevant to the topic being discussed. It can be a useful tool for diversifying learning methods and giving students the opportunity to further explore the topic interactively.

Next, the teams of students observe how to use the online crossword puzzle application. Each step that students must follow is explained and translated so that the final product is a crossword puzzle. This method promotes student engagement in the learning process and helps them review and organize their knowledge. This activity develops skills such as reading, vocabulary, and problem-solving, while providing a fun way to explore the topic. It is also an excellent way to promote collaboration and give students the opportunity to demonstrate their knowledge in a creative way.

In step 1, students must choose a name for the pair they are in.

Step 2 requires their knowledge of the solar system. They must first write down the word that will be in the rebus boxes - the space on the keyboard - the question/ clue by which the word can be identified.

A minimum of 5 words per team are noted, then the online crossword puzzle is generated by pressing the button in *step 3*.

In the last 15 minutes, students will complete their crossword puzzles in teams, exchanging them. This can be a fun and educational activity that encourages collaboration and interaction between students in the Solar System lesson. Each team has its own crossword puzzle ready to exchange with another team, either through a rotation process or by distributing the crossword puzzles at random. Students receive the crossword puzzle from another team and begin solving it in 10 minutes. This activity also gives them the opportunity to demonstrate their communication skills and practice critical thinking in a fun way.

5. Conclusions

To meet the potential training needs of students and to build the most appropriate teaching approaches for current generations, students try to highlight, in teaching simulation activities, sets of teaching-learning actions and operations, making a series of decisions regarding the effective conduct of the teaching act. They begin to lay the foundations for their teaching style, strive to ensure optimal, functional interaction between teaching and learning, and refer to possible assessment strategies (Cristea, 2019).

Our efforts to prepare students to develop and apply effective teaching strategies come on the one hand, as clear intentions in the initial training of future teachers and, on the other hand, as responses to repeated criticisms that educational activities lack theoretical consistency, but especially practical, for future employees in the education system (Stan, 2020). As such, efforts to identify new strategies for working with students continue and intensify to prepare them to meet the demands and challenges of the teaching profession. Our training activities will always involve identifying the objectives from the outset (we will refer to learning outcomes), after which various practical activities will be carried out – exercises, role-playing, case studies, etc. – (with the necessary theoretical foundation), which will provide trainees with the knowledge and skills they need to perform well and achieve the desired results.

Authors note: The authors have equal contributions to this article.

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