

THE CASE STUDY-BASED SEMINAR IN HIGHER PEDAGOGICAL EDUCATION

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Abstract

The article addresses the problem of higher education didactics and emphasizes methodological aspects of the case study-based seminar. After disclosing several main aspects based on the specialized literature analysis, some specific aspects of the case study-based seminar in higher pedagogical education are stated. Examples from primary education teaching staff university training practice at “Ion Creanga” State Pedagogical University of Chisinau are suggested, and a methodological model for case study-based seminar in higher pedagogical education is generalized.

Keywords: higher education; higher pedagogical education; didactic university seminar; case study; case study-based seminar

Alongside with the university lecture, practical and laboratory classes, the seminar constitutes a fundamental form of didactic activity organisation in higher education. Having its probable origin in verbal disputes (*quaestiones*), held in Middle Ages between the professor and his disciples [13, p. 189], the seminar has proved its effectiveness in searching for the truth and deepening of the knowledge, getting nowadays to entrench in the university development of specialist in various fields.

The etymology of the word *seminar* itself points to its formative valences: *seminare* (lat.) – to sow, *seminarium* (lat.) – greenhouse. Metaphorically speaking, the university seminar comes to ensure a highly efficient learning environment, where, as in a greenhouse, the knowledge “sown” during the lectures, the related abilities and competences would be carefully “grown”, so that, later, while being employed to the labour market, these would be finally “planted” within the professional activity field.

Within the university practice, the perception that the lecture as main form of didactic activity is widely spread, the seminar being attributed the secondary role of an appendix to the lecture. This perception comes from the traditional approach of teaching as a central component of the teaching-learning-assessment process. Yet, in the student-centred paradigm, the emphasis falls on learning, while teaching and assessment are oriented to activating the learning.

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Thereby, being focused on the students' learning activity, the seminar holds an important formative potential, whose value deserves reconsidering in the context of university didactics development.

The specialized resources offer various interpretations of the notion of *seminar*, all of them having essential resemblances. As it follows, we will come up with some significant examples which underline the approach to the seminar as: curricular approach, form, method, means of instruction.

- At the moment, the classical differentiation into lecture and seminar is not so widely used any more, due to the fact that, in certain conditions, the university lecture takes on many functions of the seminar and vice versa. The pedagogical concept of the university lecture and seminar defines a multitude of the teaching-learning-assessment activities, according to the university curriculum realized during a semester or an academic year. From the design perspective, university lecture and seminar represent *curricular approaches* elaborated by the academic staff reported to the university educational policies, but also to own didactic visions [4, p. 59-60].
- The seminar is a *form of instruction/training* whose aim is to deepen and systematize the study of the respective subject, approaching the most important and typical topics for the future professional activity; a *learning method* of theoretical and practical problems analysis, a collective search for solutions for problematic situations created on purpose; a *collective work* in which the students and the academic staff are united in a common process of activity preparation and development; an *active method of instruction*, whose application should be dominated by the productive and transformational activity of the students without being limited to the consolidation or reproduction of the accumulated knowledge within the lecture, the tasks of the seminar being wider, more complex and more interesting [14, p. 8].
- If, within the university lecture the focus is on the communication/accumulation of knowledge, then within the seminar, we focus on the deepening, systematization of knowledge and on the development of cognitive and applicative competences, on the development of the integrative attitudes. Thus, the seminar becomes a *means of development* of the culture of thinking in students [10, p. 105].

We underline the following *functions* of the didactic university seminar: indicative; formative; informative; methodological; communicative-socializing; operational; evaluative and of inverted connexion; axiological [4, p. 60]. In the context of the formative function, it is timely to use the term *polyvalent formativeness* (I. Neacșu, 1999) which deals with abilities, skills, operational schemes, action and attitudinal structures, operational capacities of establishing the cause, the communication relationships, of adapting to the dynamics of environments and activity and continuous learning profiles change [See 10, p. 106].

The specialized literature [4, 7, 10, 12, etc.] offers various types of university didactic seminars, for example:

- (1) according to the relation with the lecture (the university course): dependent on the lecture, complementary to or independent from the lecture;
- (2) according to the outcomes and types of the theoretical and practical activities: introductory; of resumption and thoroughgoing study; developmental; applicative; training; integrative; assessment;
- (3) according to the topic: one-topic and multi-topic;

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(4) in the curricular integration context: one-subject, interdisciplinary, multi-subject, multidisciplinary;

(5) according to the methods paradigm: debate; based on results; based on the exercise; based on research; based on the didactic game; based on brainstorming; base on the case study;

(6) according to the degree of organization of the activity/management style: directive; semi-directive; auto-directive.

In what follows, we will focus on the case study-based seminar which can be applied on any field of university training.

The case study may be considered:

- a well-established *research strategy* focused on a concrete case, considering all its contextual features; this requires the use of more complementary methods of relevant information, both quantitative and qualitative, gathering, analysis, processing and storage [2];
- “*an education method* which elaborates the didactic action through some real situations (cases) engaged as inductive and deductive premises for the realization of some conclusions with the value of rules, principles, laws” [6, p. 354]; “*an active education method*, based on intense implication of the participants in the training process, in the approach and, as a rule, solution for a problem situation with the aim of creative application of acquired knowledge and training and development of effective management aptitudes and behaviours [8, p. 121];
- *a didactic technology* built on six general stages: preparatory; organisational; action; demonstrative; evaluative; the action stage is divided into three steps to be passed by the students: the understanding of the case situation based on documentation and systematization; establishing solutions variants based on situation analysis and discovery of causality relations; elaborating solutions variants; making decisions based on confronting variants, their comparison and value ranking [5, p. 86].

According to V. Platov (1991), the characteristics which distinguish the case study from other education methods target: (1) the presence of a model of the socio-economic system, which state is considered at a certain moment; (2) the collective development of decisions with a common aim; (3) the decisions multi-alternativity; (4) the availability of a group activities assessment system; (5) the presence of the participants controlled emotional stress [16, p. 147]. Yet, there can be tangents of the case study with other ways of learning, for example:

- with *role play-based learning*, though the play is a dynamic phenomenon, while case study can be performed on some static situations, lacking strong temporal dynamics;
- with *problem-based learning*, though the problem in the context of case study is more concrete/specific than in problem-based learning situations, it is “hidden” within the case description, needing the multi-aspectual formulating and analysing of this.

At the same time, we can state that the case study as didactic technology realises a simultaneous combination of *situational learning* and *project based learning*, but also of *inquiry based learning*: a “case study needs empirical investigating connected to a particular modern phenomenon, in a real life context and using multiple information sources [3].

Case study-based learning has tangents with *cooperative learning* as well: irrespective of the fact that the analysis and solution of the case is realised frontally, in groups or individually, the discussion of solution variants is realised with the participation of the whole students group.

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Certainly, the effectiveness of case study application depends, as a whole, on the identified or modelled case by the teacher. The cases can be presented based on narratives, texts, video records, selected data samples, documents or declarations presenting problems, unsolved and provocative situations and questions. Not any situation can constitute a valid case, the situations need to satisfy a series of conditions which can be formulated as follows:

- “to be authentic, correct, “cut” from reality, from life as it happened; to suppose the urgency of intervention, that is, to be a problem situation that arouses the interest for analysis, diagnosis, solution; to be connected with the group preoccupations, with their professional life environment, so that the participants in case solution could possess the necessary information and to find the solutions; to be presented clearly and completely, to contain all the necessary information to be solved” (Roger Mucchielli, 1968);
- “to possess significant pedagogical resonance to the level of: establishing the causality of the studied phenomenon; selecting the means of critical interpretation of the studied phenomenon; formative processing of the taken conclusions on the studied phenomenon” [6, p. 354];
- “to tell a good story, to be recent, to include dialogue, to build empathy about the main characters, to be relevant for the reader, to have didactic function, to need a dilemma to be solved and to have generality” [1].

Thus, the case study-based seminars are not suitable for the subjects which do not suppose various approaches to problems/problem situations. This type of seminar is relevant for the subjects that offer the opportunity to choose some different situations for approaching problematic aspects. The higher education general area *Education* is extremely convenient for the realization of case study didactic seminars, due to the fact that the education sciences do not necessarily presuppose rigid, linear conditioning, but rely on situational, variable approaches.

Taking into account the need of case study method adaptation to the specifics of the students’ group, it is useful to have a preliminary classification of the possible types of situations/cases, which will allow the selection of the effective didactic strategies for the case study-based seminars.

The most vivid classification of the case study addressed situations at the seminars within the teacher training higher education programmes are: (1) the situations the teacher himself encounters; (2) the situations the student encounters; (3) mixed situations, which depict relationships between the actors of the educational process. Yet, the specialised sources address multiple criteria for the classification of the relevant cases in higher education, for instance: (1) according to the degree of complexity and accessibility: instructive, applicative, illustrative; (2) according to the presence or lack of a subject which presents the situation; (3) according to the intended purpose: analysis and evaluation of the suggested situation; interpretation/illustration of a solution or problem; taking decisions on a suggested problem; (4) according to the main character: multi-subject, with more than one main characters; one-subject, with one main character; institutional, based on the activity of different institutions/organisations; (5) according to the volume: mini-cases (app. 3 pages); medium (app. 12 pages); traditional, with full volume (more than 20 pages); (6) according to the volume of the information and the degree of structuring: structured; of short vignettes type; unstructured [Apud 15].

Further, we suggest two examples of case study-based seminars, realised in “Advanced theories and Methodologies in Primary Education: Mathematics” within the Master’s study

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programme Management and Counselling in Primary Education at the “Ion Creanga” State Pedagogical University of Chisinau, Republic of Moldova [9, 17].

➤ Example 1

- *Course unit*: Conceptual-strategic fundamentals of the mathematics primary course.
- *Seminar topic*: The capitalization of exercises and problems systems structuring principles at Mathematics classes in primary school.
- *The aim of the case study*: the development of concepts, theories, actual tendencies of education sciences capitalization competences from the perspective of mathematics didactics in primary education.
- *The case includes*: (1) photo image from a Mathematics textbook for primary grades; (2) tasks: to identify the ways of capitalizing exercises and problems systems structuring principles (typicality, completeness, continuous repetition, confrontation, didactic counterexample); to suggest methodological solutions for: typicality negative effects annihilation; the given structure positive effects amplification; (3) finite product assessment criteria: the relevance of reasoning of variants of capitalizing exercises and problems systems structuring principles in the given context; the judiciousness of the suggested methodological solutions; the relevance of the finite product presentation; the manifestation of creative attitude; (4) webography: course handbook; methodological guides; scientific articles; (5) the stages of students activity before the seminar and within the seminar.

➤ Example 2

- *Course unit*: The development of calculation competences in primary school students
- *Seminar topic*: Capitalization of mathematical dictation in the training/development/assessment of correct, fluent, rational calculation competences in primary school students.
- *The aim of the case study*: the development of methodological guiding competence of beginner teachers.
- *The case includes*: (1) a video record of a lesson sequence where a mathematical dictation is realized¹: the dictation itself; self-checking; self-checking guidance; self-assessment; (2) photos of students works checked by the teacher; (3) tasks: to fill in the analysis sheet of the observed activity; to elaborate the observed activity improvement recommendations; (4) the finite product assessment criteria: correctness, judiciousness, reasoning, relevance, originality; (5) webography: course handbook; methodological guides; scientific articles; (6) the stages of students activity before the seminar and within the seminar.

The success of the case study development approach within the seminar depends on multiple factors, among which, the ways of case presentation, on the students' activation in the context of the forms of activity organisation etc. As it follows, we will suggest the gradual description of the teacher's and students' activity within case study-based seminars, based on own didactic experience.

¹ The video materials collection of the Primary Education Department includes lesson sequences filmed during internship stages with the intern and mentor agreement. The filming is realised from the back of the classroom, being focused on the student's activity; the pupils' faces are not visible. The personal character data protection is ensured.

1. DESIGN PHASE

Academic staff activity:

1. Formulates the aim of the study case, correlated with the competences developed within the subject/topic, these being stipulated in the subject curriculum;
2. Chooses/models the situation on the basis of which the case study will be built;
3. Gathers an information bank for the students' activity while preparing for the seminar; eventually the bibliography/webography;
4. Elaborates an analysis guide of the situation in the form of tasks/questions; Shortly describes the stages of students' activity development while preparing for the seminar and during the seminar;
5. Specifies the expected results, correlated with the subject instruction outcomes, these being stipulated in the subject curriculum;
6. Suggest the assessment criteria/scale of the students' activity results;
7. Uploads the designed case on the course educational platform, for instance Google Classroom: the descriptive component (aim, tasks, stages, assessment criteria) and informative criteria (the case itself, information bank).

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2. PREPARATORY PHASE (1-2 weeks)

<i>Academic staff activity:</i>	<i>Students' activity</i>
<ul style="list-style-type: none"> At the lesson prior to the seminar: presents the case; answers questions; involves the students in the clarification of some aspects; motivates the students for the activity; 	<ul style="list-style-type: none"> Receive the information; ask clarifying questions;
<ul style="list-style-type: none"> Before the seminar: guides the students' preparatory activity for the seminar answering in Google Classroom to the requests done; if needed, activates the students, provoking their interests through novel ways, for example: visual messages, provocative questions. 	<ul style="list-style-type: none"> Work individually, guided by the teacher.

3. SEMINAR DEVELOPMENT (90 min.)

⇒ EVOCATION (app. 10 min.)

<i>Academic staff activity:</i>	<i>Students' activity</i>
<ul style="list-style-type: none"> Reiterates the aim and the objectives, the stages of the activity; Involves the students in the update of the knowledge necessary for the activity development; Makes the work teams (preferably 3-4 heterogeneous teams, depending on the number of students); Specifies the work tasks in teams, the structure of the presentation report structure and the allotted time; Motivates the students for the activity. 	<ul style="list-style-type: none"> Get involved, find answers to their own questions; Distribute roles within the team: the leader, the secretary, the time-manager.

⇒ MEANING REALIZATION (app. 70 min.)

The didactic technique „Think-Teams-Present” [11]

<i>Academic staff activity:</i>	<i>Students' activity:</i>
Action stage (app. 40 min.)	
<ul style="list-style-type: none"> Monitor the team work. 	<ul style="list-style-type: none"> Each student presents to the team the results of individual preparation for the seminar; Discusses with the team the individual results; Decide the final common results; Sketch the presentation report and decide the order of presenters.
Presentation stage (app. 30 min.)	
<ul style="list-style-type: none"> Monitors the presentation of the results obtained by the teams; Guides the self-correctness of the potential errors/drawbacks asking questions, requesting reasoning, getting involved with clarifications/correcting/additions, involving 	<ul style="list-style-type: none"> Present the results obtained as a team; Get actively involved in guided self-correctness;

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the students who are listening to the presentation as well.

➔ **REFLECTION** (app. 10 min.)

<i>Academic staff activity:</i>	<i>Students' activity</i>
<ul style="list-style-type: none"> • Guides the conclusions making, emphasizing the inter/trans-disciplinary aspects; • Monitors the self-assessment/peer assessment based on predetermined criteria. • Guides the valorisation of the experienced acquired by the students. 	<ul style="list-style-type: none"> • Get actively involved in making conclusions, in self-assessment/peer assessment; • Value the acquired experience.

At the end of the course, in the academic years 2020-2021 and 2021-2022 an anonymous survey, focused on the following aspects was conducted: (1) advantages and disadvantages of the case study-based seminars; (2) personal attitude to the application of the case study at seminars; (3) competences developed within this type of seminars.

The data processing showed that all the students expressed a positive attitude towards the case study-based learning. Among the competences they consider to have developed best, the students underlined the following: analysis (100%); team collaboration/cooperation (100%); individual study (100%); own strategies development (95%); expression and giving reasons (95%); primary data/information/observations processing (90%); secondary results processing (92%); adaptation and suitability to contexts (84%); metacognition (77%). The advantages mentioned were the connection between theory and real school practice (100%); the development of own didactic personality (100%); the opportunity of experience transfer in own professional activity (95%); multifaceted approach (95%). The following disadvantages were mentioned: it requires substantial effort to prepare (77%); they would like more discussion time during the seminar (77%); the gaps in fundamental theoretical knowledge are an impediment (63%).

In conclusion, the case study-based seminar allows the student to imaginary transport himself/herself to the professional activity environment, staying in the university classroom, thus:

- it favours the development in students of a wide spectre of competences (transdisciplinary, general professional, specific professional), yet, it requires substantial effort while preparing for the lesson;
- it is a form of connecting the instruction, education, research aspects in the didactic activity;
- it represents a means of enhancing the academic staff professional competences; the design and preparation of the case requires extensive theoretical and practical experience, while conducting the activity at the seminar needs serious preparation in didactic field, the creativity being an indispensable part of the whole process.

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