

EMIL M. BRANDZA'S CONTRIBUTION TO THE DEVELOPMENT OF MODERN PSYCHOLOGICAL PEDAGOGY

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Abstract

Emil M. Brandza alongside Dumitru Muster, leading teachers of “Studies Circle” have been instrumental in the development of experimental interwar psychological pedagogy. Emil M. Brandza's outstanding contributions to the development of modern experimental psychological pedagogy in the interwar historical era may be proved, particularly at the level proposed methods amid the owning the doctrinal and action requirements that belong to the experimental investigations: a) the method of the biographical surveys; b) pedagogic diagnosis; c) the pedagogic file for the academically professional guidance; d) experimental verifications. Emil M. Brandza's contribution in promoting experimental psychological pedagogy is demonstrated in the study entitled “The pedagogic experiment through integral method of the equivalent groups” where he insists on the “integral method” mark required when called upon the “integral method of equivalent groups”. The psychological argument of the hypothesis refers on the anticipation of the fact that in the mentioned circumstances “the students have immediately the opportunity to comprise the movement within itself or as it's alternatively called to feel the alternative structure of the movement”.

Keywords: *experimental psychological pedagogy, pedagogic action.*

The development of the Romanian modern psychological pedagogy, in interwar era, is realized through the contribution of a several authors that can be integrated in the two important orientations: a) the orientation of the experimental psychological pedagogy; b) the orientation of the theoretical psychological pedagogy.

Emil M. Brandza (1894-1984) is the author of a School-pedagogy class, published in 1932. In the same year, on 16 December 1932, at “The Study Circle for experimental pedagogy research” opening, he held the conference named “What is understood through the experimental pedagogy”. In “School Pedagogy”, Emil M. Brandza analyses base competencies of the pedagogic phenomenon

that must be studied, especially, by experimental pedagogy (through the experimental methods): teachers, students, curriculum, lesson, method, teaching materials, school furniture, school building, class of students. The second edition of the book, published in 1940, conceived as a “system of general methodology” also defines and analyzes other important pedagogic concepts: teaching, teaching methodology, instruction, education, pedagogy (term that is “clarified in systematic of scientific pedagogy”) (see Dumitru Muster, “Emil M. Brandza and the Romanian interwar scientific experimental pedagogy”) (Brandza, 1942).

Emil M. Brandza's pedagogic conception is clarified in the study named “The problem of the relation between scientific pedagogy and philosophic pedagogy” (“University Pattern”, Bucharest, 1942). The author starts from the distinction operated by a founder of psychological pedagogy, A. Binet, between “the old pedagogy that must give the issues to be studied” and “the new pedagogy that must give the study procedures” (Brandza, 1973). “The old pedagogy” is the philosophic one, focused on the values and the goals of the education that don't make the object of the “scientific pedagogy”. “The new pedagogy” is the scientific one, focused on the scientific research methods. If we would remain within these boundaries “the scientific pedagogy will be subordinated to unscientific pedagogy” (Brandza, 1973).

The opposition between the two “pedagogies” can wear the extreme form of the relation between “the dogmatic pedagogy” that fixates the goals and the scientific pedagogy, subordinated by the fact that “doesn't enjoy the prestige of the university teachers” (Brandza, 1973). The

proposed solution targets to release scientific pedagogy conceived as experimental pedagogy, under the tutelage of philosophic pedagogy. The study object of the experimental pedagogy must be fixed not at the level of "the grandiose problems" that can be solvable by philosophic pedagogy only "on a paper, through the game of quotes", but also in level of "detail researches viewed through real problems' perspective leading to concise results (...) at least perfectly controllable" (Brandza, 1973).

The lesson, according to experimental psychological pedagogy is designed as a "learning, information and training process". Evolve through "thematic lessons" and "practical lessons" in the educational process that can be achieved "in two ways": a) through instruction that "aims to spread knowledge through the sustained contact between the enlighten subject and the cultural object", to give to the student "a material culture"; b) through education that aims "to exercise spiritual and physical powers which support cultural elaboration", that makes way for the student "towards integral culture" (Brandza, 1973).

The lesson design is conceived in herbatian spirit, with experimental orientation maintained by "three psychological parts": a) the psychological preparation of the lesson (psychological introduction and discussions); b) the psychological approach of the lesson content (from perception, attention and memory to contemplation, abstraction and reason); c) the psychological application of the content achieved throughout the lesson (Brandza, 1973).

The psychological approach of the lesson and of the student stimulates "the adaptation of class activity to the work possibilities of the students" experimented through "some stimulation and care means" a) punctuality at the beginning and at the end of the lesson; b) allocation of at least of 7-8 minutes "for the testing the students every time an answer is obtained that prove a progress of the one is being tested"; d) eliminating the tendency of "indignation", of "addressing harsh words" towards the students that "do not answer or aren't behaving properly"; e) accepting "the goodwill signs demonstrated by the students in terms of cooperation" expressed and through "the desire of participation of the weak students";

f) creating appropriate teaching conditions that "allow students time to think" both for "slower" and for "livelier" (Brandza, 1973). In conclusion must to mention an important distinction operated by Emil M. Brandza "between lesson and class". The author anticipates the need to report the lesson to a more complex unit which we call today "unit of learning". Thus "class does not imply the full deployment of a lesson. The lesson, as methodical unit may require two or three classes with a single preparation, treatment and enforcement for all." (Brandza, 1973).

An important contribution brought by Emil M. Brandza is the one that is soundly explained in the study named "The pedagogic experiment through the integral method of the equivalent groups" (Brandza, 1973). The author insists on "integral method" mark, necessary when we use the "integral method of equivalent groups". This mark "indicates an amount of improvements designed to distinguish in the term of its objectivity and scientific validity, to its original summary procedures." (Brandza, 1973).

The hypothesis of "this complete method of experimentation" is available "on the realm of the didactics itself", used at the "art lessons, painting". It seeks to demonstrate that the "treatment of artistic procedures (of the execution method) by visual intuition, indirectly, leads to a more imperfect application than treating these procedures through a direct kinesthetic intuition." The psychological argument of the hypothesis, brought by Brandza, refers to the anticipation of the fact that in the evocated circumstances, "the students immediately have the opportunity of learning the movement within itself or as it's called, to feel the intimal structure of the movement" (Brandza, 1973).

Emil M. Brandza highlights the special importance of formulating the hypothesis in the case of applied didactic in "art lessons, namely painting" which needs the demonstrating through experimental method. He presents the following model of "making an experiment through the experimental method of the equivalent groups" with "four distinct phases: a) the composition of the group; b) the actual experimentation; c) the marking of the works - sample; d) the calculation and the interpretation of the results" (Brandza, 1973).

The composition of the group is adapted to the specific topic "art (painting); it involves the analysis of the student's results that have been divided into homogeneously valued groups (which "facilitates the equalization"); it isn't made by a single experimenter (class teacher), "but by a bundle of at least ten experts from the specialty whose field binds the experiment";

The actual experimentation involves primarily "setting up samples, at least two in the spirit of the integral method, which combines the logical procedures of a complete induction"; the sample represents "the material of information and exercise on which we need to focus the the methodical operations whose effectiveness is to be harnessed"; the quality of samples: "should be simple or in case they are complex, they should contain precise data in the composition, well distinct from each other " (Brandza, 1973); the duration of the experiment (two days) asks for an adequate distribution of time: by treatment through direct kinesthetic intuition, 2 minutes - settlement in places, 20 minutes - treating by direct intuition, 20 minutes - the application, 8 minutes - drying and collection of samples, total - 50 minutes; to treating by indirect intuition of samples: 2 minutes - settlement in places, 10 minutes - treating by indirect intuition, 30 minutes - the application, 8 minutes - drying and collection of samples, total - 50 minutes (Brandza, 1973).

The marking of the works, the works made by students, is the special task of the experts chosen by the experimenter (teacher); the techniques that are used targets: reporting to "the so-called etalon samples" and the unfractionated notation for each specimen - sample.

The calculation and the interpretation of the results "tends first of all, to assemble a totalizing primary painting based on the type of the expertise tab"; the second picture will synthesize "the method of A formation with B formation/group method" by adding the averages of the data samples for every experimental formation, taken each at a time and divided by the number of copies" (minimum 2 samples); the interpretation of the results has as premise "a first and very important observation: the interpretation is bound to edge exclusively to the overall results of the groups' activity" (Brandza, 1973); "the

comparative study of average is made from two points of view: the differential methodical rule view; concomitant variation view."

The ultimate objective of interpretation seeks "to establish whether indeed the effectiveness of one alternative from each other is marked by a fairly high number of points to serial number that have registered the notes (1-10)", with the difference absolute of 2 points for each "qualitative" category (very poor, poor, mediocre, good, very good).

The most important *conclusion* demonstrated through *experimental method* is recorded by Emil M. Brandza in the next operational terms - "treatment by direct intuition led us to a better outcome than treatment by indirect intuition as treatment difference was the only difference from alternative + (plus) to the alternative - (minus)". We should note the researcher's methodological caution, aware that "in the spirit of the integral method", obtained and continued experimental results in a given time should not be overrated, because of the many changes in education, where immeasurable variables are involved. Hence the solution proposed by Emil M. Brandza, "to range the experiment resuming all conditions except one, that treatment is effected by direct intuition in one group and by indirect intuition in the other group" (Brandza, 1973).

Emil M. Brandza's outstanding contributions to the development of modern *experimental psychological pedagogy* in the interwar historical era, may be proven, particularly at the level of the proposed methods based on the assumption of doctrinal and action requirements typical to *experimental* investigations: a) Biographical surveys method; b) Pedagogic diagnosis; c) Pedagogic file for academic professional guidance; d) Experimental verifications.

a) *Biographical surveys method*. It is harnessed in the study process for "developing skills in the realm of academic culture"; it is performed individually and in teams with other researchers (Ilie Şulea-Firu, Dumitru Muster, Alex. Bubulac, Gh. Zapan) (Brandza, 1973). It allows the correct approach to some major problems, complexes that we face in pedagogy school; "the frequency errors of teacher prognostic on children, except the gifted ones"; "the ratio between the aptitude precocity and the virtuality scale of creative

functions"; "the structure of academic skills" ; "the average age for skills occurrence etc."

Emil M. Brandza conceives the "biographical investigations method" as a research experimental strategy that includes multiple methods, procedures that he called "the issue procedures": the Questionnaire; the work Distribution; the Directives; the information Material; the Calculations (Brandza, 1973).

The questionnaire is built on two categories of questions: a) "Constant ones" - "on behalf of the personality name, privacy, the time experienced by the biographical source"; b) "the variable" called also "substantive" questions, that "can not indicate in advance as going into a meaning or purpose of the investigation after another"; they are "the most delicate parte of the investigation", particularly "in the experimental investigations"; their choice is more important, "especially in biographical surveys where the investigation material is susceptible to varying interpretations".

Assuming that "the biography is the most important source of suggestion" for one who carrying out experimental research, it should focus on some "background questions" with open nature, but they must conducive to obtaining accurate, clear, concise information; the variables questions (background) "must be based on a clear and well-defined concept" of the experimental research and of the researcher involved (Brandza, 1927).

The work distribution is a process "that must be viewed with the same seriousness as the biographical investigations" as in the building of the questions included in the questionnaire; aims, "the exploration field of biographical surveys" wich must be held in the context of experimental research; involves the development of "a catalog" to record the evolution of academic results or the skills to disciplines (literature, history, geography, etc.) or certain fields towards educational and vocational guidance (poetry, painting, sculpture, sport, army, theology, etc.).

Directives to proceed calls the researcher, "before starting the actual biographical investigations to, draw up a list of priorities": the alphabetical order of the studied personalities, followed by the "consultation of biographical notes of the major dictionaries". *The information material* "completes the methodical processes of

the biographical investigation" organized by researchers in a team, tending to the establishment of "a biographical library" (treaties of science history, biographical dictionaries, biographical monography).

The calculations are "intended to finalize, through conclusions, the results of any biographical investigation"; they are made "based on averages and percentages", but the final resolution "depends more on the common sense of the researcher".

b) *The „pedagogic diagnosis"* in the "biographies light" is intended for "the research of the individuality school", performed by different specialists, anthropologists, doctors, psihotechnicians and teachers; in the case of pedagogy suposes "the research on the pupil's individuality throught the traditional means of direct observation" (Brandza, 1927), it involves a "psychological file" used by: "completing only through systematic and long-term observation"; "seriousness, good will, powers of observation and love child" from educators (teachers, teachers-masters).

Emil M. Brandza analyzes the question of involving *non-psychologists teachers* in students knowledge, situation unsupported by psychologists even A. Binet. Through experimental verification, Brandza reaches the following conclusions worth methodological recommendations values:

"The empirical prognosis" given by the teacher, "regardless of his knowledge in psychology proves to be true" if the direct observation is consistent and systematic;

"It is confirmed at least the equality of opportunity to fair diagnose of the teachers to the opportunity of fair diagnose of the non-teachers";

It is needed a comparative analysis of the "diagnosis of the non-teachers - teachers people" made by the following psychological indicators: "a) Diagnostic according to the recognized aptitude (global, general skills); b) Non-compliant diagnostic ("disputed skills; overlooked skills") (Brandza, 1973).

The results interpretation leads to the following conclusions, drawn according to the psychological experimental pedagogy:

"We should trust the academic mentoring methods based on the direct observation";

"The alleged lack of discernment of teachers regarding the students skills is just a mit (...) which must be removed";

"The highest percentage of *compliant diagnostic* results were obtained on specialty, not global", because: a) "direct observation is more favorable to special diagnosis, conducted by teachers of different specialties on their field teaching activities"; b) "the master-teacher will preferably be inclined to notice the characteristic in terms of his specialty presented as global characterizations".

This latest pedagogic and psychological truth experimentally demonstrated by Emil M. Brandza leads to two *methodological* recommendations related to the method of "pedagogic diagnosis in biographers light":

Direct systematized observation gives positive results in the case of supported lessons by specialist teachers "as long as they get a preliminary preparation for a precise and conscientious application" of the method;

Direct observation does not have the same results in the case of global characterization necessary for individualizing education and professional orientation; therefore, the master-teacher should be helped by psychologists specialists in overall personality of the students in many ways.

c) *The pedagogic file for professional guidance* is considered useful, if the following criteria are respected: the compliance of "guide text indications"; developing responses "to all or almost-all issues" included in the pedagogic file; ensuring consistency between the "general impression" and "the rest of the diagnoses"; establishing guidelines to "systematize observation charts (object, class, school year, student's name, name of the observer)"; diagnostics motivation on the level of special indicators (pupil's imagination/limited, normal, exceptional; the capacity for synthesis that "exceeds the low order of expertise, global impression; proposal for "professional careers"; request explanations for misunderstanding of "the text issues" (Brandza, 1942).

The correct application of *the method to observe the student's individuality*, depends on the quality of the specialist teacher involved "on the basis of a theoretical and practical training according to this method"; in this regard, "in the professional academic vocation a strict control of the observation papers from which diagnose data are gathered must be exercised" (Brandza, 1942).

d) *The experimental verifications* constitute basic processes used in experimental research for knowledge of some pedagogic realities, especially teaching. Emil M. Brandza refers to the "experimental checks" that assessed: a) "the influence the structure plan (lesson) may have on the quality of lesson"; b) "the efficiency of schematic outline images the may have on the scientific intuition" (Brandza, 1942).

The experimental verification process of how the "structure of the lesson plan" influences the lesson's quality was used by Emil M. Brandza by analyzing only "1,075 lesson plans". The bottom line is this - *the lesson's plan positively influences the quality of the lesson*, as far as "three methodological conditions" are met: focus "only on the main ideas" ordered so that "he could see at first glance what effect the lesson tends (see lesson objectives) and what data" (see contents arranged in "synoptic ordination"); presenting ideas "as statements", and not as a "form of questions and answers"; grouping the ideas that make up the content of the plan taking into account the "moments" that characterize the natural development in some way or other the cultural phenomenon underlying the respective school discipline or matter (Brandza, 1942).

The experimental verification process of "the schematic outline images efficiency in scientific training" is used by Emil M. Brandza to clarify the importance of verbally expressed in teaching proces, based on Pentalozzi's thesis who underlined that "the spring of our knowledge is in number, shape and word". It combated such the teachers tend to put in convenience, the middle school ready developed by industry - "a detailed and colorful drawing" - before a systematization method of knowledge - on valid base, transposed through a "linear outline" written on the blackboard, in collaboration with the class, and with the permanent request of the students .

Emil M. Brandza proves a superior psychological understanding of the training act which should not be subordinated to the intuitive temptation, based only on "the color which decides the aesthetic effect of the image, not its meditative effect" (Brandza, 1942). *The experimental verification of "the higher formative effect of the schematic images"* in comparison with those that appeal to the spectacular aspects priority addressed to the senses, can be achieved in Brandza's vision, by appealing to "the integral method of equivalent groups".

The conclusion is as follows - "to examine the differences between two linear pictures, the intuitive discernment of character was 1.18 stronger than the examination of the differences between two chromatic images" (Brandza, 1942).

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