

METHODOLOGICAL GUIDELINES FOR A QUALITY LEARNING

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ABSTRACT. The assimilation of information and transforming it in knowledge does not include only a simple taking over, a supply and a later mechanical reproduction. In fact, we are talking about a complex procedure of processing data which is realized in many steps and the individual must make a series of operations. In this study, I tackled the learning as a complex process of mentally processing the information. The result of this process is the fact that the pupil creates notions and opinions, develops understanding, convictions and competences. The identification and the development of those are conditions making the activities more efficient.

Keywords: *the learning, the processing of the information, the understanding.*

ZUSAMMENFASSUNG. Die Informationsaufnahme und Transformation von Wissen ist nicht nur eine einfache Akkumulation und später Reproduktion, sondern ein in der Tat komplexes Verfahren der Datenverarbeitung, der, in mehrere Etapen und Operationen von Individuum realisiert wird.

In diesem Artikel habe ich den Lernprozess als ein komplexes psychisches Verfahren konzipiert. Das Ergebnis dieses Verfahrens ist dass die Schüler sich eine eigene Meinung und Vorstellung bilden und gleichzeitig die Fähigkeiten und Überzeugungen selbst entwickeln können. Identifizierung und Entwicklung der Lernbedingungen streben nach mehr Effizienz im Lernprozess und erhöht dessen Wirksamkeit.

Stichwörter: *Lernen, Verarbeitung von Information, Verständnis*

What means to learn?

Generally, by learning, we understand acquiring new knowledge, creating new intellectual abilities and skills. Regarding the first aspect, we can characterize the knowledge as it follows: information assimilated by a person, information he understood and he can use them when he realizes explanations and solve problems. So, information memorized only mechanical, information you can reproduce without understanding it and without being capable to use it later, it is not knowledge, and memorizing it does not mean the learning. The learning purpose is not resumed to keep information, to register them in the memory to be able to be reproduced and which aims and develop those capacities to allowed using the received information from an independent, productive and creative activity.

For many years, educational sciences promotes the idea that instructive-educational activity can be focused on developing intellectual-operational capacities and consolidated logic-formal pupils thinking. Learning does not resume only to simple knowledge accumulation but it creates competences, which name thinking operations used in ideas and theories elaboration. We do not follow the passive, mechanic reflection of knowledge in pupil's intellect and developing a reproductive thinking but their intellectual education, by developing productive, creative thinking. At the superior levels, according to Jean Piaget the thinking is before all, a logic operation system. So, to think means to operate, fact that can develop intellectual capacities and which is decisive to learn and to intelligence progress.

Learning is realised many times new knowledge are assimilated and they shape/improve new competences. The person is confronted with new problematic situations and succeeds to offers acceptable solutions on formative consequences. By learning he succeed to understand what he did not understood previous, to identify new aspects of its financing, to solve problematic aspects ignored previous or without solutions, to makes predictions using theoretical bench-marks and to promote the desirable evolutions and to avoid the evaluated evolutions as being dangerous, harming. The activities formative outcome named generic „learning” is the dominant characteristic, but there are situations which attributes informative purposes to learning (assimilating information for a further reproduction of them). An also, the formative finalities are many times reduced to assimilations of the „making modalities” by which the person is prepared, for example to behave as a working force. The pupil learn what the professor says and the way he says but this is a homogenize learning and not one opened towards innovation, towards developing the capacity to information operate to solve optimum the problem situation.

Conscious knowledge by reception is active only in the measure in which the pupil proves capable to realize the interrogator senses and to prove a self critical sense. Knowledge assimilation is a process rarely reduced to the simple data memorize, it involves the processing of received messages, in order to become knowledge or to be integrated in their own cognitive structures. Information assimilation does not mean a simple add but their integration in a cognitive structure, after a previous adequate processing, a dynamic integration of mental activities, by understanding their own sense, by explaining the relations involved, by filtering and hierarchic criteria for generality and importance. So, the pieces of knowledge are pieces of information integrated in „intellectual structure” of the receiver; they can gradate and expend the further interpretation possibilities, but can also generate immutably, reconsidering the further interpreting possibilities.

The Information Processing

Knowledge is information assimilated by the person, and assimilation is a process in which we exercised the necessary abilities to receive information, to

process and to value them. When a receiver, receive an information or a message, in his mind we have a cognitive process, not a process to process the received information. By information mental processing, he analyses and ordinate message elements make many selection operations to recognize it and make them different and unified, being evaluated and the information being interpreted according to several criteria: relevance, signification, intelligibility, context, value, and unity (Gh. Dumitru, 1998). Inside the information mental process, the person forms notions, opinions, and developed the understanding, the motivations, and the convictions, the competences the attitudes and the behaviour. He learns to know, to communicate, to interaction ate and to have modalities more efficient and creative.

Assimilating information implies decoding the information, interpreting it, and sense according, by reporting to what is already known, to personal culture, to motivational and affective structures. According to this determinants, the informational content of messages received from many sources, is processed. The main stepes of the process are the following:

- 1) The decoding - the receiver decipher the message to receive it sense without any distortions,
- 2) The interpretation - the receiver analyses, synthesize and establishes rapports, noticing the information implicit the information signification included in the message to understand it,
- 3) The appreciation - the receiver express a value regarding the value;
- 4) The notion extension - the receiver conceive the implications, the consequences of the information received;
- 5) The application - the receiver uses the information from a given situation (problem solving, research, personal study).

For example, in a *Civic culture* lesson, we talk about the need to solve the conflicts between pupils. The teacher makes the following statement: „In the primate’s collectivities that we can see the imposed of the strongest supremacy. The man had the power to replace the force by the low force”. Receiving the message, the pupil tries to decode it, the get the sense, so the following: „In human interrelations it is necessary to create a tolerance and respect climate, because on tolerance base and on mutual respect, conflicts can be solved peacefully”. There is a interpretation of this purpose, which can involves an analyses of „tolerance” notion, its relations with other notions too, as other as „negotiation”, „respect” and „compromise”, the identification of the way in which „correctness force can avoid the aggressive manifestations, explaining the way in which the intolerance manifestations can occur. Briefly, the interpretation can be the following: „By tolerance we understand the knowledge, the recognition and the acceptance of the different way of persons and groups around us. This „different way” refers inclusive especially at the interest, opinions, ideas, values, beliefs, convictions differences. The notion of „respect” brings in the evidence the other acceptance, as it is, the desire to get rich of personal experience by the contact with the others different way of being. When in a

group and in a society, different interest, convictions, passions clink, it is necessary to negotiate between the concurrent parts, to avoid tension degeneration in conflict. By negotiation, we can follow the consensus of involves parts on final result, or the final outcome or the compromise, respective the solving solution to negotiate the conflict and each can obtain certain advantages, accepting to make compromises regarding other problems.

Obtaining the consensus or the compromise depends by parts dialogue, when is necessary, and by the mediators and conciliators efforts. The value judgement from the end is the following: „It is good as in their relations; the pupils may manifest tolerance and mutual respect, because only this way, they can solve peacefully the conflicts”. The next step is the implication conceiving by the students of the received information: „If in relation with our kind, we prove tolerance and respect, we succeeded to avoid the conflicts, and we will arrive to intolerance, to incapacity and lack of will to know, to recognize, to accept the other different way of being. In extreme cases, the intolerance goes to other’s dignity and freedom trespassing or even to murder”. Then, the pupils will try to apply the knowledge identifying intolerance cases to which they confronted during every day life and they will realize a groups play, as it follows: we propose a subject which presents interests and passions, they chose a mediator and they seek a solution for which pupils can express the consensus and the compromise between the opposite parts. In the end, the groups communicate one to each other the obtained results.

We can say that the success in acquiring knowledge depends especially by the information correct requiring and by their valorisation in the processes made later by the person. An information becomes a knowledge when two base conditions are fulfilled:

- 1) assures a knowledge enough detailed on interest object;
- 2) the person which has it, is capable to identify the situations in which can be used.

For example, when we memorize texts in order to reproduce them later, we do not form knowledge coherent systems, so we do not learn yet. We must keep in mind the fact that learning becomes useful when we must solve different and difficult problems. Regarding the competences, this is capacities to process the information and to realize actions for using them in problem solving. „Knowing what you do...” is a way of saying, „you have competences”. Between the current uses of words „to know”, we can differentiate, first, the ones who indicate a certain competence and the one who presents assertions on real or hypothetic states, which can be correct, incorrect or false. G. Ryle (1949) operated the distinction between „knowing how” and „knowing that”, showing that „knowing how” means to know how to do a certain thing, the proof of having this kind of knowledge, being the capacity to unfold successfully a certain action (activity). So, the proof for „knowing that” can be made by a verbal, intellectual activity. The contrast between „knowing how” and „knowing that” can appear when the person offers descriptions and explanations regarding what he knows, but his concrete outcomes are under the expected level.

The school offers to the pupils a certain information volume and follows to produce modifications at intellectual capacities level.

So, she involves thinking and the „intellectual gymnastics”, saying according to J. Piaget (1988, p. 79) to develop it. An instructive-educational action desired efficient, can not adjust only to knowledge communication, and may involves mental operations development, as central aspect of intellectual formation. Saying that the pupil must know certain subjects, according to H. Aebli (1973), this means that he must learn to execute some operations (analyses, synthesis, determinations, classifications, comparison, interpretation) considered knowledge general instruments, because them aide to notions formations and make possible the knowledge options presentation. That's way in the teaching-learning objectives of a study discipline; we can see a different class, which presents the formation and the development of operational capacities. Presented in every learning space to assure it, new qualities, this capacities presents the core of what psycho pedagogy names „formative” (I. Neacșu, 1990). It constitutes in cognitive structures, and by them we can realize knowledge.

Teaching and learning involves operations which condition ate the pupil's cognitive acquisitions. In this sense, forming a specific cognitive-instrumental complex and educating using it in different cognitive aspects presents a special importance. We will illustrate this:

- 1) Analyses - operation exercised on: concepts signification, concepts rapports, affirmations, ideas, theses from a text, a metaphor's sense, its own life experiences, phenomena, nature processes, society processes, the interference between study discipline and other disciplines.
- 2) Synthesis - possible operation: realizing generalizations on concepts formation, expressing understanding, extracting key concepts, main ideas and arguments in a text, organizing necessary data for problem solving, realising thematic synthesis.
- 3) Definition- operation which makes possible the sense and signification determination of a concept and of an expression, analysing a concept content, introducing new senses for a concept, instituting a convention regarding concepts signification, interfering as a rule in demonstration.
- 4) Classifying - operation by which we can obtain: notions types, reports types, phenomena and processes types, hierarchies.
- 5) Comparison - operation which has an object: understanding concepts, different definitions gave to the same concept, ideas, interpretation, different arguments phenomenon and social process, establishing analogies, similarities and differences, different conceptions.

We add to these, other operations, such generalization, abstractization, on concept formation bases. The operation makes possible the intellectual exercise contributing to the elucidation of cognitive contents.

Discursive-rational knowledge is mediated by many operations, which mediate knowledge acquiring, organising and structuring them, to have a unitary and coherent character. Notions assimilation involves such operations according to which, the operation is a mental activity form. That's why, operational structures development in instructive process is a very important objective, being determined by transmitting and acquiring knowledge by the subjects who knows the facts.

The intellectual formation is conditioned by capacities development to effectuate operations. That's way is necessary as pupils to be entrained in learning activities which involves these operations. Learning progress is realized by consolidation of operator structures, with a greater importance in knowledge. The teachers must organises learning situations, which does not admit pedagogic lead of acquired operations but also prom ovate it, offering to the pupil the way of executing effectively the operations in the course of trying it: „Who speaks about a thinking formation, speaks about operations formation, and who speaks about operation formation, speaks about their building. Constructing operations is made in research course and any research starts from a problem”, writes G. F. Kneller (1973, p. 101). That's way, in approaching instructive-educational duties it is desired to have active-participative strategies, so the education would become a process of cognitive construction, not only a simple and passive knowledge receiving. That's way, the pupils acquires its own cognitive competences. Teacher's duty is to organize situations in which the operations are not only presented to pupils, but they to be provoked to build by themselves the operations in order to acquire them.

The Understanding

To understand a message, involves a systematic processing, by which we follow the identifying the message significations, the possible connexions with other messages significations, appreciating the significations to identify the differences. The whole evolution of individual knowledge is the result of interpretation ability. For example, the pupil receives the following message, transmitted by the teacher or enclosed in book (textbook): „We do not behave at a random in society or according to every one wish, but we behave according to some rules”. Interpreting the informational content of the message can be centred on find out concrete answers on eventual interrogations: What are the rules? What express the rules? Why it is not desirable to behave at a random or according to my own wish? What does it mean to behave according to the rules? What happens if I broke the rules? The behaviour of each person is determined by its own cognitive system, by certain knowledge. The behaviour of each person is determined by its own cognitive system, in fact by knowledge kept, by a certain reflection degree, organization and information processing, of which origin must be searched in the information type received. The interpretation idea suggest the fact that the one who realizes involves an activity to examine an informational content to decrypt its signification and to understanding it. Beside,

by receiving significations, this operations puts in the light the rules which allows the information selective information in thinking and action structures, and also the rules which guides the situation and the contexts. Many times in many contexts „the interpretative reasoning” tries to get closer, some times until confusion, by description and explanation procedures. Generally, we must consider the interpretation as a rational activity, as a passing from a description to an explanation, a transformation of an informational corpus in a starting point towards the theoretical explanations.

A message is correct understood when by its own interpretation; its significations are not modified, when the comparison becomes possible with its own interpretation of the field to which the message refers to. Essential for understanding is the way in which the information stored in memory is already conjugated, the first being a code towards the second. If the person does not have enough knowledge and did not develop certain mental capacities, he will not be able to decode the signification. To realize an adequate understanding, it is necessary to make a selection regarding the activating of the old knowledge, regarding information sorting. To found when you need the proper information, this might enter in a resonance with the mind climate created, to be detached to enter in the sphere of the ones who deserve to be taken into consideration. This thing is not possible even if the information is in a rich and dynamic network of relations with person knowledge assembly. The information received is useful for the person in order to be mobilized, in different efficient combinations. Reproduced information without being understood does not enter in resonance with others, with the mental activity, generally speaking and it becomes a lumber. So, to understand new information it means putting it in connection with mental activity ensemble, and at the end, it includes this acquisition in this ensemble dynamics. As far the integration is more complete, more polyvalent realized (by its connection with a greater diversity of information), so the understanding is fullest, and the acquisition is more efficient to knowledge and action.

If in a first stage of learning it is not possible to understand the message, the situation must be interpreted as a clue that misses those capacities involved in its analyses. In these cases, the learning must be organized to sustain the formation of those capacities; when we obtain the understanding, we have the necessary clue to considerate the formed and used qualities. If we see interpretation errors, they are clues of involved capacities limits. The frequent errors from the understanding process are: rash interpreting, the simplifications and the deformed generalizations.

As we showed before, according to Piaget's theory at the base of developing child thinking is the operation. Regarding the pupils from small classes, according to D. P. Ausubel and F. G. Robinson (1981), using the notions, is connected with the inductive generalizations, starting with the concrete experience, meanwhile the pupils from bigger classes can get notions through assimilation, because they are capable to notice the direct relations between abstract things, without having the need for empiric concrete supports. Conscious learning produces only when the student tries to keep in mind an idea connecting it with what he knew before, his

cognitive structure, which confers it a certain senses. The quoted authors continues an old idea, of J. Dewey, according to which in the childhood, the understanding of notions and exact principles is realized by direct and concrete experience, from where the need to use active methods in the first educational cycles. The pupil at adolescence is in formal operation state, being capable to effectuate the logic operations and hypothetic-deductive operations of theorization and critics. He receives an increased stock of abstract notion and becomes capable to manipulate mental those notions, without an intuitive-empiric support. The received notions are mentally examined, processed and integrated in it cognitive structure, indifferent by the way they are obtained. The conscious learning involves more than a simple registration of some notions well done in the existent cognitive structure as it follows:

- 1) The relevance appreciation to decide to which from ideas received already, can be reported easier the new educational duty,
- 2) Reconciliation, if it is the case, between the new ideas and the old ideas,
- 3) Rewording the new propositions according to the vocabulary and the idea structure of the one who learns, to be more easily integrated in reference frame.

We presume that the teacher speaks to the pupils about “guilt and punishment”. He explains them the meaning of the two notions, he explains their guilt and what kind of punishment involves. The knowledge received are relevant for the pupils in the perspective of knowledge and of understanding the way social life is settled by law. For this to be integrated by pupils in their own cognitive system is necessary to relation ate them to old knowledge, regarding the notions significations, such as: „norm”, „value”, „right”, „laws system”, by the existent connections, by the norms and values types (moral, judicial), by the actions and behaviour according to those, by the relations between judicial norms and human rights. Only in this way, we can obtain a coherent knowledge, well articulated and complete on the discussed question. The pupils can have a priori representations on those matters, formed after the life experience and which are not according to what I have already learned, for example, regarding applying the law in solution ate processes. In such a situation, confronting the new knowledge received by the previous representations is necessary, to realize an adequate knowledge. An explanation, of course, of transposing the informational content at language development level and of pupils knowledge is, also, necessary, for them which are not capable to arise at specialized discoursed level, very intimate for a jurist.

Conclusions

All the people realizes learning activities, but few of them asked how is possible this and what can they do improve the developing ways to becomes more perform ante. The consequence is one predictable: using superficial the own intellectual capacities. Over passing the superficial attitude will open other action

horizons for the persons involved, to ameliorate their own capacities to process information and to make efficient learning activities. Learning activities, which are different to one person from another, result from existent differences regarding information abilities processing. Referring strictly to school learning, one pupils succeed to accommodate superficial to educational process and others does not arrive to the expected performances, fact explained by intellectual procedure absence and by mental operations proper to complexity degree of information engaged by a study object or by another. If learning make the difference between pupils, if the results marks strong their life and not only the professional results, is obvious that each persons to be interested to „learn how to learn”, developing the intellectual instruments necessary for such a step. The organization and effective realization of learning is essential for every body’s life.

REFERENCES

- Aebli, H. *Didactica psihologică*, 1973, Editura Didactică și Pedagogică, București.
- Ausubel, D. P. Robinson, F. G., 1981, *Învățarea în școală. O introducere în psihologia pedagogică*, Editura Didactică și Pedagogică, București.
- Chiș, V., 2001, *Activitatea profesorului între curriculum și evaluare*, Presa Universitară Clujeană, Cluj-Napoca.
- Christensen, R. C. (éd.), 1994, *Former a une pensée autonome*, De Boeck-Wesmael, Bruxelles.
- Dumitru, Gh., 1998, *Comunicare și învățare*, Editura Didactică și Pedagogică, București.
- Gagné, R. M., 1975, *Condițiile învățării*, Editura Didactică și Pedagogică, București.
- Jinga, I., Negreț, I., 1994, *Învățarea eficientă*, Editura Technis, București.
- Kneller, G. F., 1973, *Logica și limbajul educației*, Editura Didactică și Pedagogică, București.
- Lehrer, K., 1974, *Knowledge*, Oxford: Clarendon Press.
- Neacșu, I., 1990, *Instruire și învățare*, Editura Științifică, București.
- Neacșu, I., 1990, *Metode și tehnici de învățare eficientă*, Editura Militară, București.
- Piaget, J., 1965, *Psihologia inteligenței*, Editura Științifică, București.
- Piaget, J., 1988, *Ou va l’education*, Denoel/Gouthier, Paris.
- Radu, I., 2000, „Strategii metacognitive în procesul învățării la elevi”, in *Studii de pedagogie aplicată* (coord. M. Ionescu, I. Radu, D. Salade), Presa Universitară Clujeană, Cluj-Napoca.
- Rod, E., 1995, *The Study of Second Language Acquisition*, Oxford: Oxford University Press.
- Ryle, G., 1949, *The concept of Mind*, London: Hutchinson.
- Sălăvăstru, C., 1994, *Logică și limbaj educațional*, Editura Didactică și Pedagogică, București.
- Vîgotski, L. S., 1972, *Opere psihologice alese*, vol. II, Editura Didactică și Pedagogică, București.
- Zlate, M., 1999, *Psihologia mecanismelor cognitive*, Editura Polirom, Iași.