

Some features of didactic communication (Didactic Test Specifics)

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In this paper, I would like to draw attention to those features of didactic communication, which have a marked influence on its success. My conclusions are based on the observations of Czech and Slovak educationalists and specialists in didactics (Průcha 1987, Gavora 1992). I also drew inspiration from foreign research based on Bloom's taxonomy of cognitive learning goals (Bloem 1959) and Piaget's theory of the phases of cognitive development (Piaget 1966). The empirical level of my paper is strongly influenced by my experience in teaching didactics at Prague Philosophical Faculty, especially by the analysis of the students teaching practice and some of their diploma theses. It was mainly the current state of didactics of Czech (i.e. mother tongue) what made me deal with didactic communication.

Didactic communication represents a specific type of pedagogical communication directed towards teaching. Of all possible educational environments I chose school as the most typical and institutionalized didactic environment. I believe that didactic communication cannot be studied in isolation. It is necessary to take broader context of social communication into account. Such a complex approach requires the application of interdisciplinary research methods. Much can be taken from psycholinguistics (both on the theoretical and methodological level), especially from the branch which represents a synthesis of cognitive and contextual approaches. In contemporary psycholinguistics, one of the most important topics is the relation between the processes of text production and reception (Nebeská 1992). Similarly, research in the relation between production and perception of didactic texts is of great importance for didactic communication (Šlédrová 1995). The producer of a didactic text – both the teacher, who implements the text in speech while teaching, and the author of the textbook, who implements didactic intentions in the written text, should respect cognitive faculties of the addressee. The overestimation or underestimation of these faculties has a negative influence on the success of didactic process. Regard to the cognitive level of recipients might contribute to the general improvement in the reception of learning materials. It could especially decrease the amount of lack of understanding.

How the cognitive level of text recipients can be determined is outlined in a pedagogical and didactic way by applied psycholinguistics. It is evident that it incorporates findings from personality psychology. The so called cognitive style becomes a key concept here. It is a personality dimension which can be understood as a special category of the abilities related to the way information is processed and used. It represents a special type of perceptual, cognitive and intellectual processes which differ from one individual to the other. For the most part it is inborn, and therefore difficult to change. It can be, however, diagnosed.

The diagnostics of cognitive style which also influences learning style, i.e. the choice of concrete procedures used by the student to learn is a sphere which could be a source of valuable information for the text producer, no matter whether he is a teacher or the author of a textbook. It is generally known that the quality of the text reception depends on the quality of text production. Similarly, learning is markedly influenced by teaching, and a learning style by a

teaching style. To optimize learning results, it would be desirable for the teaching style but also for the didactic text itself to take recipient's cognitive style into account. Not only selection of the subject-matter, but especially the way the content is didactically mediated to the learning subjects is important.

The problems of cognitive style are a matter of interest especially in cognitive linguistics and personality psychology. As an illustration I would like to mention two contradictory responses to situation: reflexiveness and impulsiveness. Reflexiveness is characterized by a delayed response and low speed of transforming the information, whereas impulsiveness manifests itself by fast response and the information is usually processed immediately on the basis of first hypotheses. Reflexiveness is based on anticipation while impulsiveness on retrospective analysis (Nakonečný 1993).

It is evident that e.g. the mentioned ways of response may act in contradiction in such didactic communications as are for instance various examinations. It is desirable for the examiners to consider these two contradictory ways of response and not to give preference to one of them at the expense of the other.

Pedagogic – diagnostics is not restricted only to discovering up to date educational results, it also studies the development of student's educational processes and procedures, his strategies and methods of solving problems, the way he or she treats information and processes it, i.e. his or her individual cognitive style. Diagnostic investigation concentrates on the existing but also on the latent potential of the student.

I will now focus on one diagnostic method which is often used in the present-day school system, i.e. didactic test. Basically, the test has two objectives:

- discovering the current state of the acquired knowledge, skills and abilities to solve certain specific sets of selected tasks in a given subject of study
- verification of the capability of more general operations as logical reasoning, analyzing situations, ability to promptly solve simple problems, etc.

The test measuring the educational results is oriented above all towards cognitive area of learning. Therefore, our but also foreign specialists in didactics find inspiration in Bloom's taxonomy of cognitive goals (Bloom 1959). Bloom describes the following basic target categories:

- **knowledge** (remembrance) – memory acquisition of terms, facts, rules, conventions, laws, criteria and classifications
- **understanding** – understanding the meaning of the communicated message, which is presented in verbal, visual or symbolic form, and its transformation into the form intelligible for the student
- **application** – the ability to correctly apply general principles to problem solving
- **analysis** – the ability to segment the communication into elements or parts, to determine their structure and clarify their mutual relations
- **synthesis** – putting elements from many different sources together so that they would form an integrated whole (this step requires the most creative activity)
- **evaluative assessment** – a very complex process which requires a person to chose his or her own criteria and norms to evaluate given phenomena from different angles.

With regard to the assessment of the didactic test as a diagnostic instrument with a predictive force but also as a part of didactic communication, it is appropriate to add to general taxonomy of goals a taxonomy of learning tasks:

1. memory reproduction of findings (reproduction of facts, concepts, definitions)
2. simple thought operations (solving simple tasks, classification of phenomena)
3. complex thought operations (exposition, deduction, verification, evaluation)
4. communication of knowledge (preparation of abstracts, summaries)
5. creative thinking (practical application, actual observation, reflection) (Hrabal 1989).

Some students of the Philosophical faculty in Prague wrote a diploma thesis in which they used these taxonomies to evaluate authentic entrance examinations at 21 state and private Prague high schools. First they analyzed the entrance tests with regard to the nature of cognitive tasks. They distinguished 7 types of tasks: 1. memory reproduction, 2. analysis, 3. synthesis, 4. classification, 5. comparison, 6. evaluative judgment, 7. creative solution of tasks. The careful analysis of all the sets of tests showed that in the majority of cases the test tasks were directed towards measuring isolated findings and simple analytic – reproductory skills whose acquisition which requires systematic school drill. The result which clearly shows that creative students do not have much chance in these tests is all the more piteous when compared with the opinions of the authors of the entrance tests. The majority of them claimed that the tests were intended to discover, apart from actual language skills, general presuppositions for study – i.e. the ability of independent logical reasoning, of logical deduction of links between phenomena, the ability of a detached point of view, orientation in the language system but also the ability to apply the knowledge in wider context – i.e. the overall knowledge. The test tasks, however, do not fulfill this diagnostic function. I consider the shortcomings this research revealed to be very serious, for the entrance test requirements in high schools have a marked influence on the choice of selection of subject – matter in higher grades of the elementary school, but also on the overall character of didactic communication.

I believe this type of research may also contribute valuable stimuli to the improvement of diagnostic methods used at schools and to the improvement of didactic communication in general.

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