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ABSTRACT

As has been the case in medicine, social work, and psychiatry, progress in education will follow closely the adequacy of our category system concerning pertinent functions of a child, our understanding of these functions, how children fail to function properly (malfunction), causes of malfunction, signs of malfunction, course of malfunction (time, sequence, and states), means of detection, and the development of techniques specific to a task. The more we understand our task, the more we can direct our efforts. Not only is such information necessary to classroom diagnosis and prescription, but it also serves to direct research and development efforts. A study of the literature in these other applied sciences to determine the types of background knowledge a practitioner in these professions requires in order to provide appropriate treatments for his clientele reveals, among other things, the fact that these professions emphasize diagnostic information more than does education, the practitioner's first task being to arrive at a systematic understanding of his client so that he can focus his efforts more effectively. If individualization of instruction implies that the teacher's task is to provide experiences appropriate to each child's present level of development, potential, interests, etc., then a similar approach is needed for progress in education. (JS)

Individualization and Needed Research

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"We must teach the individual child," is a statement expressing an idea which usually goes unchallenged in education today. Yet, it bears little relationship with actual practice in most classrooms.

The researchers have proceeded on the premise that the major blame for this lies, not with the teachers or their training institutions, but mostly with the state of educational knowledge or the work of educational researchers and developers.

Confusion about the meaning of the above statement has been part of the problem, interpretation taking basically two forms.

By individualization some have meant that a teacher should not impose her own value system on a child. Proponents of this view tend to favor an unstructured classroom situation in which a child follows his own interests, teacher guidance being de-emphasized.<sup>1</sup> To others, individualization implies that the teacher's task is to provide experiences appropriate to each child's present level of development, potential, interests, etc.<sup>2</sup> This latter view has been taken as a basis for this study.

In considering this view, it becomes immediately clear that the basis on which the teacher makes her decisions as to what is an appropriate experience is highly important to the result. As in any decision, the quality of the decision is usually only as good as the decision process followed and the relevant knowledge and values of the decision maker (teacher).<sup>3</sup>

1. Provincial Committee on Aims and Objectives of Education in the Schools of Ontario, Living and Learning, Toronto: The Newton Publishing Company, 1968.
2. Madeline Hunter, "Tailor Your Teaching to Individualized Instruction," Instructor, LXXIX (March, 1970), pp. 53-63.
3. Jack M. Ott, A Decision Process and Classification System for Use in Planning Educational Change, produced and distributed by The Evaluation Center, The Ohio State University, 1967, pp. 73-84. (ERIC: ED 034 298)

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The purpose of this study was to identify the types of knowledge teachers need as a background in order to consistently provide appropriate experiences for each child in their classrooms along with benefits that could be derived from such information.

The researchers proceeded by studying the literature in the applied sciences of psychiatry, social work, and medicine, to determine the types of background knowledge a practitioner in these professions requires in order to provide appropriate treatment for his clientele. Utilization of such information was also ascertained. Analogy was then used to infer the types of information needed by a teacher in order to provide appropriate experiences for each of the children in her classroom, along with the benefits that accrue from such information.

The professions of social work, psychiatry, and medicine were selected for study because not only are they concerned with providing appropriate treatment for man, but also, they are highly personal in their approach to their clientele. Further, the researchers believed that each of these fields was in general more advanced in the science of dealing with the individual than was education.

As a check on the literature search and the analogies drawn, results of the study were given to a psychiatrist, a medical doctor, a social worker, and some colleagues in the Ontario Institute for Studies in Education for criticisms and suggestions. Constructive suggestions were then incorporated.

Among the findings was the fact that these professions emphasize diagnostic information more than does education, the practitioner's first task being to arrive at a systematic understanding of his client so that he can focus his efforts more effectively. The diagnosis is thought of as the beginning from which rational therapy can be constituted. Having made a complete diagnosis, the practitioner can use this information to set appropriate treatment goals and to prepare an

appropriate treatment plan within the limits of available resources.<sup>4, 5, 6</sup>

The public has learned to expect a diagnostic examination in these professions and most would be looking for a new practitioner if treatment were prescribed without at least a tentative diagnosis. They would probably be even more wary if the practitioner were to prescribe group treatment which was very much the same time after time regardless of the make-up of the group. Yet this set of circumstances parallels closely the situation in far too many courses of study in the public schools and universities. Consequently, educational treatment often lacks specificity, being similar to the physician's attempt to educate the general public concerning the benefits of physical exercise. Such prescriptions may benefit the majority, but it overlooks the individual's specific needs, some of which may be critical.

If all practitioners practiced without making a diagnosis a great deal of the responsibility for getting appropriate treatment would shift back onto the patient, and the situation would be only slightly removed from the days of home remedies. It would be up to the patient to decide whether a given treatment were helpful or not. If it did not help or if it made him worse, he would have to seek help elsewhere, probably using the experience of others as a basis for his choice, or he could give up entirely. This self-diagnosis by the patient seems to be similar to student behavior in choosing a course of study when there is no professional help available to assist him in his choice.

4. "Diagnosis," The Medical Journal of Australia, II (September 25, 1965), pp. 541-542.
5. Rosemary Conzenius, Paul Glasser, and Robert D. Vinter, "Diagnosis in Social Group Work," Ann Arbor, School of Social Work, The University of Michigan (December, 1960), p. 1.
6. Heinz E. Lehmann, "Empathy and Perspective or Consensus and Automation? Implications of the New Deal in Psychiatric Diagnosis," Comprehensive Psychiatry, VIII, No. 5 (1967), p. 266.

If a social worker, psychiatrist, or medical doctor imposed treatments on his clients without the patients' having a degree of confidence that the practitioner was capable and careful in assessing problems and prescribing treatment, the practitioner might expect a lack of cooperation or perhaps even cheating on the part of some clients.<sup>7, 8</sup> Such lack of cooperation would be more frequent and pronounced if the treatment were seen as potentially hurtful or requiring much effort. Even if treatments were deemed beneficial, but were taxing or potentially hurtful, a patient might not be aware of how to protect himself from that hurt or of what is at stake in his decision as to whether or not he should cooperate.<sup>9</sup>

The analogy with education seems obvious; when a child does not see the need for a certain educational treatment and does not have confidence that the teacher knows his problems and feelings, the results are predictable.

On the other hand, medicine may learn something from education here. While in medicine the client is highly dependent upon the practitioner for diagnosis and treatment, education produces a number of people who are very successful in educating themselves (home remedy).

Social work and, perhaps, psychiatry serve as a useful model as it seems to be the practitioner's intent to not only right existing conditions or meet needs, but to better prepare the client for handling future difficulties on his own.<sup>10</sup>

7. Allen J. Enclow and Murray Wexler, "The Medical Interview," Medical Times, XCIII, No. 11, (1965), p. 1195.
8. E. T. Lisansky and B. R. Shochet, "Comprehensive Medical Diagnosis for the Internist. A Modification of the Associative Anamnesis of Deutsch," Medical Clinics of North America, LI, No. 6 (1967), p. 1381.
9. Herbert I. Posin and Leonard R. Weiner, "Psychotherapy by Nonpsychiatric Physicians," International Psychiatry Clinics, III (Fall, 1966), pp. 177-210.
10. Robert D. Vinter (ed.), "The Essential Components of Social Group Practice," Readings in Group Work Practice, (Ann Arbor, Michigan, Campus Publishers, 1968), pp. 8-49.

If educators are to concern themselves with discovering what is appropriate for each child, they need, as do practitioners in social work, psychiatry, and medicine, the skills and tools of diagnosis and prescription. Some teachers, possessing a sixth sense which has enabled them to understand their students and provide appropriate experiences for them, have excelled in this respect. They have acquired the "art" of teaching.

Similarly, the skill with which a physician is able to diagnose and prescribe has been referred to as the "art" of medicine.<sup>11; 12</sup> But the researchers found that diagnosis became much less an art and more a science as bodily functions and their possible maladies were increasingly understood and more clearly identified.<sup>13</sup>

Technical knowledge - present category systems of bodily functions, understanding of these functions, ways in which they malfunction, causes of malfunction, signs of malfunction, consequences of each type of malfunction, course of disease (malfunction), means of detection, and the development of appropriate treatments - has added greatly to the physician's success.<sup>14, 15, 16</sup> In short, the science of medicine has assumed responsibility for some of what was formerly left to the art of medicine.

In education, success in reducing what does not properly pertain to the art of teaching is less impressive. That is, a teacher must depend more on intuition

11. Posin, International Psychiatry Clinics, III, (Fall, 1966), 177.
12. H. A. F. Dudley, "Pay-Off, Heuristics, and Pattern Recognition in the Diagnostic Process," The Lancet, II, (September 28, 1968), p. 726.
13. Lester S. King, "What Is a Diagnosis?" JAMA, CCII, No. 8 (November 20, 1967), pp. 155-156.
14. Frederick C. Thorne, "The Clinical Method in Science," The American Psychologist, II, (1947), p. 161.
15. Walter Riese, "The Structure of Galen's Diagnostic Reasoning," Bulletin of New York Academy of Medicine, XLIV, (July, 1968), pp. 778-790.
16. Alvan R. Feinstein, "Scientific Methodology in Clinical Medicine. II. Classification of Human Disease by Clinical Behavior," Annals of Internal Medicine, LXI, No. 4, (October, 1964), pp. 758-778.

than is necessary in the practice of medicine. Education must, as medicine has done, concern itself with identifying the functions of a child or those areas of his life with which it should be concerned. Little progress can be made until education is clear as to its task or as to the phenomena with which it is concerned.

A significant step has been made in this direction with the development of the taxonomies of Bloom<sup>17</sup> (cognitive domain) and Krathwohl<sup>18</sup> (affective domain). These taxonomies have already been useful in testing, but their implications for instruction have not been generally recognized. Thus we find ourselves with some sophistication in testing for synthesis skills, for example, but with little understanding of how to teach these skills. Educators as yet know neither the "maladies" of the synthesis function in children, nor their causes.

The authors assert that as has been the case in medicine, social work, and psychiatry, progress in education will follow closely the adequacy of our category system concerning pertinent functions of a child, our understanding of these functions, how children fail to function properly (malfunction), causes of malfunction, signs of malfunction, course of malfunction (time, sequence, and states), means of detection, and the development of techniques specific to a task. The more we understand our task, the more we can direct our efforts.

Not only is such information necessary to classroom diagnosis and prescription, but it also serves to direct research and development efforts. This need for information can be seen not only in the practical sciences reviewed here, but in the development of any science.<sup>19</sup> The identification of phenomena, cause and effect relationships, etc. and the development of theories and techniques lead researchers to ask new questions and to look for new and better techniques.

17. Benjamin S. Bloom (ed.), Taxonomy of Educational Objectives. New York: David McKay Company, Inc., 1956.
18. David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, Taxonomy of Educational Objectives. The Classification of Educational Goals: Handbook II: Affective Domain. New York: David McKay Company, Inc., 1964.
19. Abraham Kaplan, The Conduct of Inquiry. San Francisco, California: Chandler Publishing Company, 1964, p. 355.

With the present lack of understanding of the educational task, the search in education is often for the "wonder drug," the method to cure all ills indiscriminately. In evaluating a treatment or method we often do not know much more about the initial state of the experimental group than that it is representative of some age group or grade level. Thus, students in such experiments are lumped together on characteristics, such as types of educational problems, previously learned knowledge and skills, previous experience with similar methods, attitudes, etc. - characteristics that influence the effectiveness of a method far more than does grade level or age group.

We limit the value of our experimental findings in other ways as well. For example, outcomes are frequently not fully explored and results other than those directly sought are overlooked. Sometimes outcomes are grouped in a way that obscures what may be valuable information. As a result, teachers receive little help in determining when a given treatment is appropriate either in terms of the types of students it is likely to help, or the kind of effects which are produced by one treatment over another.

Increased understanding of the functions of a child which are of concern to education, types of malfunctions, and causes of malfunctions should allow educators to move with greater certainty into the area of prevention. Preventive medicine is a technique with which everyone is familiar. Why suffer the disease when it is possible to prevent it?<sup>20</sup> Similarly, social agencies are moving more toward preventive work with their clients, forestalling and dealing with the makings of a crisis before it has a chance to develop. By knowing the types of "maladies" children are apt to develop and the possible causes of such "maladies," a teacher should be better able to skirt or prevent educational difficulties and thus contribute to a student's clean bill of educational health.

20. Thorne, The American Psychologist, II, p. 161.

To achieve greater effectiveness in teaching, then, a clearer definition of categories for which teachers are responsible is required. Teachers also require some understanding of these categories; of the ways in which students fail to achieve optimal functioning in each category; of the causes of various shortcomings; of stages of malfunction; of how to detect various types of malfunctioning and their causes; and of the specific effects and purposes of each method.

In keeping with the present emphasis on teaching the whole child, categories must be added to those included in the cognitive and affective domains. The category systems of social work, psychiatry, and medicine may enlighten us in the attempt to organize a category system of relevant areas of functioning. In addition to their identification, these categories will need to be analyzed in terms of their relative importance and interdependence.

The authors assert that progress in education is at least partially dependent upon our ability and willingness to construct tentative but clear-cut category systems of functions of the child with which a teacher should be concerned, and then perform a concerted study of the functions in each category to gain an understanding of them, and finally, how to arrive at effective procedures under various circumstances.

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