

Personal and Cultural Factors Interfering With the Effective Use of Individual and Group Learning Methods

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In traditional teaching methods the teacher is at the center of attention; with new methods of individual and group instruction, an effort is being made to change this. The accepted ways of instruction are sequential in nature and conform to the linearity characteristic of Western culture; the new modes of teaching in effect discard the view that most people think and learn in a very systematic way. Classroom observation shows that in many cases teachers who have ostensibly adopted one of the new individual or group methods of instruction partly continue to employ the teaching methods they formerly used in whole-class teaching. It is contended that this is not just an unimportant relic of past behavior but a sign of serious personal and cultural problems the teachers encounter in modifying their ways of teaching. From the literature it does not appear that sufficient attention is being paid to these problems by the propagators of the new teaching methods. It remains to be investigated whether such basic changes are at all possible.

Dans les méthodes traditionnelles d'enseignement, l'enseignant est au centre de l'activité en cours. Avec les nouvelles méthodes d'enseignement individualisé et d'enseignement de groupe, un effort est fait pour changer cela. Les méthodes d'enseignement actuellement en cours sont naturellement séquentielles et se conforment aux caractéristiques linéaires de la culture occidentale. Les nouvelles méthodes d'enseignement ne considèrent pas que tous les apprenants pensent et apprennent d'une manière purement systématique. L'observation de la salle de classe montre cependant que, dans plusieurs cas, les enseignants qui ont adopté une des nouvelles méthodes d'enseignement, continuent d'utiliser, en partie, les méthodes traditionnelles d'enseignement. Cela montre que les enseignants ne font pas seulement preuve d'un attachement au passé mais bien qu'ils rencontrent des difficultés personnelles et culturelles lorsqu'il est temps de modifier leurs méthodes d'enseignement. Selon les écrits dans ce domaine, il ne semble pas qu'une attention suffisante soit accordée à cette réalité par les promoteurs de nouvelles méthodes d'enseignement. Il s'agit alors de découvrir si certains de ces changements en profondeur sont possibles chez certains enseignants.

The Centrality of the Teacher

Teachers could be divided into two different types: those engaging in direct teaching and those working in the indirect manner. More plastic terms, coined by Ron (1977), are the "actors," who like to hold the center of the stage, and the "stage directors," who are mainly active behind the scenes. Most teachers probably belong to the first type.

In the old-style classroom the teacher holds a prominent position. Although the teacher's dais has long since disappeared, the teacher's table and chair, larger and different from that of the pupils, and the teacher's place in front of the class set him or her distinctly apart from the pupils. This is not so in classrooms which work in the new style, where children do not sit in orderly rows but in dispersed groups, where the teacher's table is pushed to one side or even used by one of the groups or as a convenient place to store books or working materials, and where it is often difficult to locate the teacher, who is busy helping this pupil or that group of children.

It may well be that many teachers find it difficult to lose what can rightly be called "pride of place." After all, a person's spatial position often communicates his or her rank in society and pervasive cultural influences make it very difficult to discount people's feeling about spatial arrangements (Hall, 1961, pp. 146-164; Hall, 1969). This may furnish at least one possible explanation for the behavior of many teachers I and others (Kuperman, 1980, p. 269) have observed over the years. In many cases teachers start and end a session of group activity by conspicuously underlining their presence at the beginning and end of each period. Instead of just saying, "O.K. class, you can start right now," there is a formal opening, in which the teacher unnecessarily reads out instructions which appear anyway in the pupils' worksheets; or there is a formal termination in which the students report on their work. Since their tasks are different, the class as a whole does not benefit much by it and loses time which could have been better spent on the continuation of their separate tasks. Often the teacher will stop the whole class for a moment with some remark which generally is not relevant to all of the children, who are engaged in different tasks or are at a different stage of the same task. Sometimes the teacher goes to the blackboard and writes something on it; almost all children will discontinue working and read; usually there is no connection between the writing and the work of the separate groups. Such behavior may indeed be dysfunctional from the point of view of the children's learning process; nevertheless the interruption has served a real purpose: The children have been reminded of the presence of the teacher. Thus this behavior apparently serves basic personal and cultural needs, of which the teachers themselves are unaware. They consent to be submerged in the general activity of the classroom for part of the period, but from time to time they feel they have to be recognized as the person in charge.

Many teachers feel that a lesson is in many ways similar to a performance in which they themselves are the stars. For many teachers this feeling of standing in the center of attention may well have been what attracted them to their profession in the first place. Thus, the formal opening and closing of each lesson may serve an additional need of the teacher, that of making him or her feel that the lesson has in some way been a work of art, such as a play or a concert, which according to Aristotle on the tragedy (1954, p. 233) must have a beginning, a middle, and an end. Gilbert Highet has written a book titled *The Art of Teaching* (1956). As an art, teaching has need of form, of a frame like that of a painting or of the raising and lowering of the curtain in a theatre, setting it off from ordinary life. According to this conception of teaching each lesson is a kind of performance, in which the teacher fulfills a role analogous to the conductor of an orchestra. It is the teacher who gives the formal sign opening the lesson, who is responsible for the smooth flow of the action and the interconnection of its various parts, and who ideally leads the class to a "finale" which should round off the lecture or the discussion by linking it to the opening accords. When this comes off as planned, it gives the teacher — and it must be conceded, sometimes the pupils as well — a sense of completion, of harmony, of an arrival at the right destination. Having the same background and initial education as the teachers (for many years I was a teacher in primary and secondary schools), I sometimes experience this myself. But this feeling, which may well be appropriate to the lecture, seems to be out of place in individual or group work. In this case the sense of fulfillment should be felt not by the teacher but by each of the pupils or groups of pupils participating in the work of the class. This cannot be achieved when teachers conduct the period to satisfy their own needs.

Educationists trying to introduce the new teaching methods in the schools are aware that these affect the teacher's traditional position and occasionally remark on it. Kagan (1985) says that "the students adopt the roles traditionally reserved for the teacher" and the teacher has therefore to "adopt new roles" (p. 89). Hertz-Lazarowitz and Shachar (1990) mention the reduction in physical distance between teacher and pupils and the change in the verbal behavior of the teacher from unilateral and formal to reciprocal and less formal. Research shows that these changes favorably affect the behavior of the students, who increase such prosocial academic activities as helping classmates who have difficulties in understanding the material (pp. 79-81). It is thus good for the students — but is it so for the teachers as well? Aronson (1978) states his view that some teachers may have difficulty in "giving up their traditional authority," but that most will find it "exciting to watch the responsibility for learning shift to the students," with the teacher acting "behind the scenes" (p. 54) or in Ron's (1977) terminology as a stage director. It seems very questionable whether most teachers will indeed find consolation for their loss of status in the increase of independence of their pupils. Ideally, it may be the purpose of teachers to make themselves superfluous but in actual life teachers often are not too happy

discovering that pupils can go along without their assistance. This may be at least a partial explanation of teachers' interference with pupils' self-directed learning.

The Linearity of Western Culture

One of the basic characteristics of modern Western culture is its linearity, exemplified in the way people regard time — in the assembly-line, in the road system, and in the way they organize their homes and gardens (Lee, 1960; McLuhan, 1962, p. 177; Heath, 1985, p. 237; Hall, 1990, p. 12). It is therefore only to be expected that organizing learning materials in an orderly sequence, similar to the linear progression in other fields of endeavor, should be felt by Western people to be the "natural" way of teaching. Such a view of the ideal form of the lesson is clearly expressed in the didactical theory of Friedrich Herbart and his followers. According to Herbart's theory of instruction all details in a lesson should be connected to form a logical whole (Dunkel, 1970, p. 170). This will be achieved if each lesson is organized according to the "five formal steps" formulated by Herbart's disciple Wilhelm Rein: preparation, presentation, comparison, generalization, and application (Dunkel, 1969; Dunkel, 1970).

This theory, which was a fundamental element in the course in didactics taught to aspiring teachers until about a generation ago, seems today to have become unfashionable. Checking the indexes of manuals and textbooks on didactics published in the United States and Israel during the last decade, I did not find a single one in which Herbart was cited. (One fairly recent American textbook which still has an account of Herbart's views is Hyman, 1970, pp. 28-29). Instead of this theory the new books describe a wide variety of active learning methods. Nevertheless, all the new ideas about teaching notwithstanding, these 19th century ideas are still influencing both teacher training and teachers' practice in Israel. The reason for this seems to me to be twofold. First, most of the teachers of teachers, at the theoretical level (in the teacher training institutions) and at the practical level (teachers who serve as mentors for the trainees in the schools), have themselves been educated according to the systematic view of instruction of the Herbartians. Second, the linearity which is a pervading trait of Western culture is felt in every sphere of life and the teacher is not less biased in its favor than the average researcher or the typical bureaucrat.

The historical and cultural influences transmitted and strengthened by the teacher training process combine to make the teacher feel that careful construction of a lesson is of cardinal importance. Each part of the lesson should be clearly connected to those preceding and following it in the teacher's presentation. Emphasis is on the logical steps through which the teacher proceeds rather than on the way children actually think, learn, and are motivated

to pay attention to what is being presented to them. One of the expressions of the teacher's usual attitude is the ingrained habit of many teachers to start the study of a text by first presenting the pupils with a list of difficult words or concepts which have to be explained before the class can start reading. When I point out to teachers attending inservice training courses that the learning of disconnected words kills the interest and the motivation of the children to read the story, they retort by saying that preparation is an indispensable part of a lesson. (Herbart wrote about the preparation of the "apperceptive mass.") Even when it is made clear to them that children, like adults, are perfectly able to read a text including some words which they do not understand or that it is much more interesting for a child to learn the explanation of a word included in a (hopefully appealing) text than to study a list of as yet unrelated and unmeaningful words, it still remains very difficult to change the accepted procedure. The cultural impact of linearity, reinforced by the teachers' training, causes them to oppose the suggested change in the organization of the lessons.

It can easily be shown, by comparison with the ways of teaching in other cultures, that there is nothing "natural" about the method adopted by the West. In traditional Jewish education, still practiced by ultra-orthodox communities, five- and six-year-old children did not start studying the Bible at its beginning but rather with the third book, Leviticus, which for mystical reasons was preferred although its contents (such as the laws of sacrifice) are totally inappropriate for small children. In this educational system the children would come to know the Biblical stories by studying the "weekly portion" of the Pentateuch to be read the next Sabbath in the Synagogue, starting on Sunday and learning it verse by verse throughout the week. In their earlier years in school they never finished it by Friday, but on the following Sunday would skip the part not studied and go on to the next portion. The study of the Talmud was as unmethodical (seen from a Western point of view) as that of the Pentateuch (Zborowski & Herzog, 1964, pp. 95-97). Although the text was in Aramaic, a language even less known to the boys who studied it than the Hebrew of the Bible, there never was an introductory course in the Aramaic language. Basic concepts of law and logic were not systematically explained but somehow grasped by stages through repetitive use. Nevertheless, in time at least some of these students became famous sages, able to expound the law and write scholarly books on the Bible and the Talmud.

Similar systems for the gradual absorbing of a cultural heritage are known in other Eastern cultures. An author discussing the Sufi way of learning and criticizing the methods of imparting knowledge in the West says, "The habit which possesses present-day thinking is generally to assume that a disciplined approach will solve all problems." *Disciplined* here stands for systematic, progressing through the material by orderly steps, which are supposed to be more or less similar for all learners. Contrasting with this view the Sufi method is nonlinear, teaching its message through self-examination or by meditating on

the meaning of stories (Shah, 1985, p. 46, p. 44, p. 101). Other examples of nonlinear instruction are the methods employed in teaching navigation by the natives of the Pacific islands and by the 19th century American navigators on the Mississippi (Stahl, 1977).

Methodical Teaching and the Process of Learning

One of the reasons teachers advocate the linear, systematic approach to teaching is their belief that for most people thinking is an orderly process. In this too they follow the ideas of educators who were taught in teacher training institutes for generations. In the discussions among American educators on the contribution of Herbart and Ziller to classroom teaching, which some held might lead to rigidity and artificiality, Charles De Garmo defended the formal steps, contending that they corresponded with the way the human mind works (Dunkel, 1970, p. 250, p. 255). This is essentially the same view as that of theorists on the process of thinking, such as John Dewey or Graham Wallas. In their descriptions of the stages of thinking, passing through the consecutive steps of experience, problem, data, hypothesis, testing (Dewey, 1933) or preparation, incubation, illumination, and verification (Wallas 1926), thinking is presented as a systematic process. Although Dewey tries to show that "the sequence of the five steps is not fixed" (p. 115), he still holds that "as far as an actual process of thought is truly reflective," it will be "pursuing an orderly course" (p. 77). The whole way of presentation has a pronounced linear character which will become even more so when the teacher trainee has to memorize these stages (as I had to do many years ago), preparing for his or her examinations in teacher training schools.

The consecutive developmental stages described by Piaget, which are part of the education of every teacher, also imply a precise order of cognitive processes. Thus, teachers generally do not ask themselves whether in fact our thinking and learning are as systematic, linear, and orderly as assumed by educationists and psychologists. As has been indicated, this certainly is not so in other cultures. But even in modern Western culture the human mind apparently does not always work in a very methodical manner. As one can see from the textbooks on learning there are many studies involving learning and memory under artificial laboratory conditions (Houston, 1981; Mazur, 1986) but far less is known about the way people actually learn and remember in real-life situations (Mazur, 1986, pp. 252-255; Neisser, 1982). Studies and introspective accounts of creative thinking certainly do not show that this type of thought is of a very systematic nature (Koestler, 1966; Ghiselin, 1964). It is true that language itself is linear in character. In the words of the philosopher Max Black: "Discourse is inescapably linear But significant thought is seldom linear: cross references and overlapping relationships must be left for the good reader to tease out by himself." Black (1972) finds this to be true in mathematics as well as in literature (p. 21). The linearity inherent in language is emphasized by writing

and print, which give concrete form to the spoken words. Some writers and poets have rebelled against the linear mold of language which they found restricted the possibility of giving full expression to their thoughts. Hermann Hesse complains that in his medium, in words, he cannot show how chapters and sentences "correspond with one another, complement one another, fight with one another, limit one another" — something which is perfectly possible to the composer of music (Hesse, 1972, p. 145), or to the painter or film-director. Steiner (1969) cites different authors, such as Blake, Dostoyevsky, and Rimbaud who strove to overcome the linear, sequential patterns imposed on our minds by language (pp. 48-49). Thus, at least some highly creative members of Western culture find the linear modes of expression unadapted to their needs.

Accounts of the way people attack problems in a systematic way, such as that of Dewey or of Piaget, are idealizations rather than generalizations of the way of thinking usual in Western cultures (Super, 1980, p. 62). When subjects participating in experiments on free recall were allowed freedom in the manner with which they wished to organize the material to be remembered, thus approaching the manner of thinking employed in actual life, it turned out that they used a great variety of strategies. Many of these were of an associative rather than of a systematic nature (Greene, 1975, p. 41). Research on concept attainment and problem solving shows that there is great variety in the ways individuals use thinking processes (Johnson, 1972, pp. 51-55, pp. 213-228; Matlin, 1983, pp. 195-218, pp. 230-245). In a classroom of 30 or 40 pupils there may possibly be some children whose thought is more or less systematic; but it is certain that most will have their own specific ways of learning, solving problems, or memorizing facts. They will not derive much benefit from using the linear methods favored in the past for reasons which now seem to be wrong or at least not equally suited to all people. In group learning children will probably learn from books and worksheets, from overhearing the talk of other children, and from the remarks of the teacher passing between the groups. Indeed, this variety in ways of learning is one of the reasons for propagating the use of individual and group strategies in teaching.

Changing Teachers' Perception of Self and Teaching Style

Given the very real, deep-going, personal and cultural changes needed by teachers to adapt to the new style of teaching, one would expect much thought to have been devoted to this subject by the innovators. But on examination of some of the principal books and articles on cooperative learning in Israel and the United States (Aronson, 1978; Slavin, 1983; Slavin et al., 1985; Sharan, 1990; Sharan, Hare, Webb, & Hertz-Lazarowitz, 1980; Sharan, Kussel, & Hertz-Lazarowitz, 1984; Hertz-Lazarowitz & Fuchs, 1986) I found that only the last three gave due consideration to teacher training; the 1990 volume edited by Sharan includes manuals for the use of jigsaw learning by Aronson and of student team learning by Slavin. The topics presented to the teachers, preparing

them for the use of the new methods in their classrooms, explain the theoretical base of the new approaches to learning, training in the use of the appropriate materials, learning how to prepare such materials, and the techniques for evaluating pupils' achievements. In one program from Israel films were shown in which the teachers could see how the method worked in the classroom; this was followed by discussion (Sharan, 1984, p. 23). Nowhere did I find adequate treatment of the fundamental problems many, if not all, teachers will encounter when trying to adopt teaching methods foreign to their habits, their education, their self-perception, and the essential quality of their culture.

In fact, the educationists proposing these new methods do not seem to realize that the teachers apparently have some deep-going problems, over and beyond the learning of new teaching methods. This can be deduced from those problems of teacher training listed by some of the authors and included in part of the programs of training. In a chapter on problems facing the teacher Aronson (1978, pp. 77-90) lists the child whose reading is poor, the "trouble maker," the preparation of materials, and problems with the principal because of the disorderly appearance of the classroom. Sharan and associates (1985) treat "sources of teacher's resistance" (p. 317), including difficulty in accepting the abolition of ability grouping, the need for acquiring new teaching skills, the belief that children can learn only when taught directly by the teacher, and the lack of appropriate curricular material. There is next to nothing on what I assume to constitute the underlying problems of the teacher.

When trying to make teachers adopt new ways of teaching, explaining the rationale of the new approach as well as presenting the learning materials and the method of working in the classroom may be quite sufficient if the proposed change is not very radical. Thus, if teachers know and use a certain method of group learning, they may well have no difficulty in learning an additional method. But the change from whole-class teaching to working with individuals and groups involves a basic reappraisal of the teacher's role and the way people learn. In order to actually change ways of teaching, it is not enough to teach the theory and practice of the new method and to convince teachers that it positively affects achievement, discipline, or motivation. What is needed is first of all a change in the way teachers perceive themselves and their work.

Teachers will have to understand that helping children to study is far removed from the role of the performing artist occupying the center of attention. While this may cause some teachers to lose interest in their jobs, those who have not been comfortable in the role of the actor may find in the new indirect teaching methods, which favor the "stage-director," a remedy for their feelings of burn-out.

Teachers need also to learn about the linear nature of our culture and its impact on the didactic methods we have inherited from the past, which may be ill-adapted to the ways in which many people actually think and learn. My

experience in the inservice education of teachers has shown that this point is very difficult for teachers to accept. The idea of the sequential nature of thought is captivating; it sounds logical and very convincing. As it flows out from the basic nature of the culture it is felt as something self-evident. It appeals to teachers also because they regard anything systematic as desirable and they like to identify themselves and their profession with it. When one tries to show a group of teachers that the goings-on in our minds apparently are not as tidy and orderly as we would like to imagine, there often is much opposition.

In my meetings with teachers I try to give examples which are difficult to explain away: All children learn their mother language in a very haphazard manner. Nevertheless, it seems to be more effective than the method used to teach foreign languages in school. We ourselves learn a good deal about the world we live in through the newspaper and television, or in other areas of life through gossip, all totally unsystematic in their manner of presenting information. A little introspection about how we learn new material or think about a problem may also help in demonstrating that most of us do not tend to do this according to a fixed sequence of "steps," but in far more associative and configurative ways. Some teachers, when they see that, in the face of evidence from their own experience they cannot hold on to the linear view of learning, change their approach. Conceding that possibly it is true that we ourselves do not learn things in a very structured way, they say, "But at least we can teach our children to be more systematic."

Bringing about changes in accepted views is always difficult. In our case these views relate to people's professional self-image and to basic cultural traits relating to space and to time. If teachers cannot be induced to change their views in these respects, there is not much chance that the new individual and group strategies can be effectively introduced into the classroom. It is true that experiments in group learning show positive results. But one can ask all the usual questions about the possibility of generalizing from such experiments, or about the durability of the changes. In actual practice I often encounter instances of teachers and even whole schools who have adopted one or another innovation in education, only to revert gradually to their former ways of teaching after a shorter or longer time. Hence it seems necessary to understand why teachers do not readily accept a new method of teaching or tend to introduce elements foreign to the original concept and detrimental to its successful application. In the words of Williams (1966), who tried to understand the reasons why teachers often return to traditional and well-known patterns of teaching after they have enthusiastically embraced a new teaching method, "What kinds of stress accompany the introduction of a new method, and how might these precipitate reversion? Which features . . . produce stress? . . . How can safeguards against reversion be built into the presentation of new methods?" (p. 133).

I have tried to show that there are some basic features, personal and cultural, which interfere with the acceptance of the new methods of individual and group

teaching by many teachers. This can perhaps be prevented or remediated by attending to the attitudes in question and by trying to change them as an essential part of the learning of the new teaching method. Considering the fact that teachers, as all of us, are embedded in their own cultures, it is not certain that the desired changes can in fact be implemented. In any case, these problems require investigation.

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