



Jacques Barzun (1907 –)

TEACHING AND LEARNING

Mortimer Adler

“Happily there is something stable and clear and useful behind this phantasmagoria of Education—the nature of subject matter and the practice of teaching. ...”

“... the whole aim of good teaching is to turn the young learner, by nature a little copycat, into an independent, self-propelling creature, who cannot merely learn but study. ... This is to turn pupils into students, and it can be done on any rung of the ladder of learning.”

Jacques Barzun, *Teacher in America*

In the context of these passages, Jacques Barzun observes that we all know, or should know, that it is impossible to “teach” democracy, or citizenship or a happy married life; that not all subjects are teachable; that many who are regarded and probably regard themselves as professional teachers “are merely connected with education”; and that, while teaching “is not a lost art ... the regard for it is a lost tradition.” I hope what I have to say about teaching and learning will confirm and illuminate these observations, especially the point made in the second passage quoted above; namely, that the good teacher should aim to make his tutelage totally dispensable by transforming those he teaches into independent learners.

I would like to dwell for a moment on the contrast which Jacques draws between Education and teaching. In my judgment, Education (with a capital E) is a secondary subject, and a dull one to boot. Countless long and intricate books have been written on the subject, few of them good, none of them great. In contrast, the literature on the art of teaching and the role of the teacher is minuscule. It consists mainly not of books or treatises, but of little gems to be found in the context of discourse on other subjects. It begins with a few passages in the dialogues of Plato and the treatises of Aristotle; it continues with a short tract by Augustine and with a few questions answered by Aquinas in the *Summa Theologica*; and it includes, in modern times, some insights to be found in the writings of Comenius, John Locke, Immanuel Kant, William James and John Dewey.

Contemporary “educational psychology” of the scientific variety may have made contributions to the subject, but I doubt it. At best those contributions will add footnotes to the main points I wish to make about the nature and function of the teacher in the process of human learning. If what I have to say about teaching restores respect for the art, and imparts an understanding of how difficult it is to practice that art effectively, it may also help us to realize how superficial all educational plans, programs and policies must necessarily be when they do not recognize that the number of good teachers available to carry them out will always fall far short of the number required to achieve the appointed objectives.

All learning is either by instruction or by discovery; that is, with or without the aid of teachers. The teachers who serve as instructors may be alive and in direct contact with those whom they instruct, as is always the case in classrooms or tutorials, or they may be present to the learner only in the form of books. The teacher who instructs by his writings cannot engage in discussion with those who are reading his works in order to learn; he can ask them initial

questions, but he cannot ask any second questions—questions about the answers they give to his initial questions. He is, therefore, seriously limited in his performance of the art of teaching, though he may have done what he could to apply the rules of that art in his effort to communicate what he knows.

That the effort to communicate what a man knows is not, *in itself*, effective teaching follows from the fact that such efforts are seldom if ever successful and, at best, they succeed only in part. Successful teaching occurs only when the mind of the learner passes from a state of ignorance or error to a state of knowledge. The knowledge acquired may be either something already known by the teacher, or something about which he himself is inquiring. In either case, the transformation effected in the mind of the learner is learning by instruction only if another human being has taken certain deliberate steps to bring about that transformation. What the teacher does must be deliberately calculated to change the mind of the learner. Merely motivating someone to learn is not enough; stimulation is not teaching.

Since whatever can be learned by instruction must necessarily have been learned first by discovery, without the aid of teachers, it follows that teachers are, absolutely speaking, dispensable. Nevertheless, they are useful because most human beings need instruction to learn what they could have learned by discovering it for themselves. If we recognize, as we should, that genuine learning cannot occur without activity on the part of the learner (passive absorption or rote memorization does not deserve to be called learning), then we must also recognize that all learning is a process of discovery on the part of the learner.

This alters our understanding of the distinction between learning by discovery and learning by instruction. If the latter is not to be identified with passive absorption or rote memorization, then the distinction divides all active learning into two kinds—unaided discovery, discovery without the aid of teachers, on the one hand; and aided discovery, or discovery deliberately assisted by teachers, on the other. In both cases, the principal cause of learning is activity on the part of the learner engaged in the process of discovery; when instruction occurs, the teacher is at best only an instrumental cause operating to guide or facilitate the process of discovery on the part of the learner. To suppose that the teacher is ever more than an instrumental cause is to suppose that the activity of a teacher can by itself suffice to cause learning to occur in another person even though the latter remains entirely passive. This would view the learner as a patient being acted upon rather than as an agent whose activity is both primary and indispensable. In contrast,

the instrumental activity of the teacher is always secondary and dispensable.

These basic insights are epitomized by Socrates when, in the *Theaetetus*, he describes his role as a teacher by analogy with the service performed by a midwife who does nothing more than assist the pregnant mother to give birth with less pain and more assurance. So, according to Socrates, the teacher assists the inquiring mind of the learner to give birth to knowledge, facilitating the process of discovery on the learner's part. If the learner suffers birth pangs because errors block the way, then, as Socrates tells us in the *Meno*, the teacher may have to take strenuous measures to reduce the learner from a state of error to one of admitted ignorance (by "benumbing" the mind of the learner), so that motion toward learning can proceed unhampered by obstacles.

Before we consider how the good teacher, following the model of Socrates, cooperates with the activity of the learner, which will develop from our understanding of teaching as a cooperative art, let me call attention to two erroneous uses of the word "teach." It is often said that "experience teaches," but however much we may learn from experience, it teaches us nothing. Only human beings teach. We also frequently say that a man is self-taught—an autodidact—or that he has taught himself this or that. He may have learned this or that entirely by himself; all of his learning may have been unaided discovery. But to say that it occurred without the aid of teachers is not to say that he taught himself. One individual can be taught only by another.

Teaching, like farming and healing, is a cooperative art. Understanding this, Comenius in *The Great Didactic* again and again compares the cultivation of the mind with the cultivation of the field; so, too, Plato compares the teacher's art with the physician's.

In arts such as shoemaking and shipbuilding, painting and sculpture (arts which I call "operative" to distinguish them from the three cooperative arts), the artist is the principal cause of the product produced. Nature may supply the materials to be fashioned or transformed, and may even supply models to imitate, but without the intervention of the artist's skill and causal efficacy, nature would not produce shoes, ships, paintings or statues.

Unlike the operative artist, who aims either at beauty or utility, the cooperative artist merely helps nature to produce results that it is able to produce by its own powers, without the assistance of the artist—without the intervention of the artist's accessory causality. Fruits and grains grow naturally; the farmer intervenes merely to

assure that these natural products grow with regularity and, perhaps, to increase their quantity. The body has the power to heal itself—to maintain health and regain health; the physician who adopts the Hippocratic conception of the healing art attempts to support and reinforce the natural processes of the body. The mind, like the body, has the power to achieve what is good for itself—knowledge and understanding. Learning would go on if there were no teachers, just as healing and growing would go on if there were no physicians and farmers.

Like the farmer and the physician, the teacher must be sensitive to the natural process that his art should help bring to its fullest fruition—the natural process of learning. It is the nature of human learning that determines the strategy and tactics of teaching. Since learning which results in expanded knowledge and improved understanding (rather than memorized facts) is essentially a process of discovery, the teacher's art consists largely in devices whereby one individual can help another to lift himself up from a state of knowing and understanding less to knowing and understanding more. Left to his own devices, the learner would not get very far unless he asked himself questions, perceived problems to be solved, suffered puzzlement over dilemmas, put himself under the necessity of following out the implications of this hypothesis or that, made observations and weighed the evidence for alternative hypotheses, and so on. The teacher, aware of these indispensable steps in the process by which he himself has moved his own mind up the ladder of learning, devises ways to help another individual engage in a similar process; and he applies them with sensitivity to the state of that other person's mind and with awareness of whatever special difficulties the other must overcome in order to make headway.

Discipline in the traditional liberal arts imparts the skills by which an individual becomes adept at learning. They are the arts of reading and writing, of speaking and listening, of observing, measuring and calculating—the arts of grammar, rhetoric and logic, the mathematical arts, and the arts of investigation. Without some proficiency in these arts, no one can learn very much, whether assisted or not by the use of books and the tutelage of teachers. Unless the teacher is himself a skilled learner, a master of the liberal arts which are the arts of learning, he cannot help those he attempts to teach acquire the skills of learning; nor can his superior skill in learning provide the learner with the help he needs in the process of discovery. The teacher must put himself sympathetically in the position of a learner who is less advanced than himself, less advanced both in skill and in knowledge or understanding. From that vantage point, he must somehow reenact—or stimulate—for the

learner the activities he himself engaged in to achieve his present state of mind.

The Hippocratic understanding of healing as a cooperative art provides us with analogical insights into the cooperative art of teaching. Hippocrates distinguished between three forms of therapy: control of the patient's regimen, the use of drugs or other forms of medication, and recourse to surgery when that drastic remedy cannot be avoided. He regarded the first of these as the primary technique of the physician as a cooperative artist, for, unlike medication, it introduces no foreign substances into the body and, unlike surgery, it does no violence to it. By controlling the patient's regimen—his diet, his hours, his activities, his environment—the physician helps the body to heal itself by its natural processes.

In the sphere of teaching, the analogue of surgery is indoctrination, the result of which is rote memorization, or some passive absorption of information without any understanding of it. Indoctrination does violence to the mind, as surgery does violence to the body, the only difference being that there is never any excuse for indoctrination, while there can be justification for surgery. The restoration of health may be facilitated by surgery when that drastic remedy is needed, but knowledge and understanding can never be produced by indoctrination. Even so, Hippocrates did not regard the surgeon as a physician, though the physician may find it necessary to have recourse to his services. The physician and the surgeon are distinguished by the line that divides the cooperative from the operative artist. By the same criterion, the indoctrinator is not a teacher.

Lecturing is that form of teaching which is analogous to the use of drugs and medication in the practice of medicine. No violence may be done to the mind if the lecturer eschews any attempt at indoctrination, but the lecture, even when it is attended to with maximum effort on the part of the auditor, is something that the mind must first absorb before it can begin to digest and assimilate what is thus taken in. If passively attended to and passively absorbed by the memory, the lecture has the same effect as indoctrination, even if the lecturer scrupulously intended to avoid that result. At its best, the lecture cannot be more than an occasion for learning, a challenge to the mind of the auditor, an invitation to inquiry. The lecture, in short, is no better than the book as a teacher—an oral rather than a written communication of knowledge. Like the author, the lecturer cannot ask the second and subsequent questions, and unless these are asked, persistently and vigorously, the learner is not aided by a teacher in his own process of discovery. Unlike the indoctrinator, the lecturer may have the same aim as the teacher, but

his manner of teaching is at best second-rate.

Analogous to the fully cooperative therapeutic technique of controlling the patient's regimen is the fully cooperative pedagogical technique of engaging the learner in discussion—teaching by asking instead of teaching by telling, asking questions not merely to elicit answers for the sake of grading them (as in a quiz session, which is not teaching at all), but asking questions that challenge the answers elicited, and asking still more questions that open up new avenues of inquiry. Lectures audited and books read may provide the materials for teaching by discussion, and there may be advanced learners, highly skilled in the liberal arts, who can learn from lectures and books without the aid of teachers. But for those who need the help that good teachers can provide, listening to lectures or reading books without discussing them yields little profit to the mind. The help that the good teacher provides takes the form of conducting the needed discussion. Socrates did that without any use of books or lectures, and there may be others who have taught by asking questions without employing any “teaching materials” to ask questions about; yet for the most part even the best teachers find lectures heard and books read useful accessories to teaching by discussion.

Holding up Socrates as the model requires us to consider the one basic issue in the theory of teaching. Like most basic theoretical issues, it first emerged as an apparent difference of opinion between Plato and Aristotle. Their different conceptions of the teacher and of teaching are exemplified in the difference between the Platonic and the Aristotelian styles of philosophical exposition, between the dialogue and the treatise.

For Plato, the teacher is, like Socrates, one who is engaged in the pursuit of truth because he does not possess it, one who is inquiring because he does not know or understand something, to know or understand which is the object of his inquiry. For Aristotle, the teacher is a person like himself, one who knows or understands something and who communicates his knowledge or understanding of it. The mind of the student, according to Aristotle, has the potentiality of knowing or understanding what the mind of the teacher actually knows or understands, and teaching consists in those acts on the part of the teacher by which he reduces the mind of the student from potentiality to actuality in a certain respect.

On the face of it, it would appear that Aristotle conceived of teaching as an operative rather than as a cooperative art, and regarded giving lectures or writing books as effective methods of teaching rather than as second-rate efforts even at their best. However, we

have no reason to think that Aristotle rejected the fundamental truth that all learning is a process of discovery involving activity on the part of the learner, which is both primary and indispensable. He would agree that, when learning occurs with the aid of a teacher, the activity of the teacher cannot be more than a secondary and instrumental cause. The teacher who actually knows something must put himself in the position of inquiring to aid inquiry on the part of the learner, who must inquire in order to learn.

That being the case, the lectures that a teacher gives or the treatises he writes may express the knowledge he actually possesses, but they are only the first step in effective teaching. The lecture or treatise by itself will seldom if ever reduce the student's mind from potentially knowing or understanding what the teacher knows or understands to actually knowing or understanding it. To effect that transformation, the teacher must ask questions that probe and move the mind of the learner in a variety of ways. As evidence that Aristotle was aware of this, it should be noted that his treatises are full of questions—questions that are pivotal in his exposition of any subject. The treatises cannot, of course, ask the second and subsequent questions which would emerge in a well-conducted discussion.

It must also be remembered that Socrates' pretension to ignorance is at least partly ironical, the irony itself being employed as a teaching device. Oftentimes in the dialogues, Socrates reveals himself as knowing what, at other moments, he is careful not to claim he knows. That he knows more than those whom he interrogates goes without saying: he knows better than they the object of the inquiry, and he knows better than they how to inquire about it. Such knowledge makes the teacher more competent as a learner or inquirer than those whom he is trying to help in the process of learning. If, in addition, one detects in the Platonic doctrine of learning as reminiscence (exemplified by Socrates' questioning of the slave boy in the *Meno*) something equivalent to the Aristotelian doctrine of learning as the actualization of potential knowledge or understanding, then the one basic issue in the theory of teaching turns out to be an apparent rather than a real disagreement between Platonists and Aristotelians.

Space remains for only a brief statement of some of the implications of the theory of the teacher and of teaching to be found in traditional sources. The reader may perceive other consequences of the theory for educational programs, policies and practices, but the following seem to me to be of prime importance.

1. Just as the physician caring for the health of his patients treats

one person at a time, so, too, the teacher operates under ideal conditions only when he cooperates with the learning process of one person at a time. Any increase beyond that in the number of persons being simultaneously served by the teacher reduces the efficacy of his efforts, and when the number exceeds two or three, his efficiency decreases almost to the vanishing point.

2. Many—perhaps most—of the people who are officially engaged in the educational system, in one capacity or another, do very little teaching in the strict sense of that term. In any educational institution, be it school, college or university, the number of those who are teachers in more than name only is relatively small; of those, the amount of time they can devote to teaching is slight, and the conditions under which they teach render their efforts much less effective than they would be under ideal conditions.


3. If, in our educational institutions from grade school through the university, everyone who held the office of teacher were in fact truly a teacher and were afforded optimal conditions for teaching, many, if not most, of the educational problems that have concerned us in this century would either disappear or become solvable.

4. If, in every hour of teaching, the teacher, even one who is already very learned, were himself to enjoy some increment of learning, the effectiveness of teaching would be maximized. To the extent that those who regard themselves as teachers teach without any increment of learning for themselves, they are likely to fail in their efforts to assist others in the process of learning.

5. In a democratic society, with universal suffrage and universal schooling, the educational system cannot possibly hope to have an adequate number of teachers in the strict sense of that term. To cope with this inadequacy, two remedies may be available. One lies in the fact that the bright students need less help from teachers than those less well endowed; they are better able to learn by unaided discovery. The second remedy is more drastic: that every advanced student should undertake to teach, individually, someone not as far advanced. Not only would this provide every student with a teacher, but it would make every student a better learner, for having to teach a subject to someone else increases one's own understanding of it.

6. Though experience does not teach, it is an aid to learning and, therefore, to teaching. It follows from this that mature persons, of larger and more varied experience, are more teachable than the immature, though the latter may be more trainable. To increase the teachability of students in our educational institutions, policies

should be formulated and expedients adopted that would tend to increase their maturity before their schooling is completed. This might be accomplished by some years of non-attendance at schools after the completion of secondary schooling and by provision of facilities for continuing education after the completion of college or university.

7. Since it involves the application of one's highest faculties for the benefit of the mind of another, the gift made by a dedicated and devoted teacher is, as Augustine remarked, "the greatest act of charity." 

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Jacques Barzun, American writer, educator, and historian, b. Créteil, France, grad. Columbia (B.A., 1927; Ph.D., 1932). Barzun moved to the United States in 1919. A student of law and history and one of the founders of the discipline of cultural history, he began teaching history at Columbia in 1928. He was appointed professor in 1945, became dean of the graduate faculties in 1955, and was (1958–67) dean of faculties and provost. For eight decades Barzun has written and edited critical and historical studies on a wide variety of subjects. They include *The Teacher in America* (1945), *Darwin, Marx, Wagner* (rev. 2d ed., 1958), *The House of Intellect* (1959), *Classic, Romantic, and Modern* (2d rev. ed., 1961), *Science: The Glorious Entertainment* (1964), *Race: A Study in Modern Superstition* (rev. ed. 1965), *The American University* (1968), *Berlioz and the Romantic Century* (3d ed. 1969), *The Use and Abuse of Art* (1974), and *Begin Here: The Forgotten Conditions of Teaching and Learning* (1991). His massive, sweeping, and critically acclaimed historical survey, *From Dawn to Decadence: 500 Years of Western Cultural Life, 1500 to the Present* (2000), was a bestseller.

EDITOR'S NOTE

Jacques Barzun was one of Mortimer Adler's oldest and dearest friends.

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