

Mon 19, Lifelong Learning
Difference between education and learning
Education: The web of knowledge; history as
index
Association; genre; memory
Learning: insight, penetration

We are, all of us, in the business of education. Mortimer Adler, in his Paideia Proposal, distinguishes between "educatio•n and "schooling•, considering "educatio•n to be the life -long process of learning by which an individual becomes an educated person, while "schooling• is the formal process that you and I administer to the young. My vocabulary is different; what he calls schooling I call education, and what he calls education I call learning. So it will be with others, and there are many, who write or talk on this work we are in, all with different vocabularies. Still, the reader should have no difficulty; just as the string section of an orchestra automatically shifts to a well -tempered scale when the piano breaks into the concerto, so we adjust our interpretations according to the intention of the message. Meaning exceeds definition, we might say, in the same way that a real landscape is more than a map.

Education, as I consider it, is a formal process, a deliberate instruction in a well defined subject directed by a teacher, a tutor, a rabbi, a mentor - - some designated instructor, generally an agent of society. Schools are wards of the state, either directly through tax support and elected or appointed governing boards, or through charters or licenses and tax preferences. Being wards, schools are expected (by the public, by society) to promote the interests of the state and of the economy - - essentially, that is, schools are expected to maintain the status quo, with a small growth in the right direction. If that description sounds to you a bit too rigid for America, try starting an experimental college in this state and see if you can get licensed. But I am not protesting. I do believe our culture would be healthier if constraints allowed more leeway, but, generally, the smooth running of a slowly expanding status quo has been the proper aim of education. (It is hardly sufficient for our present time, however.)

Let me try on you a definition of education I used in an essay some years ago: ["The Uncertainty Principle in Education" in "Unbinding Prometheus:•]
"Education is a formal process of synthetic

learning (from synthesis, to bring together) in which symbolic material is organized into a skeletal structure•; on this structure learning from experience accumulates in such a fashion that meaning is drawn from extended areas of the structure.

Now let me analyze this statement. Education is a process, a sequence of operations headed toward a definite end. It is a formal process, following rules and established forms; thus it implies a social function, an activity duly authorized by society, guided by professional authorities, and undertaken in an orderly fashion. The process is synthetic learning, an artificial action, requiring an artfully designed, purposeful amalgamation of selected material. The entire "praxis• (the Greek word for action) is symbolic, in that what is learned comes to stand for more than itself, to suggest intangible and universal ideas, moving always toward contemplation, toward being known. In the operation, concrete and individual instances suggest larger entities, by means of a kind of shorthand - - by modes of thought that make use of metaphor, synecdoche, or ellipsis. Metaphor connects one body of material with another, the intellect bridging a gap by the discernment of similarities. Synecdoche takes the part for the whole, calling up an intuition of order and harmony; ellipsis engages an incomplete figure that must be filled in by an imagination of unity if one is to apprehend the entire pattern. These tropological processes (twists of logic) are more than figures of speech; they are figures of thought, the means by which the intellect intuitively apprehends meaning.

With this analysis in hand, we are saying that education makes use of carefully and economically selected data purposefully arranged to indicate the whole of reality, working by condensation, compression, incompleteness, suggestion. The end point of the process is the organizing of this material into a structure in the minds of students, a logical framework within which a student may reason from point to point. The structure is to be such as to provide an addressable place for true learning to reside, whenever it is acquired. Meaning, so the definition implies, exists in the relationships of these various nodules of learning. There it is. Education is a formal process of synthetic learning wherein symbolic material is organized into a significant structure.

The building of this structure, essentially put

together from inherited materials, is the business of education. The importance of teaching history is the providing of addressable points in this structure. When one comes across something that happened just before the civil war it can be slipped into this structure in the mind in an appropriate place that has a meaningful context. There are other useful dimensions in this structure: categories of writers, scientists, artists, and so on. With a few clues, then, the mind can locate an event or person and make rapid associations. It is not just remembering: it is thinking. This action has value in the political and economic worlds and therefore the promotion of this kind of education is in the interest of the state. All of this sounds ominous to our democratic ears, and has, indeed, been misused.

But education serves a cultural purpose as well. What do our schools seek to educe in our children? It is not just literacy sufficient to read a newspaper and vote right, not just numeracy sufficient to work in a technologized economy - - not trained robots. Because education has a cultural responsibility, and because we live in a democracy, we really do mean to turn out independent little entities called human beings. Over and above education, the one essential element we must give our young to make them fully human is an ability to learn. With this ability, a person can adjust to all the demands of the civic, economic and cultural spheres

The features of education named above are principles to which teachers and academic administrators must return periodically in order to solidify the enterprise in which they are engaged. From time to time it must be clarified that education is a symbolic process: it is not the gathering of information; it is not life itself (not field trips and speeches by businessmen): it is an art form, requiring skill in design and skill in performance, representing the entire cosmos in which the young person finds him or herself, pointing toward understanding. From time to time we must remember that education and learning are not synonymous, that education takes place in a highly limited arena at a crucial stage of life (a school, usually) and that learning, once initiated, is a continuous process undertaken in any circumstance.

We might notice the predominantly spatial sense in which this definition is framed. Education in its interstices is spatial. And, indeed, education

as an activity occurs in a restricted space and is socially directed -- a communal affair. Learning, on the other hand, is quite a different activity. It is informal, natural, concerned with actual things, loosely organized in such a fashion that meaning is local and specific. It is a lifelong pursuit, internally directed, and intensely personal.

We can teach education. We cannot teach learning. We can only educe it out of the student. Something happens inside -- but we've already talked about that. Of course education and learning are related, quite intimately, just as are, in physics, momentum and energy, but they are independent in the mathematical sense of being of different degrees, in the sense that x is of first degree, x^2 is of second. (Please forgive this little metaphoric flight of fancy in my discipline.) In the uncertainty principle, momentum is conjugate to space, energy is conjugate to time, The conjugates are joined to each other reciprocally -- the more you have of one, the less you have of the other..

Like momentum, education is first order; it is the thing one is doing while one is doing it. It has a direct, vector-like quality about it. Education is conjugate to -- is joined to -- "space" in this analogical scheme of things. Its spaces are the campus, the laboratory, the classroom. And in this relation to space is to be found the reciprocity arrangement of conjugates. Education intensifies as space diminishes, focusing in a small arena such as a school. In the broad stretches of existence, in life generally, education diminishes to a level of non-existence. Only a deliberate return to the semblance of a classroom for an hour, an evening, a week can again institute education.

Learning, in contrast, is second degree and exceeds education, as x^2 is of a higher order of being than x . Learning is done while one is really doing something else. It is a received quality, something possessed, not going anywhere, the scalar product of vectors. Like energy, learning is conjugate with time. The times of learning are life time, job time, schooling time, the academic year, the semester, the class period. And again, as the time span shortens, learning intensifies. (Remember not to make education and learning conjugate -- it is false to say that the more you educate, the less you learn!)

All of this schematization is little more than an ingenious metaphor or a kind of metaphysical conceit, one might be justified in saying: that is,

one might charge that I have extended a limited analogy between two areas so far that it is made to represent a purported total reality. And so I no doubt have. But the virtue of a metaphorical expedition is the realignment of the landscape when viewed through various exaggerations and distortions. The salient features become well separated. It is at least for some of us instructive to distinguish education and learning as sharply as this approach demands. Any battle against behaviorism, any disdain for mnemonic learning must then stand in review, particularly if one's own mode of instruction seeks always to engender insight. "See, see," one shouts, and occasionally someone does. And that look of joy on a single face is sufficient reward to reinforce belief in one's method. But now, as we view the educational process through the present set of analogies, we must grant the efficacy of mundane instruction, the patient construction of the logical framework for knowledge. It is the same framework for the whole class, a framework that will perdure in the enveloping society. "The construction of that meaningful framework is the business of education". Otherwise the acquisition of knowledge becomes mere information - gathering. The relation of such a frame to learning is the making of a habitat, a nesting place for insights which will come, willy -nilly, when they choose.

Insights are those intense experiences of learning that occur in brief moments, in flashes, one by one to each person individually. Education does contribute to learning - -synthetic learning, I have called it - -but, just as for energy, two other sources exist for learning: experience that, like potential energy, is an interaction with environment; and instinctive knowledge that, like rest mass energy, comes with existence itself. It seems that insights should happen more frequently in the precious educational space than in the outside world; but whether they develop then or years later, they come to the person, not to the class. Education supplies only a portion of learning. Its function is not so much to supply learning as to ready people for the task of learning.

We could say that by the beginning of the Odyssey, Telemachus has already been educated; his old nurse and his mother - - as well as Phemius, the poet - - have seen to his tutelage in the right values. He has his heritage of understanding, his

structure. But it is not until Athena comes that learning begins: and, as always, learning begins in insight.

Learning and insight give rise to joy and a suffusion of beauty, whereas education yields at most satisfaction.****

*****Or s.***** But, as we know from other evidence, the age of analysis is over. In separating the parts of the process so absolutely, I have been putting new insights into old methodologies. The result is not so much wrong as irrelevant - -old -fashioned. Such a procedure is a reduction of a vital body into its parts. And, as we all know, one does not tell time by taking the watch apart. For a good while now, meaning has not been sought in analysis, not really even in synthesis, but in a quest for unity. Indeed, the mark of twentieth -century thought is this quest.. That idea of universal equality, with its many analogues in politics, philosophy, and literary criticism, has thoroughly pervaded society with profound effects that are still working their way out and that will eventually change not only education but the encompassing style of our culture.**

In reconceiving our own work toward new ends, if any one strategy does not work, then some other one must, since the age demands equality. In the past we have begun logically with the simplest and most boring ideas - -inclined planes, pulleys, bouncing balls - -expecting to build up a quantitative competency adequate for later advanced ideas. This method is like expecting Ferdinand to hew wood and draw water before he has ever seen Miranda - -or making Dante undergo his laborious climb through the cosmos without ever having seen the face of Beatrice. We have to let him at least peek. What must be held up in the early stages is a vision of completeness splendid in its universality.

What I am saying is that education in our time needs to desert the outmoded analytic approach and move toward a holistic concern. Throughout the entire curriculum we need to readjust our stance, not through sentimental condescension, but through a frank and imaginative reseeing of our disciplines in their most fundamental aspects. Those of us who profess a discipline need to meld with it, go where it wants to go, let it choose the path of least action, lose the least energy to friction. We need to trust it. In new soil our discipline will likely blossom anew.