School is a Lousy Place to Learn Anything In

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Institutions create myths to explain to their participants and the public generally what they do, how they do it, why society needs it done, and how successful they are. Every institution fails in some measure to do the job it promises, and its functionaries find it necessary, to explain both that they are trying to do better and that the disparity between promise and performance does not exist, is not serious, or occurs only rarely. Institutional apologies divert our attention from the way the very organization of an institution produces its failures. Further, they divert us from comparisons which might show how others, under a different name and rhetoric, actually perform the institution’s characteristic function more effectively.

Schools tell us that people learn in them something they would not otherwise know. Teachers, who know that something, teach it to their pupils. Schools are said to pass the cultural heritage of our society to succeeding generations, both generally in elementary and high school and more differentiately in colleges and graduate and professional schools. Finally, while educators readily admit the shortcomings of schools, they do not conceive that anything in the essence of a school might produce those shortcomings or that any other institutional form might do the job better.

Though the evidence is both too vast to master and too scanty to allow firm conclusions when the great number and variety of schools is taken into account, it suggests that schools do not achieve the results they set out to achieve. Students do not learn what the school proposes to teach them. Colleges do not make students more liberal and humane (Jacob, 1957: 5), nor do they have any great effect on students’ intellectual development and learning (Astin, 1968). Medical school training has little effect on the quality of medicine a doctor practices (Petersen, et al., 1956; Clute, 1963). Actors considered expert by their peers have seldom gone to drama school (Hoffman, n.d.). The spectacle of elementary, and secondary education gives credence to Herndon’s (1968: 79) wry hypothesis that nobody learns anything in school, but middle-class children learn enough elsewhere to make it appear that schooling is effective; since lower-class children don’t learn the material elsewhere, the schools’ failure to teach them is apparent.

This brief and selective review of the evidence suggests that educational mythology’ presents an unrealistic picture of the efficacy of schooling. If schools are ineffective, we can consider how their organization might contribute to that ineffectiveness. Our studies of trade schools and apprenticeships allow us to compare the two and see how the organization of each interferes with doing the job it sets out to do.

The following characterization of how schools work grows out of the continuing comparisons generated by our study of trade schools and on-the-job training situations. The various studies have highlighted one or another dimension of educational organization which I have then applied to conventional schools as well. The comparison suggests structural reasons for the schools’ educational failures. By constructing an ideal type, a model of a school at its most school-like, we can understand the dynamics of more mixed cases.

Complex subject matter

We set up a school to teach arithmetic or reading, barbering or beauty culture, when we think the subject matter too complex and
difficult to be learned in haphazard ordinary life. The student, we say, must master certain ‘basic’ conceptions before he can understand the more complicated structures erected on that base; otherwise he will flounder unnecessarily and never really understand the little he learns. Further, he will suffer a confusion that may be emotionally upsetting, even traumatic, and thus compound the difficulties of learning.

The complexity may lie in the subject matter itself. We think it foolish for a person who cannot read to start by attempting written material of the variety and difficulty one might run into in the ordinary world. We give him simplified materials - short words, simple sentences, a small vocabulary. We teach mathematics by starting with simple concepts of number and relation; we think it easier for children to learn ‘addition facts’ than more abstract conceptions.

The complexity may be in the social situation the student will later use his knowledge in rather than in the material itself. Techniques of barbering may not be complicated, but we believe a student may have difficulty learning them if he must simultaneously take into account the possible reactions of customers whose hair he has butchered in a beginner-like way. So we set up our school in a way that minimizes the student’s anxiety. Barber colleges recruit customers by providing cheap haircuts. Anyone who pays $0.75 for a haircut forfeits his right to complain; if he wants a $3.00 haircut, he knows where he can get it, and so does the student barber, who masters his anxiety over complaints by writing his customers off as skid row winos or cheapskates. Similarly, teachers in the barber school Woods studied made it their business to tidy up particularly bad jobs done by students. (Medical schools use similar mechanisms.)

Curriculum

In principle, a curriculum could be tailor-made for each student; the complexities of the subject could be simplified to achieve the uniquely best way for him to learn. In practice, schools develop standardized curricula. They arrange the material in some order of increasing complexity, an order usually thought of as the ‘natural’ or ‘normal’ way to approach the subject. They decide what minimum amount of knowledge will be acceptable. They decide on a schedule, time periods in which the student is to learn particular batches of material. They produce, in short, a curriculum, which rests on a conception, usually uninspected, of a normal student who can do that much work and grasp that much material in the time allotted. The eleven-week quarter and the fifteen week semester are common examples. Anyone who could learn the material more efficiently if it were presented in a different order will have difficulty, as will anyone who needs more or less time than allotted.

Schools could teach students individually, and occasionally make provision to do so. More typically, they process students in batches, treating them as if each were the prototypical normal student for whom they constructed the curriculum. Being part of such a batch naturally constrains the student to behave, as best he can, as though he were prototypical; it is the easiest way to fit into the collective activity he is part of.

Teachers

The curriculum necessarily differs substantially from what competent practitioners of the skill or art in question know how to do, for they do not divide what they know into more and less basic components and seldom see any particular order in which what they know should be presented to a learner. Furthermore, competent practitioners in a subject matter area know only by accident, if at all, the skills of teaching. The inability of competent practitioners to teach planned curricula arises equally with such general topics as arithmetic or reading and with specialized skills like cutting and setting hair or driving an automobile. I may be a proficient user of mathematics and a skilled driver and unable to teach a child either one. Ordinary practitioners in a particular subject, finally, have other things to do than teach beginners, and are ordinarily not available for instructional tasks.

So schools require teachers whose principal work is to teach the planned curriculum to batches of normal students. While teachers want to do their work in the easiest, least troublesome way, they also wish to demonstrate to themselves and others that their work produces results. Do a teacher’s pupils know something, when he finishes
the standard curriculum, that they did not know before, something worth knowing, something attributable to his efforts? Is it a true grasp of the material such that the student can use it in everyday life? Can he read well enough to get about in a literacy-demanding society? Does he know the craft skills (of welding, nursing, hair-cutting, teaching, writing, or whatever) well enough to work adequately with professional peers? Has he mastered the liberal arts well enough to use the knowledge and sensibility they provide to enrich his private life and inform his public activities?

Teachers assume that the student is as inferior in knowledge as he usually is in age (Geer, 1968). They assume that what they know, the student needs to know. They may want to take his opinions into account, but they do not propose to let him decide which portions of the curriculum he will learn. They insist on having the upper hand in the relationship, searching for ways to augment and solidify control when it is disputed.

Because the teacher devotes his full-time effort to teaching, his own knowledge of what actual situations require may be faulty. This is especially obvious in trade schools, where the trade may change substantially after the teacher leaves it but it occurs in varying degrees in more academic schools as well. Uncertainty about the teacher’s knowledge aggravates problems of control and deepens everyone’s sense that school training may not be adequate and may require some checking.

Tests and evaluations

The setting in which teachers teach and students learn will be quite different, of necessity and by design, from the world in which students use what they have learned. The materials taught differ from the fully complex materials the world contains. When the student completes the work the school lays out for him, neither he nor his teacher can be sure there are not crucial differences between what he has been taught and what will later be required of him. So teachers - who want to know how their students will fare when they leave school students - who wonder whether they are truly prepared for the tasks they will now have to do - and the rest of the world - which wonders what it can expect of the graduates - combine their desires for a working knowledge of what is being accomplished in a demand for tests.
and other evaluative procedures. A formal program of evaluation tells teachers they are doing their job competently, students that they have learned what they came for, and employers, parents, legislators, and others that the school is doing what is expected of it.

The chief problem in testing students and evaluating their performance is to concoct tests isomorphic to the real world situations in which the student will exercise his skills. How do we test whether a student can successfully cut the hair of a fussy, middle-class executive who worries about his looks, when the only material available for him to demonstrate his skill on is a sixty-year-old drunk who falls asleep in the chair and whom both student and instructor know cannot and will not complain? Beauty colleges solve this problem (as does the state barber board in conducting licensing examinations) by requiring the examinee to provide his own subject (usually a relative or friend); medical schools do not let students perform important or dangerous procedures without supervision by more experienced, licensed physicians. Neither solution is fully effective, since each avoids some of the most cogent difficulties in social relationships. But both represent a high in isomorphism between school and practice compared to the written examinations and problem-solving exercises graduate schools, to take a notorious example, habitually use. These more typical examinations differ in gross ways from the tasks examinees will later be called on to do. It is commonplace, but true, to suggest that such tests mainly measure the ability to take tests.

We seldom argue that conventional tests measure the actual skills students are supposed to have learned. Rather, we believe that the test, while not a direct measure, is nevertheless highly correlated with the ability to exercise those skills, though the mechanism by which the alleged correlation occurs is seldom investigated or demonstrated. Common observation suggests the belief is unfounded; we seldom find hard evidence of such correlations. Instead, we rely on test results for want of anything better. In any event, the skills required to perform well on school examinations may not be the same skills required to perform adequately in the situations the school trains people for.

Another difficulty in addition to the divergence between test and real life, is that tests are usually taken at the convenience of the tester, at a time set by the periodicity of the normal curriculum, at the end of the quarter, semester, or year, when the designated material has been covered. The test thus does not measure a student’s ultimate knowledge, but his knowledge as of the time of the examination. This feature, among others, increases the student’s anxiety, so that the conventional test in some part measures not knowledge, but the student’s ability to withstand or cope with anxiety (Mechanic, 1962).

School rewards and student culture

Schools seldom use evaluations of students’ performances in an advisory way, to help the student discover areas of weakness which can be strengthened by a changed allocation of effort. Instead, they incorporate the results of such evaluations - grades will do as the generic term - into permanent records, on whose basis people and institutions make decisions bearing on students’ futures. Schools vary in the degree to which they allow examination results to become fateful beyond their immediate academic relevance. If grades have fateful consequences, students find it necessary to orient their efforts toward getting good ones; if tests are not isomorphic to the situations in which the abilities being tested will be used, students will have to divert time and effort from what the school wants to teach to what is needed for a good grade. This untoward consequence occurs only when tests do not measure and require the knowledge the school wishes to teach. When the two are the same, the school’s reward system evokes exactly the learning teachers desire.

We found an extreme example of the constraint grading and evaluation exercised on student’s allocations of their efforts in our study of a college (Becker et al., 1968). Students’ grade point averages, being the chief measure available and presumably reasonably accurate, fair, and comparable, affected most other rewards a student might want (or not want to be denied) during and after college. For example, college rules specified a minimum grade point average for initiation into a fraternity or sorority, for holding major office in campus.
organizations, and for staying in school and graduating. Grades also affected a student's chances of getting into professional or graduate school, as well as the kind of job he might get on graduation. Grades even affected his social life: he might find it harder to meet eligible girls if he did not belong to a fraternity or could not participate in extracurricular activities because of low grades; girls were often reluctant to get involved with anyone who might flunk out. Since whatever a student wanted had to be paid for in high grades, few students felt they could safely avoid learning what was needed for tests. It is hard to say what the desired outcomes of a college's educational efforts are. But if they are a change in values and the acquisition of certain intellectual skills, students might be diverted from such goals by the necessity of studying for exams not requiring those abilities. When what tests require differs from what the school wants to teach and when the school rewards good test performance heavily the structure of the school will systematically divert student effort. In this sense, and to the degree that these conditions are met, schools are structurally self-defeating. Where students have the opportunity to interact and develop collective conceptions of their situation and how it ought to be handled, they may develop a student culture which amplifies and extends this effect. When students agree they must do certain things to give a good performance for evaluation, and when that information is passed on to new students, each student need not experience the disparity and the constraint himself. He knows beforehand, in the way any functioning culture allows us to know, what is coming and how to deal with it. A student culture which advises grade getting as an optimal strategy decreases the likelihood that students will attempt other strategies, though it does not make that impossible.

Since some students do learn some things that schools want to teach, the above analysis deals with the extreme case. Where some of the conditions outlined above do not obtain, schools will be more successful than the analysis suggests.

**On-the-job training**

The chief alternative to learning things in school is to learn them on the job, especially if we define on-the-job training broadly. So defined, it includes not only the conventional apprenticeship in a trade, but all the casual learning that goes on in the course of everyday living, the kind of learning Goodman (1968) and Holt (1967) have called to our attention as the way children earn to talk and most other things. Think of living your daily life as a job to give the notion its full meaning. Though I speak mainly of occupational training, keep the larger relevances in mind.

The apprentice learns on the job, in the place where people do m' a routine way whatever members of his trade do. He finds himself surrounded from the outset by the characteristic sights, sounds, situations, activities, and problems he will face as long as he remains in the trade (if we reasonably assume the trade does not change in the short run). The butcher's apprentice works in a meat market, where journeymen break down carcasses, cut them into conventionally defined pieces of meat, trim them, price them, and package them. The apprentice ironworker works on a building under construction, where journeymen place beams and girders, rivet and weld them together, place rods for reinforced concrete, do finishing work, and take dangerous walks on narrow beams in high places. (Similarly, the small child, learning to talk, lives in a world in which most of the kinds of talk that go on, simple and complex, go on around him in person, on the radio, or on television; Goodman, 1968). Thus, the learner sees the kind of work he is to learn in all its tangled complexity from the first day, instead of being introduced to those complexities a step at a time in a carefully constructed curriculum. He suffers whatever traumas may arise from realizing all there is to learn. Some apprentices give up their ambitions quickly when they realize what they have gotten into, but those who remain have a pretty good idea of what they are in for from the start. They see the technical difficulties, and dangers, the social complications that may arise with employers and customers, and even the informal requirements of making it with one's work peers.

One consequence follows the immediate accessibility of the full round of activities characteristic of an apprentice's trade. He can participate in these activities right away or on any idiosyncratic schedule he can work out with his fellow workers. No one can learn everything at once, but no principle or
rule prevents the apprentice from learning a little of this today, a little of that tomorrow, things in some order no one ever thought of before, or learning to the point where he wants to stop and then switching to something else. He need not, when he wants to learn a certain procedure, wait until its time in a prearranged schedule; nor need he learn something he is not ready for, thinks uninteresting, frightening, or unnecessary. The learner makes his own curriculum.

Teachers

This curriculum is created with the aid of people who know more than he does, who must be persuaded to assist him, or at least not to interfere with his own efforts. Because the learning situation is the real work world - an actual meat market or construction site - no one functions as an official teacher. Everyone has his own job to do, his own set of occupational constraints and rewards. The apprentice does not have a teacher’s time and attention guaranteed to him as does a pupil in a conventional school.

This leaves the actual training to the apprentice’s own initiative. Competent practitioners will teach him if he can persuade them to, and actual training is thus in some part a function of such formally extraneous traits as the degree of his aggressiveness. A pushy punk learns more than a quiet young man. An ideology common among journeymen suggests that if an apprentice is any good, he will make you teach him: if he does not push, he probably does not have what it takes. This differs diametrically from a conventional school in which learning occurs at the teacher’s initiative: you move on when the teacher thinks you are ready.

In such a system, no one rests his self-esteem, reputation, or claim to having done a decent day’s work on the amount his students learn. While everyone cares in general that the apprentices eventually learn their trade, no particular person can be blamed or has it on his conscience if any particular apprentice or group of apprentices fails to learn. Teaching is no one’s job in particular, so it is no one’s fault if no learning occurs.

Two consequences follow from the failure to assign teaching responsibility. On the one hand, when teaching does occur, it is not overlaid with the teacher’s own worries about how he is doing; teacher and apprentice can concentrate on the learner’s difficulties. Where the teacher has no responsibility, he cannot misuse or fail to meet it. On the other hand, an apprentice may not be taught anything, since he may not be aggressive enough to force anyone to teach him.

External constraints

The characteristic virtues of each kind of learning situation breed characteristic difficulties and vices. Schools divorce themselves from the problems of the everyday world in an effort to make learning easier. They thus create a need for evaluative mechanisms and thus divert student effort from learning to efforts to be evaluated more highly. On-the-job training, in and of the everyday world, provides a realistic and individualized learning setting. But it does that at the cost of making teaching and learning vulnerable to potent external constraints.

The chief constraint arises from setting the educational encounter in a real life enterprise which has its own problems and imperatives. Meat markets have, as their main purpose, to profitably sell meat to customers. Ironworkers work for a company whose main business is to construct a building or a bridge. Interns (who also undergo a kind of on-the-job training) work in hospitals whose main business is to treat illness (Miller, 1970). Each enterprise requires potential learners and teachers alike to contribute what they can to the success of the enterprise as the price of continued participation.

But the required contribution may prevent teaching or learning. Potential teachers may not have time for it, because of the press of more important business. When journeymen butchers prepare for a steak sale, they do not have time to teach apprentices. When senior physicians handle medical emergencies, they have no time to teach interns. Opportunities for on-the-job learning vary inversely with the amount of work the enterprise must turn out.

Similarly, the apprentice’s labor and time may have to do necessary work for the total enterprise that no one else wants to do. An apprentice ironworker’s first jobs are fire watch (looking for possible fires set by sparks from welding and riveting...
operations) and getting coffee for the journeymen. These jobs are not entirely uneducational - going for coffee prepares the novice to 'run the iron' - but apprentices do them not for that reason but because people want them done and the apprentice, lowest man on the totem pole, gets the honor. Apprentice meatcutters start out running the wrapping machine, which packages, seals, and labels the meat. The wrapping machine requires no skill, and working on it falls to the one who cannot do anything else; the work may familiarize the novice with the various cuts of meat, but is not a big step in becoming a butcher. An apprentice may run the wrapping machine for the three years in a large meat department solely because the other workmen, knowing more, can be profitably used elsewhere. Marshall saw one apprentice work on the wrapping machine for three months until a new apprentice was hired; then apprentice 1 was taught new skills while apprentice 2 ran the wrapping machine. No further new apprentice was hired, and apprentice 2 continued to run the wrapping machine. Someone had to. The first apprentice received superior training by the accident of being hired three months earlier and thus being advantageously placed with respect to the needs of the total enterprise.

Another external constraint limiting the opportunity to learn lies in the potential cost - to fellow workers, employers, customers, or the public - of allowing an unskilled apprentice to undertake some task. Because teaching hospitals may be held liable for the damage done a patient, they limit what medical students can do to patients in furthering their own learning. Ironworkers do not allow apprentices to do things that might jeopardize the safety of fellow workers. Meat cutters give apprentices more practice cutting up meat in markets that serve poor populations. The cost of mistakes made on cheap cuts of pork can more easily be absorbed than mistakes made on the expensive steaks sold in markets in more well-to-do neighborhoods.

Some of the things a novice ought to learn (or would like to learn) may occur infrequently during his period of training. A school would make some provision to cover this material, so that the student’s competence would not depend on the accidents of history. Medical schools compromise, necessarily, on this point; they systematically teach about various diseases, but whether a student has clinical experience with those diseases is left to the chance of whether a patient with a certain disease appears during the student’s tenure.

Gross effects of the external environment on the learning situation result from changes in the economy. A depression (or the memory of one, in some trades) may cause journeymen to fear the competition of too many qualified workmen. In consequence, they systematically withhold training and keep apprentices at the classic apprenticeship tasks of sweeping the shop and running out for coffee. Boom times make it harder to get prospective trainees; with more work to be done, apprentices must quickly be pushed into more responsible positions; if they feel ill-used, they may quit, and the enterprise needs their labor to meet its commitments. Under these circumstances, a trainee may be taught thoroughly and rapidly.

In short, what one can learn on the job and who will teach it depend on contingencies unrelated to education or training. The learning situation exists to do some quite different job and is subject to the constraints emanating from the external world, any of which may interfere directly in the novice’s training. Many of these interferences have nothing whatever to do with any attribute of the novice, neither his skill nor aptitude, nor his aggressiveness and initiative. The defect is structural.

**Evaluation**

Even if people who learn on the job never take formal examinations, they do not escape evaluation, which occurs continuously as they go about their daily business. Everything they do is what people in that line of work do, and everyone in a position to observe their performance can immediately see whether they have done it satisfactorily. No person with special training need be present to make the evaluation; most people on the scene can do it. The evaluators not only know the work the novice attempts, but are the very people the novice must please to be successful. On-the-job training thus avoids completely any disparity between what the school tests and what the real world requires. Because the evaluators are part of that real world and what they require is the test, the two are the same.
Facing the process of evaluation in the midst of the work setting has interesting consequences:

1. The learner can take his tests any time he feels ready. Every novice will want to test himself or allow himself to be tested to convince both others and himself that he has mastered some important skill. In schools, tests can be taken only at stated intervals, when the tester gives them; often the student must take them at the time they are given or suffer a serious penalty. Since the on-the-job trainee’s test will consist of doing something that could be done every day (or almost every day, allowing for weekly or seasonal variations in the workloads), he can take it at his discretion, simply by announcing that he thinks he can do a particular task. Someone will give him the chance, and both novice and observer can see the result. The test is self-scoring and self-interpreting, since the product either does or does not pass muster in the same way the world usually evaluates it.

2. Because the test consists of performing some routine task, an apprentice can take it repeatedly, without having to wait for any special time, until he finally performs successfully. Unlike the typical school, in which scores are averaged over some time period, only the last test counts. Since the test can be repeated, and since the learner takes the test when he feels ready, he feels less anxiety than over a conventional school test. The results are less fateful.

3. Because his progress is immediately observable, the learner can make a good or bad reputation among the people he will be working with once he has become a full-fledged member of the group. The possibility can cause considerable anxiety. School typically shelters the student from having his bad mistakes known to the people he will eventually join, but mistakes made on the job are fully seen by those people. Further, while school does not let really serious mistakes occur (because it simplifies the curriculum in ways making that impossible), learning on the job allows costly, even fatal, mistakes to occur, because the actual work cannot be successfully sealed off. An apprentice meatcutter can ruin an expensive side of beef an apprentice ironworker can unintentionally cripple or kill another worker. In each case, that reputation may dog the perpetrator for years, especially if he harms a valued colleague (Forsyth and Kolenda, 1966: 132).

4. Testing on the job is not restricted to technical material. It includes all the relevant human relations skills as well. Haas provides a detailed example in his analysis of ‘binging.’ Ironworkers must demonstrate their ability to participate adequately in this earthy teasing before those already established accept them as trustworthy. Schools do not test these skills; on-the-job situations invariably do.

5. Because the testing occurs so much at the insistence of the novice, and because he may not wish to be tested in all or even in very many areas, a person who learns on the job may never be tested on a great variety of matters. In so far as testing has value for either the learner or those who have to work with him or use his services, that value may well be lost. (This is another way of saying that the apprentice may not be taught more than a few of the trade’s characteristic skills.)

Relations to the world of work

Educators, as I have already suggested, construct a standard curriculum which includes what they regard as the essential elements anyone must learn to be certified as knowing particular subjects, or as fit to occupy a particular social or occupational position. As we have seen, learning on the job in no way assures that any student will learn such a common core of knowledge. In this, learning on the job realistically reflects the character of most jobs and occupations.

Hughes (1951) has suggested that any job or occupation, any named kind of work, actually consists of a bundle of tasks. Some of those tasks may be taken to be symbolic of the whole, as when we think of courtroom pleading as the definitive legal task. Ordinarily, no single member of the occupation does the full range of tasks associated with it. Differentiation and specialization, characterize most kinds of work, so that a member of the occupation may actually do only one or two tasks from the bundle. A school requires students to learn the entire bundle, in case they are called on to perform any of them, but on-the-job training allows a student to learn, at a
minimum, only one, while still becoming a full-fledged member of the trade. On-the-job training thus reflects realistically the demands of the labor market, operating on the assumption that, if a person can get a job doing one of the tasks in the bundle, he knows enough to be an acceptable member of the trade.

Ironworkers present an interesting example of this phenomenon. The characteristic and symbolic act that marks the ‘real ironworker’ is ‘running the iron,’ working high above the ground while standing on a four- to eight-inch steel beam. Running the iron takes more nerve than some recruits have, but their failure either to take that test or, if they try, to pass it, does not mean that they cannot be ironworkers. They can do one of the other jobs, requiring more brawn than nerve, such as placing rods for reinforced concrete construction. They will not get the considerable glory that goes with doing the tasks that require bravery, but they can still be ironworkers.

The work world, in short, accommodates what people can do. Apprenticeship and job training prepare people for such a world. They avoid a recruit’s difficulties with some portion of the standard curriculum, at the cost of producing a member of the trade who knows less than the complete body of knowledge that might be expected of him.

Conclusions

I have been discussing ideal types. Real-life educational situations usually contain some mixture of school and on-the-job styles of teaching and learning. Thus, medical schools, beauty schools, and barber colleges are schools, but with strong on-the-job emphases. On the other hand, meatcutters and ironworkers may take classes in some subjects. Ordinarily, when we are anxious to teach people something, we remove teaching from the job and organize a school. The above analysis has as its chief implication that schools are lousy places to learn, precisely because we establish them without considering the circumstances under which other ways of proceeding, perhaps less organized, might be more efficient, more humane, or both. Another equally important implication is that on-the-job training is often no better, for the same reason. The analysis has in general been pessimistic, making it appear impossible for anyone to learn anything. Since people do learn, the analysis is clearly insufficient, and I would like to end by considering how this learning occurs.

I do not suggest that students learn nothing in school, only that they typically learn what the school does not intend to teach and do much less well with what the school focuses on. We found an excellent example of this in our study of college students. Students learned effective methods of operating politically on campus. But in academic subjects they devoted themselves to getting good grades, a time-consuming activity that presumably accounts for the lack of attitude change Jacob reports and the lack of effect on academic achievement Astin uncovered. The explanation is that they learned their politics on the job, by acting in the political arena of the campus. Imagine what would happen if someone gave a course in ‘Operating on Campus,’ complete with texts, tests, and grades. Students busy learning how to pass the tests, would never become the effective politicians campus political life produces.

People learn, in spite of the obstacles our analysis suggests, because the schools and job situations in which they learn seldom approach the extreme conditions of these ideal analytic types. Schools are effective, when and where they are, because tests sometimes require what teachers want students to learn, because teachers do not always connect a multitude of other rewards to academic performance, because students are sometimes incapable of developing a culture which maintains and spreads counterfaculty perspectives. On-the-job training is often effective because someone does have time to do a little teaching because the enterprise allows enough leeway for the apprentices to make some mistakes without costing others too much because the things that can interfere with his learning are fortuitous occurrences rather than structural necessities.

On-the-job training, then, for all the difficulties I have mentioned is more likely to produce educational successes, nevertheless I do not propose that we immediately convert all education to an apprenticeship model. Substantial difficulties are associated with that model. Students may be denied the teaching they want, due to the exigencies and constraints of the real-life situation in which the
training occurs. Students may learn very little of what we would like to see them know, even though they will probably learn a little something.

Nor is it easy to set up apprentice-like training situations. It requires the specification of educational goals in a more exact way than is common in schools. When schools state ‘educational objectives,’ they generally content themselves with pious generalities. If you want to create an on-the-job training situation, you must go much farther and find a place in the everyday world where people ordinarily act just as you wish your trainees to act, where the very skills, attitudes, and sensibilities you wish to inculcate are embodied in the daily activities of people trainees will be allowed to associate with. It is often difficult to find a place which wishes to be used as a site for an educational enterprise.

In addition, we sometimes cannot specify our objectives clearly. We may believe that we are training people for an unknown future. We do not know what we want them to know, because we cannot specify the problems and situations they will have to cope with. This may be because the situations that lie ahead of them are too complicated for us to deal with in detail or because we believe the world is going to change so much that we cannot forecast how things will be and thus what a person will need to know to act effectively. Given such a diagnosis, we generally settle for inculcating proper orientations from which students will be able to deduce correct lines of action in specific circumstances, general skills which can be used in a variety of situations, and an ability to learn new material as it becomes available.

We will always have schools, because we will often find ourselves in the dilemma of preparing people for unknown futures. A minimum use of the present analysis might then be to broaden educators’ perspectives so that they will be aware of the possibilities of apprentice-like training that may be available to them (Beck and Becket, 1969) and not engage unnecessarily in activities that actively defeat the very ends they seek. Such irrationality can only perpetuate the troubles our schools are already in and deepen the mistrust so many people have of them.

1. Is this argument fair?
2. Are Becker’s strictures as applicable today?
3. What can be done within a university to mitigate the problems?