14 Practical implications for institutions and instructors

The starting point for discussion in previous chapters was the *person*. We described what, why, and how he learns. On the basis of this empirical data, we pointed out (especially in Chapters 6 and 10) the better help and new services that he needs. Throughout, the learner himself was the major focus.

In this chapter, our focus shifts to the *institution*. Certain implications and suggestions for educational institutions arise from our empirical data. If our general picture of adult and out-of-school youth learning is accurate, then major changes are needed in various institutions of education. These institutions include secondary schools, colleges, universities, professional schools, graduate schools, manpower training programs in businesss and industry, and military training colleges. In short, this chapter suggests changes for any educational institution or program that operates primarily by providing courses and classes. Because of the changes that probably occur in youth learning between the ages of 10 and 16 (see Chapter 3), this chapter will not try to suggest implications for education below the secondary school level.

The suggestions are presented as a series of gradual steps, with the easiest steps first. Each step arises from the specific data presented in the previous chapters, and from the general picture they provide of adult learning (and out-of-school youth learning). If an educational institution takes this picture seriously, how can it change to help learners more effectively?

My own classroom teaching in various educational institutions has certainly been influenced recently by the contents of this book. My teaching in elementary school, junior high school, secondary school, graduate school, and adult classes has been reasonably successful by the usual standards. But I have become increasingly dissatisfied with my earlier teaching as our picture of noninstitutional learning efforts developed. As I reflect on the motivation and methods of learners in real life, my previous assumptions, procedures, feelings, and attitudes as a teacher seem strangely distorted and ineffective.

The suggestions in this chapter have arisen directly from our data and our general picture. Some of them are not completely original, however, in that they have already been suggested by some educational reformers. In addition, some institutions are already experimenting with helping the learner to operate more independently by conducting individual projects in learning resource centers and other settings.

1.   Provide New Help

Without changing their current programs, educational institutions could experiment with providing new sorts of help. Several specific suggestions have been presented in Chapters 6, 7, and 10. The help might be provided for the institution's present learners, or for certain learners it is not currently serving.

2.   Help Teachers Learn

Educational institutions do very little to facilitate the learning of their own staff members. Like any adult, the teacher is sometimes a learner. It is useful to examine his behavior as a learner – when, why, what, and how he learns – as well as his behavior as an instructor. For his doctoral dissertation at the Ontario Institute for Studies in Education, Jim Fair is interviewing teachers about their learning projects. Some of his preliminary work is presented in a recently published article (Fair, 1970).

Most teachers and professors conduct several learning projects each year. Some of their efforts to learn require only 10 or 12 hours; others require several hundred hours, as was pointed out in Chapter 3. Some of their learning is for credit, but most of it is not. They learn in a group, from reading, from conversations with their colleagues, and in self-planned learning projects.

What do instructors learn? One common and obvious thing to learn is the subject matter that they are going to teach. They also learn about teaching methods in general, or about a particular new teaching method. Sometimes they learn about a particular student who is especially difficult or intelligent, or about their students in general (adolescents, disadvantaged, immigrants). Some teachers read about the future of education. Some work at a specific weakness or problem. Many try to improve their teaching by seeking various forms of feedback.

Intentional learning by administrators and teachers at all levels of the educational system is an essential component of innovation and reform. The adult education program planner may also learn in order to do a better job. For example, he may gather information about the needs of the particular audience he wants to serve.

3.   Emphasize Three Objectives

Many schools and colleges claim that they teach their students how to learn, and prepare them for a lifetime of adult learning. They should state these objectives more precisely, do everything possible to encourage and help their students attain them,

and measure the extent to which their graduates exhibit these behaviors several years after leaving.

These objectives can be stated in behavioral terms as follows.

1. As a result of his experiences in this educational institution, the student will tend to initiate a learning project when facing a major problem or task, and when experiencing strong puzzlement or curiosity. He will use learning as one step in achieving certain action goals in his home and family, in his leisure activities, and on the job.
2. The student will realize that learning projects are common, natural, and useful. He will be aware that people learn for a variety of reasons, that most learning is not for credit, and that each type of planner is appropriate in certain circumstances. He will not regard any reason for learning, or any type of planner, as strange or inferior. He will not believe that learning with a professional teacher in an educational institution is the only way to learn, and will not feel guilty when he chooses other formats for learning.
3. The student will become much more competent at discovering and setting his personal life goals and learning goals, at choosing the planner for his learning project, at conducting his own self-planned projects, at defining the desired help and getting it from a person or group, at learning from nonhuman resources, and at evaluating his progress and efficiency in a learning project.

Incidentally, some agency might develop a test of the person's competence at learning, and issue a certificate to successful learners. Such a test might assess the learner's skill at setting learning goals, at reading aggressively and effectively, at planning his own learning, and at getting necessary help.

In his book relating individual learning and self-renewing societies, John Gardner (1964) expresses the third objective very well. He says, "Education at its best will develop the individual's inner resources to the point where he can learn (and will *want* to learn) on his own. It will equip him to cope with unforeseen challenges and to survive as a versatile individual in an unpredictable world. Individuals so educated will keep the society itself flexible, adaptive and innovative [p. 26]."

Other writers, too, have touched on these three objectives. Roby Kidd (1959), for example, has noted that a common purpose of education is to produce "a continuing, 'inner-directed,' self-operating learner [p. 47]."

In a major work on andragogy, Knowles (1970) has pointed out that "education is not yet perceived as a lifelong process, so that we are still taught in our youth what we ought to know rather than how to keep finding out." Hence the need for "helping individuals to develop the attitude that learning is a lifelong process and to acquire the skills of self-directed learning [p. 23]."

Arnold Toynbee (1968), the distinguished British historian, has declared that "the pupil should transform himself into a self-teacher, and the teacher should transform

himself first into a stimulator and then into a consultant. . . . The initiative should be transferred to the student himself [p. xxiv] ."

Suggesting a university course called "Learning to Learn," Jahoda and Thomas (1965) said that "the purpose of this course would be to encourage the students to think of themselves as autonomous people, i.e. as self-organizing systems responsible for their own learning, who can view the facilities offered by the university (e.g. lectures, projects, work periods, programmed texts, teaching machines, seminars, tutorials, laboratory facilities, library, research staff, etc.) as opportunities to be used for pursuing self-defined ends."

Schools and colleges can foster all three objectives without making major changes in the curriculum or in the organization of the institution.

4. Help the Instructor Feel Equal

Educational institutions should encourage the instructor to feel equal to the students. He will not be an effective helper if he feels superior or inferior as a person. The instructor may have greater knowledge in one subject matter area than most of the learners, and he may have greater skill in helping people learn that subject matter. At the same time, though, he may realize that some of the learners in the group are clearly superior to him in certain other ways.

For example, a few learners may be older or stronger than the instructor. Some may have traveled more widely or held a greater variety of jobs. A few may have had more experience than the instructor with certain subject matter being discussed. One or two may have more poise or confidence, greater speaking or teaching skill, or a higher income or social class. If the teaching occurs within a company or the armed forces, some learners may hold a higher rank or position in the organizational hierarchy than the instructor does.

If the instructor feels that he and the learners are equal as persons, his feelings and behavior will be influenced in certain ways.

First, he will not feel or act as though he is on a pedestal – superior in all ways to all the learners. Instead, he will comfortably accept the fact that there are differences in status on various dimensions between him and certain learners. He will realize "the importance of respecting the person-to-person parity which exists between teacher and students," to use McClusky's phrase (1964, p. 166). He will not feel the need or urge to show off, bluff, pretend to know all the answers, or pretend to be superior in all ways. He is unlikely to act in an overly authoritarian, dictatorial, or arrogant manner. If the learner's expectations tend to force him onto a pedestal, he will resist or discuss their expectations.

Second, the instructor's feelings of equality with the learners will probably lead to his interest in establishing friendly relationships with them. He will enjoy talking

with them, before and after the group sessions as well as during the sessions. Their conversations will deal not only with the subject matter of the course or workshop, but also with many other things they have in common – family, housing, cars, hobbies, travel, problems, interests. He expects to learn from them, just as they learn from him.

Third, the equality may be reflected in the seating arrangement. In the traditional arrangement, the class faces the instructor because it does not really matter whether the learners can see and hear one another. The basic assumption is that the instructor knows all the answers, and will be the only one with much experience and knowledge to contribute to the group. When the instructor is aware of the wealth of experience and knowledge among the learners, though, he will probably arrange the seating so they can see and hear one another. In addition, he will probably make some effort to help them become well acquainted.

Fourth, the instructor may be eager to have the learners assume certain responsibilities in planning the learning activities. If he accepts their competence and experience, he will realize that the specific content and learning activities can be made even more appropriate as a result of their suggestions.

Fifth, the teacher may emphasize that any superiority he has is strictly limited to the one area of expertise, as suggested by Geer (1968). He may clearly expect some reciprocal help, and thus be a learner or receiver as well as a helper. He may not call himself a teacher. He may let the learners take much of the initiative in asking questions and setting directions.

Sixth, if the instructor realizes that he is approximately equal to the learners in his group, he will probably not experience the difficulties and embarrassment that sometimes arise because an instructor is inferior in some ways to some of his students. If the instructor accepts equality between teacher and learner as a normal occurrence in adult groups, if he has sufficient competence in teaching the central subject matter, and if he has a pleasant, friendly manner, he is unlikely to encounter resistance. Instead, he will probably be accepted readily by the learners despite his youth, lack of experience, lower rank, or whatever.

5.   Increase the Student's Choice of *How* He Learns

Increasing the student's freedom of choice with regard to how he learns is a fairly easy step for most instructors and professors to take. Even if they refuse to let the student decide *what* to learn, they can at least leave him free to choose his own methods.

The instructor might announce, for example, that each student in his class or

course must learn certain knowledge and skill by a certain date. The instructor defines the scope and level of the knowledge and skill fairly precisely, and gives some idea of how the students will be tested. He suggests several methods and resources, but gives the students complete freedom in their choice of which ones to use. The resources might include certain pages in the textbook, certain reference books and other printed materials, a few students who already have the knowledge and skill, programmed instruction, parents, phonograph records or tape recordings, two or three meetings of a discussion group, and the instructor himself. The test or examination will not be biased toward any one way of learning.

This arrangement is probably not suitable for all courses and subject matter, or even for all students. But instructors in schools and colleges might well experiment with several variations in some of their courses or topics. Each of these variations would break away from the traditional classroom stereotype of a single instructor being responsible for the entire sequence of events: setting the objectives for a group of 20 to 100 students, motivating them, orally providing the subject matter to the group, prescribing other learning activities, and evaluating the learning.

Giving the student more choice in how he learns has several advantages. It develops his competence in choosing methods, resources, and strategies. He will not come to believe that all learning occurs under the control of a professional instructor within a large educational institution. Instead of spending time "just getting something done" or gaining certain knowledge and skill to be retained for just a few hours or one day, he will spend a greater proportion of time at learning episodes. Also, this arrangement clearly emphasizes learning objectives, and thus breaks the tendency to think only about activities and exercises rather than outcomes.

Several analyses of what many students actually experience in classrooms have successfully captured certain negative aspects. These analyses include Philip Jackson's *The Teacher and the Machine* (1968), George Leonard's discouraging description of what you may find when you visit your child's classroom (1968, pp. 106-109 and 117), Jerry Farber's article (1968) on "The Student as Nigger," and Carl Roger's article (1968) on graduate education in psychology. Giving students greater freedom in deciding how to learn might improve the quality of the interaction between teacher and learner.

I have found that students with freedom in how to learn are very creative in their choice of methods. In addition to reading, they may discuss the subject matter with one or two fellow students, may visit or observe someone or something, and may even interview some people or do a small research project. In addition, the instructor might facilitate the formation of small groups, structured or relatively unstructured, with or without the instructor present. The instructor might also identify programmed instruction materials and other resources developed for the "individualization of instruction," which usually refers to an object-planned learning project in which the student sets his own pace. Field work and laboratory experiences might also be provided for the students who are interested.

Help as well as freedom

It is necessary to increase the amount of effective help as well as the freedom for the individual student. Some students, for certain topics, will need help in choosing appropriate methods and resources. The student may even need help at first, from the instructor or a small group or a how-to-study guide, in learning how to go about planning an appropriate strategy. The instructor or group will also have to deal with students' initial reactions to increased freedom; resistance, frustration, anger, and puzzlement are common at first.

Preparation for a career

Professional education and preparation for certain other careers might be improved by giving students a greater choice of how to learn. This could be done within each course or subject, perhaps in blocks of two or four weeks, or for an entire curriculum that ordinarily requires somewhere between two and five years. For example, the professional school could announce precisely what knowledge and skill are required to receive a degree or certificate for the given occupation or profession. It could also suggest various resources, probably including lecture courses and correspondence courses, and could provide some of these. The student could then gain the required knowledge and skill in whatever way he wished, at home or at one or more educational institutions, in a shorter time than usual or spread over many years. When he felt ready, he would present himself for the written examinations and practical tests established by the educational institution or professional school.

Preparing for a demanding career in this way has several advantages. It is probably more efficient for certain learners who can learn faster on their own than they can in highly structured courses. Even more important, it enables the student to develop a high degree of competence in planning and conducting his own learning with the subject matter and reference tools of his chosen profession. This skill, in a rapidly changing world or occupation, is almost as important as the basic minimum knowledge and skill. A lawyer, doctor, professor, architect, or social worker who is not willing and able to continue learning soon becomes obsolete.

6. Increase the Student's Choice of *What* He Learns

What proportion of his time does the typical student spend learning subject matter (or performing learning activities) chosen by his instructors? To arrive at an answer, we would first have to add up all the hours that the student spends in class, at homework and assignments, in studying for tests and examinations, and at other

activities necessary for passing a course or obtaining credit. From this total number of hours, we would then subtract the times during which the student was learning subject matter that he himself had chosen freely from a fairly wide range of possibilities.

It is difficult to generalize for all years from Grade 9 through to the final year of a Ph.D. program. My guess, though, is that the typical student spends at least 60% to 80% of his time learning subject matter chosen by someone else. I suggest that this percentage be reduced by increasing the proportion of subject matter that the student chooses without restriction. In fact, this trend is already evident at most levels in the educational system.

At the simplest level, the school or college can recognize that its students already learn a great deal completely outside the structure and requirements of the institution. As mentioned previously, our interviewers found that 10-year-old children and 16-year-old adolescents conduct a large number of out-of-school learning projects. The school or college should recognize, encourage, and assist this type of learning. A teacher, for example, can encourage students to continue learning about any topic discussed in class or raised in a film or on a field trip. The school or college might also help its students find resources for their out-of-school learning, and help them set additional learning goals. Indeed, the institution could even take some initiative in locating, listing, and perhaps developing additional out-of-school resources for its students. The institution might help parents become more conscious of their children's learning, and more competent at helping their children set goals and find learning resources throughout the city.

Students can also be given much more choice in what they learn within a single course or subject. At the beginning of the year or semester, the instructor could announce just what level of common knowledge and skill must be learned by all students, and tell them clearly how much additional time is to be devoted to knowledge and skill chosen by the individual student. For example, the instructor might define the proportion of the course devoted to free-choice subject matter in terms of percentage, hours, or number of assignments.

Even within assignments, the amount of freedom can vary. At the broadest level, the instructor can simply require that the student do some sort of essay or project on any subject whatsoever that has some connection with the course. Or the instructor can provide a varied list of topics or questions from which the student can choose. Another possibility is to assign a single topic or question, but to make it broad and flexible enough to allow the student to approach it in his own way.

The school or college that wants to let students devote even more time to freely chosen knowledge and skill may let certain students initiate and carry through a large project. The institution can also let the students take an independent study course or individual reading course in place of a regular one.

When permitting a student to choose what he will learn, some institutions limit him to academic or approved topics. Some also limit his freedom by requiring a long-term

commitment instead of giving him the freedom to shift direction frequently. For example, the student may have to outline his entire project before beginning, or he may have to obtain approval for a long list of books before reading the first one.

If some schools and colleges really give students complete freedom, without demanding that they obtain approval, they may find that many students will learn things other than established bodies of academic subject matter. Many students will focus on a problem or responsibility, and will gain the knowledge and skill for fairly immediate application; others will be motivated by curiosity or puzzlement about some question or phenomenon. If the student learns what he considers important, not just what society or his instructors consider important, his subject matter will probably be closely related to his real-life problems and interests. For example, a student may learn about himself, about various careers, about love and sex and the choice of a marriage partner, about getting along with other people, about drugs and smoking and alcohol, about social change and protest, about certain regions to which he hopes to travel in the near future, about certain personal problems, and about various other matters in which he is interested. As students increasingly learn such real-life subject matter, the distinction between in-school and out-of-school learning may become blurred.

Help as well as freedom

Most students will need a great deal of help in developing skill in choosing their learning goals. Such skill also involves the ability to determine one's own problems and interests. Some sort of counseling or personal assistance, with no evaluation or approval included, may be necessary for most students while they develop increasing competence at setting their own goals.

The institution will also have to make available a wider variety of learning opportunities. The freedom to learn whatever one wishes is rather a hollow freedom if there is no opportunity or resource available for learning the chosen subject matter. Consequently, the institution may have to provide additional printed materials for self-planned learning projects, additional programmed instruction and other resources for object-directed learning, and encounter groups or other group opportunities for certain subject matter. The institution might also foster the formation of small, spontaneous groups of individuals interested in learning the same thing.

Effects

Does it make sense to let children and adolescents decide for themselves what to learn? Will it work in actual practice? The answer is probably affirmative. Many schools and colleges have already had good experiences with this. Already a great

deal of successful youth learning is self-initiated outside of educational institutions without any credit. Gardner Murphy (1958) has stated that observant teachers can readily notice in children "the reaching out, the sense of exploration, the insatiable curiosity, the urge to new experience, the delight in manipulation and the mastery of new media [p. 317]." After observing young children learning in the home and with their playmates, John Holt (1967) concluded "that children learn independently, not in bunches; that they learn out of interest and curiosity, not to please or appease the adults in power; and that they ought to be in control of their own learning, deciding for themselves what they want to learn and how they want to learn it [p. 185]." One other interesting piece of evidence comes from those who work with alcoholics and drug addicts: instead of urging or forcing the addict to reform, they wait until *he* is certain that he wants to change.

Two major benefits would result from giving the student complete freedom in choosing a larger proportion of the knowledge and skill that he learns. First, at least some of the subject matter he chooses will be more useful and interesting to him than the standard curriculum. Not only will he gain more appropriate knowledge and skill, but also he will probably do so more efficiently and with stronger motivation. Second, he will develop skill in setting his own learning goals, and in understanding his own needs and interests.

These two factors may, in turn, have a dramatic influence on his learning for the rest of his life. Because of the relevance, pleasure, and success of his learning as a full-time student, he may learn far more as an adult. In addition, the knowledge and skill that he decides to learn during adulthood will probably be much more appropriate for him.

It would be interesting to compare, 10 or 20 years later, students who attended traditional educational institutions and those whose education was marked by freedom and help in deciding what and how to learn. The amount of learning, the confidence and pleasure in learning, and the methods would probably be quite different in the two groups of adults.

7.   Experiment With Group Help for Self-Planned Learning

Educational institutions should experiment with some of the group formats described in the previous chapter. In particular, they should experiment with effective group help for *self-planned* learning. This format consists of a group of students who are conducting self-planned learning projects and who help one another with setting goals and planning for their individual learning projects.

My experience with this format began in 1967 when I started planning a university course called Psychological Development During Adulthood. Although this course was for academic credit, I wanted to make it as close to noncredit learning as

possible. The instructions given to the students at the beginning of the course stated that "each member of the group will freely decide what knowledge and skill he or she wants to learn, and will go ahead and learn it individually, seeking help from the members of the group whenever appropriate. There will be no lectures, assignments, tests, examinations: such procedures are not very effective when each person is learning something different."

Each student was expected to fulfill two major requirements, but these were quite different from requirements in most courses. The first requirement was the following: "Decide what knowledge you want to learn at first. You are completely free to choose whatever you think will be most interesting or useful for you. Your decision can be to begin reading an entire book at first, or to cover the entire field of psychological development during adulthood. Or your decision can be to begin learning intensively about one or two aspects, such as intellectual development, motivation, emotion, or moral and religious development. Or your choice might be a problem to which you will apply whatever subject matter seems relevant. After this tentative initial decision, begin learning the knowledge you have chosen. Modify your objectives, desired knowledge, and strategy whenever appropriate. Do not hesitate to alter your goal or route greatly, even to the point of abandoning an inappropriate one. The whole point of this course is that you learn whatever *you* find most interesting or useful."

The other requirement was to help the other members of the group to learn. Each student was to feel some responsibility for helping others clarify the knowledge and skill that they wanted to gain, and for helping them select appropriate procedures and resources for doing so.

During the group sessions, either in the total group or in smaller subgroups, each student had several opportunities to describe what he wanted to learn, why, and how. The other members of the group, including the instructor, tried to figure out what sorts of help he would benefit from most, and decided how to provide that help. Sometimes a suggestion or a question about goals was made right in the group session. At other times a suggestion for some additional reading was jotted down and handed to the student. Often one or two students in the group would initiate a further conversation with the student after the group session.

This format differed from the typical university seminar in that the students did not present their findings or other subject matter to the group. The group did not at any time discuss or listen to someone presenting subject matter, except as an incidental part of helping one learner with his own project.

This format is effective only if the students are strongly motivated to learn at least some aspect of the subject matter included within the scope of the "course."

During the summer of 1967, each student was clearly more capable than I was of deciding how much knowledge and skill he had learned, and how many hours he had spent on his individual learning projects. Consequently it was his responsibility to evaluate his own learning and to assign himself a grade. This grade was based

completely on his self-planned learning, because there were no other requirements or activities as part of the course. I do not think any students "cheated," either consciously or unconsciously, in assigning a grade. Even if one or two students had marked themselves excessively high, though, I would not abandon the format if it proved highly effective for many of the other students.

A group of self-planners probably provides an effective format for other sorts of subject matter as well. Pearson (1967) describes a very similar format that he used in an undergraduate course on personality and in a graduate course on aging, dying, and death. Kolb, Winter, and Berlew (1968) describe a format in which each individual directs his own change project, but receives group help with goal-setting and other aspects. I have found the format fairly effective in two other graduate courses that I have taught recently: a course about individual adult learning, and a doctoral research seminar.

8.   Reduce the Emphasis on Credit

Some educators suggest or imply that all learning controlled by a professional instructor in an educational institution is good (and therefore a certificate or degree is a guarantee of good learning) — and that other sorts of learning are poor or nonexistent. Some want to extend the stamp of approval of the educational institution to the rest of the world: having won control of a major portion of the lives of children and adolescents, they want to control and give credit to all other learning as well. Some urge that compulsory schooling be extended to four-year-olds and to young adults.

In my opinion, shifts in the opposite direction would be more appropriate. The necessity and compulsion of schooling, and the emphasis on credit, should be reduced, not expanded. A variety of learning opportunities and resources (not just full-time classroom-centered instruction) should be made available. Learners of all ages should increasingly be left free to learn whatever, whenever, and however they wish. Their status and their employment opportunities should depend on their actual knowledge and skill and their relevant performance, not on where or how or when they gained that knowledge and skill. They should be judged by what they are, not by the pieces of paper they lack or hold.

As schools and colleges increase their students' freedom to choose what and how they learn, the emphasis on credit will decrease. Instead of frequently assessing the students' progress and level, the institution will emphasize the provision of resources and help for their learning. As a result, students will probably learn far more.

There are several ways in which a school or college can reduce the emphasis on credit. We will examine each possibility in turn.

A pass-fail distinction instead of a precise mark

If all the students in a class or course are expected to learn the same knowledge and skill, it is possible to measure fairly precisely just how much each student has learned. This, in turn, makes it possible to rank order the students or to assign each student a fairly precise grade or mark. The mark might be *A*, 78, or the first decile.

When students in a course are learning a wide variety of subject matter, though, it is more difficult to compare them. For example, if one student reads widely in the field and another student collects some original data in order to learn about a narrow portion of the field, who should be given the higher mark? When students have a great deal of freedom in what they learn, it is often better simply to decide whether each student has learned enough to pass the course or not. A student who has learned enough knowledge and skill (regardless of what it is) or who has spent enough time in learning efforts related to the course receives a grade of "pass." There are no further distinctions within this category. If a student spends little time at learning, or finishes with insufficient knowledge and skill, he receives a grade of "fail."

In some schools and colleges, the student and instructor cooperate in writing a short description of what the student learned. This statement is then recorded on the student's official record along with the "pass" grade.

Distinguishing the functions of helping and evaluating

The help that an instructor provides to the students in his course is often distorted and restricted by the fact that he is also the judge or evaluator of each student. The learners feel they must follow his advice and try to please him.

An alternative is to divide the helping and evaluating functions between two different instructors. One instructor then becomes a helper who is clearly "on the students' side." They can seek his help in meeting the external requirements without worrying about his opinion of their efforts and decisions. Some other instructor or institution then sets or at least marks the assignments and examinations.

If the examinations and assignments are narrow or biased, however, or if the marker is harsh, this situation may not be an improvement. But if the helper and evaluator cooperate, and if certain safeguards are provided, dividing the functions of helping and evaluating can potentially improve the learning.

When helping a graduate student as a member of his thesis committee, a faculty member has difficulty in divesting himself of his role as judge. He can, though, make it clear just which of his suggestions must be accepted in order for his eventual approval, and which suggestions may be rejected safely by the student after some thought. In addition, the thesis adviser can make it clear that his suggestions are not just a personal whim, but are designed to make the research project more important, valid, or efficient.

The learner assigns his own mark

In some courses and classes, it is most appropriate for each student to choose the most suitable procedure for determining his grade. Such a procedure is especially appropriate when much of the knowledge and skill learned by each student is different from what the other students are learning.

When given a choice of procedures, most students prefer to assign their own marks individually. That is, each student will decide his mark and then report it to the instructor's secretary or to some central office. The major criterion used by the student is usually the amount of knowledge and skill that he has learned, or the extent to which he has successfully applied that knowledge and skill. He may also take into account the amount of time that he has spent at the learning. In a group of self-planners, each learner may also take into account a less important criterion: the extent to which he has helped other students learn.

In one variation of this procedure, the student also submits his reasons for believing that the mark he has chosen is the most appropriate one. If the instructor feels the mark is not appropriate, he then discusses it with the student.

Another variation is for the student to set a target grade near the beginning of the course, instead of waiting until the end. The student then learns enough to feel that he has achieved his target grade.

Let us quickly dismiss two objections to procedures in which the learner assigns his own mark. One objection is that students will learn less if they are not being evaluated by an instructor. In actual practice, the opposite seems to be true – depending, of course, on the instructor's skill in establishing an appropriate group climate. The other objection is that a few students will give themselves a much higher mark than they deserve. Even if this does occur, I would hesitate to abandon or distort a procedure that is most beneficial for the largest number of students just because of a small number of "cheaters." In practice, the usual experience is that students mark themselves too low, not too high.

Reducing the proportion of credit learning

A school or college can also decrease the amount of credit learning required of its students. The institution might reduce the amount of compulsory knowledge and skill, the number of courses that the student must pass, or the proportion of his time spent at credit learning. The institution could either insist that the student learn *something*, without restricting or evaluating just how and what he learns, or the institution could leave him completely free to learn or not as he wishes.

The success of the "free universities" (Werdell, 1968) suggests that college students are quite eager to learn without credit. *Time* (June 6, 1969, p. 60) has described the 450 American free universities as·"academic utopias where students

and teachers can pursue whatever subjects interest them without formal examinations, grades or degrees."

Jacobs (1969) has suggested that, in an ideal university, "there should be no courses, no credits, no degrees, no hours, damn few administrators [p. 14]." A school or college could refuse to provide any marks or credit whatsoever. Instead, assuming that people will be eager to learn many things for various other reasons, it would concentrate solely on providing help with that learning. If it screened its learners before agreeing to serve them, it would simply select those who could benefit most from the institution's help or who would put their learning to use in society.

In effect, the educational institution would say to its learners something like this: "We have some library resources, librarians, noncredit lecture series, seminars in which students take turns presenting papers, groups to help self-planned learning projects, and some staff members who are competent at helping learners set their goals and plan their strategy. If you think any of these resources would be beneficial to you in planning and conducting some learning projects, you are welcome to come and make use of them for a nominal fee."

Thurman White (1965) foresees a learning society in which people will be judged on whether they can learn or are learning, not on their past attainments in formal educational institutions. "The learning man will replace the knowing man as society's most valued and highly prized member. . . . Political candidates will run on their problem-solving ability. Employers will advertise for the most learnable applicants. Television will use prime time to show people as they study questions of common concern. . . . Mastery of the learning process will top the aims of formal schooling. Teaching as the art of helping someone else in his effort to change himself (i.e., learn) will be a required proficiency of all college graduates [p. 2]."

Demonstrating one's knowledge and skill once, instead of passing courses

It will probably never be possible to eliminate credit entirely, for two reasons.

First, in most societies, it is considered essential for every member of the society to learn certain things, such as how to read, enough arithmetic to handle money, and something about the nation's history. If we ever realistically examined the minimum knowledge and skill that a society should require, it might turn out to be a surprisingly short list. There would probably be *some* required knowledge and skill, though, and consequently some sort of evidence of its achievement might be required of each individual.

Second, it is necessary for some associations or government departments to certify that certain individuals are competent to perform certain tasks or occupations. We care about the competence of our doctor, plumber, and accountant. Consequently, we want someone to verify their knowledge and skill before they work for us.

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At present, both of these needs for credit are usually handled by providing courses and requiring people to pass them. It might make sense to experiment with another procedure for determining whether certain individuals have gained the necessary knowledge and skill. Instead of requiring them to take courses, we could point out to them some alternative ways of learning the knowledge and skill. Then, at least every month or two, we would provide some sort of examination for anyone who felt that he had reached the necessary level.

A child could learn to read and handle money in whatever way seemed most enjoyable or efficient to him. He might use a variety of methods and resources. He might occasionally seek help in establishing procedures for evaluating his own progress or level, or he might even ask some other person to evaluate his level privately for him. Then, when he was satisfied that he had reached the required minimum level, he would demonstrate this in some examination situation.

The person interested in entering a certain occupation, too, might seek some help in determining what knowledge and skill he is lacking. He would then gain that knowledge and skill, using whatever resources and institutions were most convenient and effective. He might obtain practical experience in a variety of situations, or perhaps only in a single situation. Before being allowed to become a full-time, unsupervised practitioner, he would have to demonstrate that he was ready to enter that occupation.

This procedure might not be appropriate for every occupation, but it could certainly increase the quality of those who enter certain occupations. The success of the experiment might hinge to a large extent on the nature of the examination situation. If the examinations are based only on two books or a few particular courses, then the person does not really have much choice in how and what he learns. Instead, the examination situation should test the person's competence in handling real-life problems, cases, or tasks. He might be observed during several weeks of actually performing on the job, for example. This would permit him to seek information and advice from various printed sources and colleagues, just as most competent practitioners do in actual practice. The examination situation might also test a person's basic understanding of the field, and a certain essential core of knowledge and skill.

Who should evaluate occupational competence?

It is evident by now that I believe that evaluating and helping a person are conflicting tasks. Educational institutions as well as individual instructors find themselves in the awkward position of evaluating the learning of the same individuals they are helping. The result has been to distort and reduce the effectiveness of educational institutions in promoting learning. In fact, they sometimes hinder significant learning instead of facilitating it.

My solution is simple. Schools and colleges should evaluate their students' level of knowledge and skill only when absolutely necessary, if ever. These evaluations should be used only for the internal purposes of that educational institution. They should not be released to prospective employers.

For many positions, the employer himself should assess the individual's capacity to perform the job. An employer should develop screening procedures that are fair, realistic, and reliable instead of simply insisting that the person hold a certain degree or secondary school certificate. The employer's procedures should test the person's competence in the knowledge and skill that are essential for his new job, not some peripheral learning. Or, as White suggested (1965), the employer might assess the candidate's learning ability, or the amount and success of his past noncredit learning, instead of his current level of knowledge and skill.

For occupations that are standard in many companies, or that are practiced individually by self-employed persons, the test of competence could be developed and administered by the professional association and/or government. For certain occupations and professions, these tests of competence might be repeated every five to ten years.

Some employers might well shift their emphasis from the initial screening to a trial period on the job. Surely the most effective way to tell whether someone is suitable for a particular job or company is to let him try it for a certain period. The trial period might be one week for a simple job, three months for a complex one. At the end of that time, employee and employer would decide whether the position should become permanent or not. This procedure might eliminate Peter's Corollary (1970), which states that "in time, every post tends to be occupied by an employee who is incompetent to carry out its duties [p. 8]."

9. Do Not Rely on a Single Institution

Until recently, it has generally been assumed that each student's education during any given year will be provided entirely by a single school or college. In addition, it has always been recognized that certain attitudes and skills should be taught in the home. Children and adolescents take music lessons, swimming lessons, and ballet lessons from instructors outside the school system. Our 1970 survey indicated that some students spend a great deal of time at out-of-school learning projects. Nonetheless, most educators and parents assume that the school or college attended by the student is far more important in his learning than all the other resources put together.

Several chapters in this book have directed our attention to certain steps that learners take, and to the help they need with these steps. Instead of accepting an educational institution as our starting point, we began with the learner – his

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motivation, steps, and needs. It is no longer necessary to assume that a single educational institution will meet all the needs of a given learner. By focusing on the learner, we can see a variety of ways of meeting his needs through a variety of institutions.

Earlier in this chapter, I suggested that it is important to help each child and adolescent to develop certain attitudes toward various ways of learning, and to develop competence in setting his learning objectives and in planning his own learning. It is not necessary for him to attend a single institution in order to develop these attitudes and skills; instead, he can develop them through reading a how-to-learn book, through practice, through discussions with a competent learning consultant, and from his parents.

An even more important function of schools and colleges at the present time is to help learners in deciding what to learn, in planning that learning, and in obtaining the subject matter. The responsibility for providing subject matter is already shifting toward a variety of institutions, with the student no longer tied to a single institution. The student learns from field trips to museums and forests, in the public library, and even from certain television programs recommended by an instructor. Perhaps schools and colleges will eventually encourage learners to obtain much of their help and subject matter from resources outside the institution.

As we shift away from having each student attend a single school or college full-time, we may find that the student spends more and more of his time learning at home. Indeed, his study area at home, and his immediate neighborhood, may become his base for learning. Instead of traveling to a certain building or campus five days a week, he may learn at home, and may travel to a number of buildings and resources throughout the city.

All students could be provided with free transportation on the city's buses and subways, and free admission to various museums and other educational buildings. Alternatively, each student could be issued an identification card and a certain number of educational coupons that he could use in place of money for these purposes. In addition, he might be allowed to buy whatever books or informational magazines he chooses up to a certain amount of money.

Neighborhood helpers

If the learner's base of operation shifts from the school or campus to his home, perhaps the instructors should move in the same direction. That is, professionally trained persons who are competent at stimulating and facilitating learning should be provided throughout each geographical area, not clustered in certain buildings.

Let us picture, for example, a typical one-block street in a typical city or suburb 15 years from now. One person, trained as a teacher, is paid by the local board of education to stimulate the 30 children and adolescents on that street and to help them

learn whatever seems appropriate to each one. Much of the teacher's time is spent conversing with individual children. Some conversations take place in the teacher's home or on his front steps, some in the child's home, and some on the street. The teacher helps each child set certain learning objectives, and helps him plan how to achieve them. Sometimes the teacher suggests pairs or small groups of children who might get together for certain learning projects. The teacher has a few books, newspapers, and magazines to lend to children, but the learners obtain most of their printed resources from the public library and from people living on their street. Some field trips are organized for the younger children, occasionally including children of a similar age or with similar interests from a nearby street. For certain recreational and athletic activities, as well as for specialized workshops and laboratories, the children and adolescents travel to the building that used to be called "the school."

The teacher might also be responsible for helping any adults on the block who want help in planning their learning. In addition, the teacher might try to stimulate some adults to increase their learning or to see a wider variety of learning possibilities.

A similar arrangement might be useful in certain developing nations. Instead of establishing school buildings and liberal arts colleges, such countries might experiment with this neighborhood helper model, as Illich (1971) has suggested. Most helpers would be mature local adults. In addition, some experiments might try using overseas volunteers as neighborhood teachers. Anyone who wanted to learn about agriculture or health, or how to read or do simple arithmetic, would then approach this helper.

Small pilot projects

Experiments with a variety of educational alternatives are already being tried in actual practice. Most of these, however, occur within an educational institution or take the form of an experimental school or free university. That is, it is still assumed that a single institution will be predominantly important in a person's learning.

Perhaps we should also initiate some small pilot projects in which the learners use a variety of resources and locations, perhaps with a neighborhood helper to consult at certain stages in the planning. Although each project may be physically small, it should be complete and comprehensive in scope. That is, instead of merely modifying the present approach, we should try to initiate a completely fresh approach.

As these pilot projects teach us how to be more effective in stimulating and guiding learning, we might become ready to attempt a large-scale pilot project. The eventual result might be an astounding increase in the amount of appropriate knowledge and skill learned in our society, accompanied by a high degree of individual competence at planning and learning.