

THE LEARNING SYSTEM

KENNETH H. SILBER

A NEW APPROACH TO FACILITATING LEARNING BASED ON FREEDOM, THE FUTURE, AND EDUCATIONAL TECHNOLOGY

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This article is a very brief version of the concepts presented in the Learning System Simulation done by Dr. Silber at the AECT Convention in Minneapolis. Due to space requirements, only the highlights are presented here. The full system will be described in the Simulation, which will be published this fall.

Many of the concepts expressed here are the result of collaboration with Dr. Ronald Barnes, Minnesota Experimental City, and Dr. Milton A. Young, University of Connecticut. However, Dr. Silber accepts responsibility for all ideas presented here.

Playing the game of “What’s Wrong with America’s Public Schools?” has threatened, in recent years, to become America’s number one sport. And while the game playing is perhaps excessive, the reasons for it are still quite evident in the schools. Without getting into a repetition of a listing of faults which is probably familiar to, if not believed by, everyone, it is safe to say that the real question is not whether the schools need improvement, but rather whether they need minor, major or radical change — and what that change should be like.

Most critics and reformers of the school have taken the position that the change needed is a minor one — such as the addition of systematically designed instructional modules, the development of a Black studies or woman’s studies or process curriculum, the reorganization of school financing procedures, or the creation of alternatives within the school system. Most of these solutions and their obverses, converses and inverses have been tried — and the results have always been the same: no real improvement of what happens to a child (perhaps even your child) in school.

Why have all these reforms had no real effect? The answer is, I believe, twofold: the magnitude and



complexity of the school system, and failure to look at basic assumptions.

RATIONALE

Inadequacy of Proposed Solutions to School Problems

The school system in America today is a vast set of bureaucratically organized systems and subsystems, group and counter-groups, which interact and counteract until what the schools are supposed to do finally reaches the child in the classroom. Yet all but one of the six sets of proposed solutions which follow operate on the assumption that all the problems of the public schools come from

one small item, and that by changing that item — whether it be where the money comes from, how many kids are in a class, what the curriculum says about Blacks, or whether it is said by book or film — all the school’s problems will dissolve. As a result, when looked at in terms of the total school structure, the proposed changes are *hardly different* from what now exists. And not surprisingly, therefore, these changes, when tried, have made *no* appreciable difference in what happens to learners.

The second reason, however, is even more basic and more important than this. It is that all these solutions

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beg the real question. They are band-aid solutions to symptoms instead of an attempt to first find the real problems. They never ask the real question about learning, and about what kinds of institutions best facilitate it. That is, they never question the basic assumptions and structures of the current system. They demand new types of schools, curricula, methods, and teachers without first ascertaining if schools, curricula, methods, and teachers are the best things to have for learning and/or education.

Critics in the “deschooling” movement, led by Ivan Illich, believe that the very notion of “school” itself is the problem. They find that school — and its notions of simulation of reality, of authority, and of curriculum — and learning are antithetical.

If, as the deschooling critics suggest, it is the elitist, specialization and simulation of reality notions of school that create the problems, then it makes little difference whether the school is repressive or free, white or Black — it is still a school. If it is the compulsory, arbitrary authority of a knowledge elite (teachers) that makes students powerless, then it makes little difference whether the teacher is white or Black, maintains or plays at giving up her authority, uses films or not — she is still a teacher. If it is a curriculum that limits people’s conceptions of what learning is and where it can take place, then whether it is in Spanish or English, tells the truth or lies about Indians, teaches courses about relevant things or is irrelevant, it is still a curriculum.

Thus, the proposed solutions may serve as temporary restraints, temporary means of patching a piece of the system, temporary means of keeping

the system limping along with the illusion that all is now well. But they will never create a viable educational system.

Creating a New System

How can such a system be created? The answer to this question goes back to the second reason for failure. To create an educational system that works, one must first go back and ask basic questions about the necessity for and shape of that system: First, one must ask questions about the nature of man. Then, one must derive from that nature how learning takes place. Then, based on the nature of man and how learning takes place, one must decide what, if anything, must be created to help people learn. Then, if some sort of learning system is necessary, one must specify its characteristics and show how they are congruent with the nature of man and learning. Finally, from the characteristics of the system, the components and operation can be derived, with special emphasis on the congruence between them and the characteristics. (It is at this bottom level that most proposed solutions fail.)

This is the approach to solutions taken by the Learning System described in this article. Each step proceeds logically and congruently from a basic philosophy of man and learning. In this way, it is hoped that the Learning System can provide a real solution to the problems of education in America today and in the future.

Philosophies Underlying the Current Educational System and the Learning System

The current educational system has a philosophy that deals with the nature of man and learning. Its

philosophy must be judged not by the words it uses, but rather by the behavior of its personnel, by its structure, and by its mode of operation. This philosophy is detailed in Column 1 of the chart (see “Educational System Philosophy/Learning System Philosophy”).

It would seem that in light of what we know about man, and in light of what we can guess the future will be like, this philosophy is exactly the *opposite* of what we need. In order to help people develop the ability to “be” and to “function” both now and in the future, a system that aspires to facilitate learning must operate under a very different philosophy. This philosophy must take a diametrically opposed view of the nature of man, his relation to his world, and his process of learning. Such a philosophy — one to form the basis of a new Learning System — is presented in Column 2 of the chart.

Other Rationales and Systems

What might a means for facilitating learning based on this philosophy look like? Several authors have described their conceptions in very important books: George Leonard’s *Education and Ecstasy*, R. Buckminster Fuller’s *Educational Automation*, Ivan Illich’s *Deschooling Society*, Carl Rogers’ *Freedom to Learn*, and Robert Theobald’s *An Alternative Future for America II*. All present learning systems, or parts of systems, based on such an “open” or “free” philosophy.

The Learning System presented in this article is an attempt to synthesize pieces from each of these systems, to add the concepts of educational technology, to add some original concerns and ideas, and to come up with a “comprehensive” Learning System.

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Definition of a Learning System

Based on the open philosophy and on the rationales of futurologists, humanists, educational technologists, and deschooling advocates, the following statements of definition can be derived for a Learning System:

- A Learning System has as its purpose to bring people into contact with resources for learning.
- A Learning System is a system which provides:
 - a compilation of data about resources for learning;
 - a means for creating and storing learning resources;
 - a means for access to learning resources.

One might ask why, in the light of the philosophy on which the Learning System is based, there is a need for any system for learning at all? Why doesn't the philosophy lead to the absence of any system and to merely turning people loose to learn? The answer lies in the fact that while people do not need teaching or motivation to learn, they also do not learn in an isolated, sterile environment. They learn by interacting with information, things, people, and institutions.

The next question, then, is if these exist in great abundance in the natural environment, by just turning people loose, would they not come in contact with these resources and learn from them? That is almost true, except for one small problem — "contact." In order to learn from the resources, one must locate them, obtain access to them, and interact with or observe them. How does one locate the environment in which to learn a certain thing? Could one, for example, learn to make pottery in a

Educational System Philosophy

- Man is basically evil, and needs to be controlled and socialized in order to fit into a society.
- Man does not want to learn — he must be motivated to extend himself.
- Man cannot learn on his own — he must be taught.
- Some types of learning are better or more important than others.
- Learning is preparation for life, and is therefore removed from life.
- At some time in their lives, people stop learning and start living.
- An experience is learning only if it takes place in a specially sanctioned environment — what takes place outside of that environment is not real learning.
- There is a group of people which is a priori qualified to make decisions for other people.
- There is a group of people who are qualified to sanction education experience for others and tell them what to learn.
- The learner is subservient and has no rights.
- Knowledge is the sole province of a few skilled professionals; it is a mystery to the masses.
- This philosophy calls for a closed system with opposing philosophies not tolerated, the underlying philosophy hidden, the philosophy closed to change.
- This philosophy violates the United States Constitution, Bill of Rights, and Declaration of Independence.

Learning System Philosophy

- Man is basically good, and can grow on his own into a civilized being — given the chance.
- Man always wants to learn — he is essentially a seeking, learning animal.
- Man learns on his own, in his daily interaction with his environment.
- Different types of learning are just different — no value judgment can be made.
- Learning is life and life is learning — the two are merged into one.
- No one ever stops learning as long as he is alive — to stop learning is to die.
- Any experience the person experiences, no matter where and under what circumstances, is real learning.
- All people must be involved in the decisions that affect their lives.
- An individual is the sole and best judge of what educational experiences are best for him—he may seek advice from others, but no one may dictate to him.
- The learner is equal and has all rights of men.
- Knowledge belongs to the masses—it is generally available to all.
- The philosophy calls for an open system with opposing philosophies an integral part, the underlying philosophy open, the philosophy open to change.
- This philosophy follows the intent and the letter of the United States Constitution, Bill of Rights, and Declaration of Independence.

100-acre Oklahoma wheat field with nothing else but wheat, and could one learn to grow wheat in a California potter's studio with nothing but clay and a wheel? There must be some way for a person to know where the environments are — and there

are many — from which he can learn a given thing. And once one has located the environment, how is he to become part of, or an observer to it? Is he to barge in and demand to use the wheel or plant the seed, or is he to peer in the window? There must

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be some way for a person to gain access to the environments from which he can learn.

This leads directly to Illich's suggestion for a learning network. This would provide the learner with information about, and access to, learning peers, expert models, things, and mentors. This network is an excellent place to start in setting a model for the Learning System. However, the network has several shortcomings. The most important concerns what happens when the network does not have the resources to meet the learner's needs; this may occur because the network does not list this type of resource, or because this type of resource does not exist. For example, suppose a learner wanted to learn pottery, but was terribly shy and did not want to learn from an expert potter. What he wanted was clay, a wheel, and a film on how to make pottery. If the network does not list "educational materials," then it might have to tell the learner that it could not provide the resource even though it existed on film.

A second shortcoming is that the learning network assumes that the learner knows what he wants to learn when he queries the network. If he does not know, then the network does not provide any means to help him obtain guidance in deciding what he wants to learn.

Thus, to remedy these shortcomings, the concepts of educational technology from Silber and humanism from Leonard can be added to the learning network of Illich to create a Learning System. This has the effect of doing three things: First, it broadens the range of resources that the learner can be put in touch with by including the full range of educa-

tional materials and equipment. Second, it creates a means for developing resources which are requested by learners but which do not exist, and a means for storing those resources until they are needed. Third, it broadens the meaning of access to include help in accessing if it is requested.

It might seem, however, that by adding these features to the learning network, and transforming it into a system, we have gone back to the concept of a school — a special place for learning — which violates the philosophy of the Learning System. The best way to see if this is true is to go beyond the definition of the Learning System and to look at its characteristics. These characteristics take the definition to a more specific level by presenting the guidelines for the system operation.

CHARACTERISTICS OF THE LEARNING SYSTEM

It is not unique for a system to have characteristics. What is unique is to plan those characteristics in advance and to:

- Make those characteristics *congruent* with the philosophy and definition of the system.
- Arrange the characteristics so that they may be easily *changed* by the participants in the system.
- Use the characteristics as criteria for the participants to *evaluate* and change the system if it does not operate according to the characteristics.

The Learning System characteristics are congruent with its goals, can easily be changed by all learners, and are used to evaluate the success of the Learning System. This unique use of its characteristics is designed to

stop the Learning System from turning into an entrenched bureaucracy which operates for its own sake instead of for the purpose for which it was originally intended.

In order for a Learning System to be a compilation of resources and data about resources and a means for access to those resources, the Learning System must possess the following characteristics:

- *Learning System and control.* All decisions in the Learning System remain ultimately in the hands of those affected by them. The Learning System provides a free network of resources, and not a controlling education.
- *Learning System and experimentation.* The Learning System is experimental. The process of constant, ongoing evaluation and self-renewal is built into the Learning System.
- *Learning System and the learner.* Everyone is considered a learner throughout his whole life. Everyone is considered a resource throughout his whole life. The Learning System is a zero-reject system. The Learning System is accountable to the learner. Failure is Learning System, not learner, based.
- *Learning System and its organization and operation.* The organization and operation of the Learning System are built around the learner and facilitating his learning. The Learning System is integrated with other systems in the city. The Learning System is a full-time operation. The Learning System uses the most sophisticated technological concepts and machines to develop and provide access to learning resources. The Learning System is based on a

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broad-range, open-ended bank of learning objectives which provide access to a wide range of learning experiences.

One of the best ways to understand the Learning System is to see how it might operate. By seeing the system in operation, it is hoped that the learner will develop some framework in which to put the information about the components which make up the Learning System — information which follows in subsequent sections.

The operation of the system will be explained in two ways: First, a straight narrative describing possible phases in learning; second, a scenario, describing a family just entering the learning system (see Appendix, “Entry into the Learning System: A Scenario”).

OPERATION

Operation of the Learning System from the Learner's Point of View

The operation of the Learning System from the learner's point of view is the most important aspect of the Learning System. It is how he utilizes all the resources of the system to move from a vague gnawing that there is something he wants to know to knowing it. Since the Learning System is neither uniform nor compulsory, there is no way to predict how any given learner will, on any given occasion, use the system resources. To facilitate an understanding of how the system might work, however, it is possible to take a hypothetical learner who goes through all the possible steps of utilizing the system's resources. It is important to remember that this learner is merely hypothetical, and that most learners will not want, and will not be forced to learn in this way.

HOW WILL TEACHERS EARN A LIVING?

If there are to be no full-time people doing what teachers and administrators do now, how will they earn a living in the Learning System? This is a very difficult question to answer. One is initially tempted to say that an exception to Learning System philosophy ought to be made for this group of people in order to allow them to earn a livelihood. However, all this would do is recreate the same educational system we are trying to avoid. The answer to the question lies in not thinking of the way people live in the current system, but rather to think about how they would live at The City. At The City everybody learns, performs learning helping functions, and earns a livelihood.

For some teachers, what they taught in school will be similar to real-life occupations (artists, carpenters, mechanics, accountants, interior designers, writers, historians, computer programmers, scientists, filmmakers, etc.), and in addition to offering themselves as expert resources for those wanting to learn these skills, they practice their occupation to earn a livelihood. For those who feel that they are not skilled enough in the area they previously taught to practice it as an occupation, and for those whose areas provide no means of earning a livelihood, it is possible to learn another area through the Learning System. There will be jobs for some in the Learning System's “Structured Center” — the place where those who want structured education instead of free learning go.

This will be difficult at first, but it will be as difficult for people coming to live in The City, for different reasons. If people are coming to The City to improve the quality of their lives, then they must be willing to give up some of the things that cause life outside The City to need improving. To say that we must allow cars to be driven in The City because some people will be out of work or inconvenienced if we don't is obviously ridiculous in terms of what we know about ecology. To say that we must keep professional teachers and administrators in the Learning System is just as ridiculous in terms of what we know about how people learn and what the school system has done in the past.

There are 11 possible sequential steps a learner could go through in utilizing the Learning System. These steps, with explanations, follow.

Unstructured. In this phase the learner has no particular interest in learning anything. He wanders around the city, talks to other learners, drops by the Unstructured Center, spends some time in the Stimulus Center. After some time, either because he is bored of being unstructured or because he has become interested in something, he decides he wants to learn something.

Consultant Contact. Since he is not sure of what he wants to learn, he decides to contact a person to serve as a personal and educational consultant, and also as a learning resource consultant. He queries the Learning Objectives-Resources-Information Network (LORIN) from a terminal in the Stimulus Center for a list of consultants currently available. He receives a listing which includes the names of several consultants he knows and doesn't like, so he decides to wait for a few hours. Later, he receives the name of a person he knows

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and respects; he “makes an appointment” through LORIN.

Consultant Interaction. He explains to the consultant either his desire to learn something specific (which he picked up in the Stimulus Center) or his desire to just plain do something. The consultant asks if she may see his learner data file and, since he has dealt with her before and trusts her, he agrees. Together, they discuss his needs in terms of what he knows about himself and what he has already learned. This does not help him narrow down what it is he wants to learn. She makes several suggestions and asks him for suggestions. Despite some good interaction, they are not able to narrow down his interests beyond a global area — art.

LORIN Interaction. The learner finally suggests using the LORIN sort-down procedure to help decide on his interests. After using the sort-down, he selects a learning objective and then a learning resource. The resource is an activity which requires material resources, an expert resource, a space in the Resource Utilization Center, and two learning peers.

Resource Contact. Through the administration, human resource, and peer learner data files, the learner makes appointments with an expert resource and two peer learners, makes arrangements to pick up the materials at the Resource Storage Center, and reserves space in the Utilization Center. The next morning he picks up the materials and meets his fellow learners and the resource.

Resource Utilization. He and his fellow learners interact with the material and expert resource. They make the responses called for in the activity, and even while they are in the

midst of the experience, feel themselves beginning to grow.

Evaluation. While they feel good about their experience, they all agree that it would be a good idea to use the evaluation resources included in the activity to see if they have really met their objective. The evaluation involves performance of the skill they have been learning under the evaluating eye of the expert resource. Our learner and one peer do fine, but the third is not capable of performing the skill.

Data Update. The learners update their learner data files, indicating that they have completed this objective and resource and whether or not they have met their objective. They then give the results of their evaluation to the resource evaluation data file. Finally, they indicate to the resource administration file that the resources are free again.

Resource Maintenance. Since our learner had responsibility for the materials resource and the facility used, he checks them both for damage and cleanliness. He puts the special dividing wall they used in the Center back and returns the materials to the Storage Center.

Recycle. (Not Meet Objective.) The learner who did not meet the objective recycles to Step 2 and discusses with the consultant the problems he had in meeting the objective. It turns out that he felt intimidated by the expert resource and the fact that he thought the other two learners were smarter than he was. They agree that he would be better off trying the objective this time with only a material resource and a tutor. He then goes through the entire process again.

(Meet Objective.) Our learner met his objective and is now ready to

decide what he wants to do next. He could recycle to Step 1 and be unstructured again; he could recycle to Step 2 and have another discussion with a consultant; he could query LORIN himself and find the next objective which follows the one he has just completed. Instead, he makes a different decision.

Human Resource. He decides that rather than be a learner in the formal sense for a while, he would like to perform one of the human resource roles in the research and development function. He has already taken the learning activities to learn the skills involved. Today he feels that he would like to work on redesigning a film that the Resource Evaluation Data file had indicated, last time he checked, needed to be made more effective.

COMPONENTS OF THE LEARNING SYSTEM

What components are needed in a Learning System in order to allow it to operate as indicated above? I believe three types of components are needed: objectives, resources and data. The objectives and resources components will be discussed in the following sections. Data, due to space limitations, will not be dealt with in this article.

Objective

Purposes of the learning objectives component. The learning objective component facilitates the learner's learning in three ways:

1. It provides, through a set of standard descriptors, a means of accessing the appropriate learning resources.
2. It helps the learner identify what he wants to learn to some degree of

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generality or specificity for either short-term questions or long-term learning goals.

3. It provides a basis for helping the learner decide whether or not he has learned what he set out to learn.

One of the ways to select and access learning resources is to know what you want to learn and to request the resources that can help you learn it. (The other is to merely browse through all the resources.) In order to make such a request and to have it fulfilled, however, there must be a way of indicating what each resource deals with, so that when someone asks to learn something he can put his finger on the resource that would be most helpful. This is where the “descriptors” are useful.

This first way is fine for the learner who knows what he wants to learn; the learner who has a vague idea, or no idea at all, or who wants to make long-range learning plans needs more help. He needs the learning objectives component to act something like a roadmap — to show him what learning options are available and how to get there, without *forcing* him to go anywhere. He can use the objectives to help him identify where he is now, where his immediate learning destination is, where his long-range learning destination is, and what intermediate routes to it there are. To provide this road map, the descriptors must be related to one another in a hierarchical and/or coordinate manner which enables the learner to sort from general to specific learning interests and to identify how learning objectives are related to other learning objectives. For example, a bewildered learner could, after searching through the areas of the objectives

component, decide he was currently interested in “art”; he could then become more specific and decide he was interested in learning to “throw pots on a wheel” as an immediate learning objective; or he could decide (as a long-range objective) to learn enough to become a “professional potter,” and discover what intermediate learning objectives were needed to get to that objective.

Regardless of which approach learners use in selecting their resources, some will want to know whether or not they have met their learning objectives — can they indeed “throw a pot on a wheel” or can’t they. With objectives stated in specific terms, it is possible to use these objectives to develop evaluation resources to enable the learner to measure his learning and to see if he has met his objective. Whether the Learning System develops formal evaluations from the objectives, or the learner derives and applies his own criteria to them, the objectives provide the basis for deciding whether the objective has been met.

The breadth and open-endedness of the learning objectives component. There is only one criterion for the inclusion of a learning objective in the learning objectives component — one learner expressing it as a learning need. Since the Learning System is designed to meet *each* individual’s learning needs, it must use the sum of each individual’s needs as the parameter which defines what is included. It cannot, as does the current school system, use as a criterion “what everyone agrees upon” — the lowest common denominator — since that ends up meeting no one’s needs.

As a result of this criterion, the range of objectives offered through

the Learning System will be broader than the range offered by any current “educational institution.” Objectives will not be just cognitive or just affective or just psychomotor; they will not be just conventional or just radical or just offbeat; they will not be just work-oriented or just leisure-oriented. The objectives available will cover anything any one learner could possibly want to learn.

The learner is not limited, however, by the imaginativeness (or lack thereof) on the part of the designers of the Learning System. The bank of learning objectives is open-ended, so that the learner can add any learning objective which he wants to meet but which, for some reason, is not already in the Learning System. Only by having the system open-ended can we be sure that “designers” do not limit what learners may learn. Further, no objective may be removed from the Learning System because the criteria for removal too easily become criteria for censorship of what one may learn.

These two criteria — for inclusion and deletion — will necessarily result both in sets of objectives which contradict each other, and in sets of objectives which are offensive to some people. There are, for example, three (or perhaps more) distinct, disagreeing approaches to the study of biology. Rather than have the Learning System select the “best” approach for learners, it will make all three available, letting each learner select the one (or more) that he wants to pursue. In addition, if some people find certain sets of objectives on biology which offend their religious or moral beliefs, then they are not obligated to study those sets. These criteria are necessary to insure that no

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one but an individual himself makes decisions about what he will learn, and the breadth and open-endedness of the learning objectives component insures that the resources are available to help him learn it once he has made the decision.

Required objectives in the Learning System. How far does the right of the learner to determine for himself what he will learn extend? Surely there are limits on it somewhere. There must be some objectives that are required? There must be some that are forbidden? The Learning System answer is no — no, there are no required or censored objectives.

The problem with required objectives is that what is required depends upon who is requiring. If a skill is really required for survival in society, then it will be so obvious that every learner will see it and want to learn it on his own so he can survive. No learner has to be required to learn to eat; he figures out very quickly that that is an essential to survival and he learns it. If we made eating a required objective, he might starve to death out of spite. If reading is essential to survival, then the learner will figure that out and learn it; if it doesn't strike him as essential, maybe it isn't and then there's no need for him to learn it. Finally, required objectives assume that if you require someone to learn something, they learn it. All the evidence in the world suggests that people only learn what they want to learn. They do not learn, and often resent, what they are required to learn.

Learning Resource

The learning resources provide the learner with the vehicle through which he can meet his learning ob-

jectives. They are *how* he learns, or *with what*, and *with whom* he learns. They provide him with an enriched environment in which to learn. They bring him in touch with information, people and things which help him learn. They do this for each and every learner, according to his unique learning needs.

Since we know that learners are different, we would intuitively feel that, to meet each learner's needs, we must have different resources for each objective. The evidence supports this feeling. Research indicates that learners have a learning style — how they go about learning something the most effective way, and a learning preference — how they like to learn. These variables, and others, go into making up learning style and preference.

They must also, therefore, go into making up the different learning resources which are available for each objective. The variety of resources must be great enough to provide the appropriate type of resource for any conceivable type of learning style or preference. The resources must cover all possible senses, approaches, techniques, and media.

To be adequate the list must have several inputs. A list should not be limited by the knowledge of the person who made up the resource list. It may be missing what might turn out to be the most important resource of all, or it may be missing an obscure resource that would be used by less than one percent of the learners. In either case, the list is inadequate. To remedy this situation, the learning resources component is open-ended. Any learner may add any resource which he feels is related to the objective; in addition, any learner may

design new resources for himself and others if he feels currently existing resources are inadequate.

Structure of the Learning Resources Component

In order to systematically cover the large variety of learning resources needed for the Learning System, the learning resources component takes its structure from a systematically developed model in the field of educational technology. All resources are grouped under six categories:

- People resources
- Tool/equipment resources
- Facility resources
- Activity resources
- Evaluation resources

These six categories are designed to include any type of resource any learner might want to use — involving any degree of structure, any senses, any location, any media, any approach, any personal contact. Further, these six categories are co-equal in importance; no one type of resource is considered to be, *a priori*, better or more important.

Space does not permit a detailed description of all six sets of resources. Most should be familiar to educational technologists and need little description. Two sets of resources that are unique in the learning system — that is, they operate very differently from the way they would in any other system — are the *people* and the *facilities* resources. These are described in detail below.

People

Always learners — not full-time educators. In a Learning System which has as its base learning and communication, the primary role of people

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will be that of *learner*. They will not just be learners from the first to the twelfth grades or until after college; they will be learners from the moment they are born until the moment they are buried.

This means that in the Learning System there will not be a class of people who are considered ignorant or “unfinished” because they have not yet learned and another class of people who are considered smart or “finished” because they have already learned. Everyone will be considered as having learned many things and still having many things to learn, although for each person these categories will include different things. No one is better than someone else for having learned something, because the other person has learned something he hasn’t. In practice, this means that the white middle class Ph.D. or corporation executive is as unfinished and as much a learner as the 12-year-old Black boy or Chicano girl who can barely read English — although, of course, both have already learned different things and still have different things to learn.

This notion has important implications for the other people’s roles in the Learning System. It implies, first of all, that since no learner is better than another and since different learners have learned different things, that one learner can help another learner learn what he knows, while the second learner can help the first learn what he knows — in an equal sharing relationship. It also implies that, because such a condition would violate all the ideas about people and learning stated above, there is no room in the Learning System for a role in which people are considered to be superior by virtue of

past learning; who are considered to be so learned that their primary responsibility is no longer to learn; and who are asked to interact with learners in a superior, one-way relationship to help others learn, and to assume that they can learn nothing from the learner. Further, people who desire such a role are the people least deserving of it, for the values they model — stopping learning, superiority — are exactly the opposite of the values of a learning/communication based Learning System.

How people are made available to help learning. Since there can be no full-time “educators” (to use the current word) because they violate the principles of a Learning System, how do we make people available to help other people learn, in return, of course, for being helped to learn something themselves? The key to the answer to this question lies in differentiating between two different approaches to helping other people learn. The first and current approach asks, “What do we need to do to help people learn?” and then takes the answer to that question and gives it to *one person* to do as a *full-time job*.

The second approach, which is more compatible with the goals of a Learning System, takes the same answers to the question, but then says, “Okay, these are the *functions* or *roles* that must be performed (things that must be done) to help a person learn. Since the different functions require different skills anyway, they are best performed by different people. They are best looked at as *temporary functions* or *roles* that are only performed as needed by another learner and as they don’t interfere with one’s own learning.” This means that a person, primarily a learner, would some times

perform one or more of the functions that help others learn. Of course, the other times he would have them performed for him.

Incentives for helping others learn.

Since helping people learn may not be a full-time paying job, three possible incentives exist for performing one of the 10 Learning System functions needed to help learners meet their learning needs: learning, barter for other learning, money.

First, learners may perform some of the functions (development, evaluation, supply/maintenance, administration, tutoring, and consulting) as part of their own learning experiences. They may, for example, choose as part of learning activities related to computer programming to help program the Learning System computer. In this way, learning becomes more real, and has an immediate and useful output. Second, learners may perform some of the functions for other learners in return for having the functions performed for them when they are learners. For example, a businessman, housewife, writer and child could barter their services — each one performing the expert resource function once during the day in return for being able to be a learner twice during the day, with no money or other incentive having to change hands. Third, those who wish to perform functions more and learn less than what is decided to be a fair barter rate, can be paid for performing the functions, provided they do not become full-time educators. The exception to this will be the few full-time administrators who will be paid. *Learning-related functions.* What are the functions that need to be performed, by many people some of the time, to help people learn? To help

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identify these, let's first identify the function or role of the learning, because all other functions stem from facilitating the learning function. The learner decides what he wants to learn, interacts with some resources (human or non-human) to help him learn, decides if he has learned what he wanted to learn, participates with all other learners in making decisions about the Learning System, and performs other functions of the Learning System — sometimes to help other learners.

In order to help or allow the learner to do these activities, the following functions must be performed:

- *Personal and Educational Consulting Function.* The person truly acts as a consultant, helping the learner only as requested. The main function here is to relate to the learner as a human being and help him discover that he has interests needs, potentials, and problems, and to discover what these are. The learner could then be referred to another function (possibly performed by the same person, and possibly not) to either help him solve the personal problem — a function probably outside the system if the problem is major — or to help identify how to meet the educational needs and potentials.
- *Learning Resources Consulting Function.* The person acts as a guide to the Learning System (if requested to do so). He helps the learner identify his learning needs in terms that enable him to use the system to meet them. Using data about the learner, he may make suggestions about learning needs or resources. Using his knowledge of the learning resources available, he can help the learner match them to his needs.
- *Expert Resource Function.* The person acts as a skill model for the learner. The expert resource does not try to “teach” but rather acts as a model and guide helping the learner.
- *Peer Learning Function.* The learner will spend a good deal of time interacting with learning resources and activities by himself; thus full attention can be paid to his unique needs. Sometimes, however, for all learners — and perhaps most of the time for some learners — the learner will feel the need for an additional component in his learning situation — another learner. Such a person (or persons, if more than one) can be called a learning peer. Learning peers do not need to be peers in the sense we define the term today; all that is required is that they both have the same learning need and decide they want to learn in the company of someone else.
- *Group Facilitating Function.* The person helps groups of learners, or groups of learners and resources, who request help to learn to function more effectively as groups — either as an end or means to an end.
- *Tutoring Function.* The person acts to facilitate an individual's learning process. The person is not an expert resource in the area in question, but rather has just learned the skill himself and is therefore aware of potential problems that other learners might have. He obviously will frequently change the learning objectives for which he offers to serve as tutor, since over time he forgets those nuances which will enable him to tutor. There is no age qualification on performing the tutor function for a particular learner, and the learner will select the person who will perform the tutor function

for him. The tutor function will most frequently be called into play when the learner has tried existing human and non-human learning resources for his learning need and found them to be inadequate.

Several additional functions must be performed to help keep the system itself operating. These are omitted here because of space limitations.

Facilities

Building special facilities for learning has three undesirable effects.

First, it increases the cost of operating the Learning System, since money must be expended to build, maintain and repair the buildings. Second, it tends to isolate learning in those special facilities. Third, the permanence of the facilities tends to stagnate and freeze the Learning System. Therefore, the facility resources of the Learning System follow two principles:

- Wherever possible, learning takes place utilizing already existing facilities in, and outside of, the city where the Learning System is located.
- Wherever it is absolutely necessary to create special facilities, they shall: be built by learners from the Learning System, be inexpensive to build, be of a temporary nature, and be built so they have some learning value in and of themselves.

Existing facility resources to be used by the Learning System. In the Learning System, learning will take place in seven types of already existing facilities:

Home. The home can serve, for those who so desire, as the main learning facility. It could be one's own home, the home of a learning peer, or

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the home of an expert resource. The only requirement for using the home as a learning facility is that the desired learning resources are available.

The extension of currently available remote-access systems to the home would facilitate its use as a learning facility, and those planning new towns are indeed making this service possible. The optimal outfitting for a home to be an ideal learning facility would include a computer terminal with the following characteristics:

- Send messages to all Learning System components.
- Receive data from the Learning System.
- Receive learning resources from the Learning System:
 - *see a film* — requires color television display,
 - *read parts of books* — requires hard copy from screen capability,
 - *draw and alter drawings* — requires CRT and light pen,
 - *do programmed materials* — require interactive capability.
- Send messages to other learners.
- Receive messages from other learners:
 - *requires combination with video-telephone.*

These ideal equipment configurations are not needed, however, to make the home a perfectly adequate learning environment. All that is needed is to bring the learner into contact with those resources he needs to learn, and this can be done with material (books, films), tool (clay, chemicals), people (peers, experts), activity (simulations), and evaluation resources (tests) easily at home.

Business and Industry. Recent experiments in “schools without walls” have shown the wisdom of utilizing

the community’s business and industry as facilities for learning. Since the goal is to bring the learner into contact with the resources, it seems logical to take the learner to the places where the resources are most concentrated — where they operate every day for profit. It is at the sites of business and industry that the learner would come into contact with expert resources (auto mechanics, accountants, lawyers), tool resources (gauges and wrenches, books and calculating machines), material resources (technical books, documents), and evaluation resources (does the car run, do the books balance, did the client get off).

Public Facilities of the City. “Schools without walls” have also discovered that the city itself has some of the finest learning resources available for no charge (except for a few tax dollars) — materials resources in the form of art and history collections in museums, books and films in libraries, animals in zoos, and fish in aquariums; expert resources on transportation, justice, human resource development, housing, and government; and tools resources in the form of transportation systems. While one can quibble over whether or not these resources function adequately in roles for which they were designed, they still exist as facility resources which bring the learner into contact with resources.

Streets and Open Spaces. Not all learning takes place in facilities which have an “inside,” or in facilities which are planned. Outside facilities, planned and unplanned, are resources for learning. Planned resources include recreational facilities (tennis courts, football fields, lakes for boating), and miniature eco-systems just

waiting to have their biology, chemistry, geology, and history studied. Unplanned resources include grassy areas, oceans and lakes, trees, streets, flowers — all ideal resources for meditation, isolation or chance encounters.

Special Private Facilities. The concert hall, the theater, the cinema, and the lecture hall are all special facilities which are privately owned, but which have as their purpose providing access to resources for communication. Rather than duplicate them, the Learning System makes them an integral part of its facility resources.

Private Schools Outside the Learning System. It is possible that the means for learning selected by a learner will be a formal class which is offered in a private “school” (high school, business school, college, laboratory, institute) either inside or outside the city where the Learning System is located. This selection may be based on the learner’s need for structure or on the fact that the class is indeed the best resource around.

Countryside and Cities Outside the City and Country. It is obvious that all the learning resources for a given objective will not be located in the city where the Learning System is located; in fact most of the resources, or at least the best resources, may be in another city, out in the countryside, or in another country completely. To meet learning needs of all learners, then, these must be considered as facility resources.

EVALUATION AND SELF-RENEWAL

Need for, and Types of, System Evaluation/Self-Renewal

It would be impossible for the Learning System (or any system, for that matter) as a whole, and for the

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components of that system, to function perfectly from their initial moment of operation onward. The system or its components will malfunction either initially from poor design and implementation, or later on from just running down or from forgetting the initial purpose, or from both. If this malfunction is not corrected, it grows worse, cripples the system, and eventually kills it.

Since the Learning System philosophy recognizes that failure is not the end of the world, this malfunctioning does not mean that the Learning System must be scrubbed. On the other hand, it certainly does not mean that the malfunctioning should be allowed to continue as it is in most currently operating systems. The legitimacy of failure and the need to correct it give rise to two of the most important operations of the Learning System: evaluation and self-renewal. The purpose of evaluation is to find the malfunctioning in the system or in its components before they have had a chance to grow to unmanageable proportions. The purpose of self-renewal is to remedy the problem so that the system or its components are functioning as they should again.

The evaluation and self-renewal processes of the Learning System are different from most of those currently operating in systems; the processes in the Learning System are continuous, immediate, integral, and universal. Evaluation and self-renewal in the Learning System do not occur just at the end of a year, month, week, or day. They occur every minute of every day. Every time any learner interacts with the system and its components, the system is being evaluated. And every time an error signal is generated, the system or component is redeveloped.

Renewal takes place immediately upon discovering the problem. Evaluation and self-renewal are not put in an isolated, budget-starved department somewhere to die. They are built into the everyday operation of the system. Nor are evaluation and self-renewal done by a few specially hired professionals. Evaluation is performed by those affected by the Learning System — the learners. Self-renewal is performed by those learners who choose to work on it in the research and development function.

Lengthy discussion of evaluation and self-renewal for learning resources and for system characteristics has been omitted here for reasons of space.

FEEDBACK/EVALUATION

The Learning System, as just has been indicated, is in a continuous state of evaluation and revision. This article is part of that process — and so can you be if you so desire. Your evaluation of, feedback on, criticisms of, suggestions for, or improvements of the Learning System presented are needed for this revision process. If you have some strong feelings about the system — either pro or con; if you want to see it improved or abandoned; or if you want to implement it, please write and express your views. Any constructive suggestions *will* be incorporated into the system; this is not just a writing exercise. Please send feedback to: Kenneth H. Silber, Instructional Communications Center, Governors State University, Park Forest South, IL 60466.

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APPENDIX

ENTRY INTO THE LEARNING SYSTEM: A SCENARIO

The purpose of this scenario is to illustrate most of the possible occurrences in the introduction of a person into the Learning System, and to show both the variety and relatedness of the occurrences. As a result of this aim, the family which is used in the scenario may be a bit extreme. Each person in it has been chosen to represent an extreme of some "type" of person who might have special problems, or adopt special postures in adjusting.

Mr. and Ms. Miller and their four children, June and Robert 15, Ralph 13, and Jennifer 4, have just moved to The City, which has a Learning System. After getting settled into their house, they contact the DOR center to "find out about the Learning System." Each member of the family first has contact with another City resident who is performing the educational and personal consulting function, and from there, the routes they take in their relationships with the Learning System are completely different.

Mr. Miller, now 40 and unemployed, was until recently a structural engineer in the aerospace industry. While his boyhood interests and skills in mathematics and science had led him to this career, he had been doing some thinking lately about his mission in life. That thinking, plus the circumstances forcing him into a career change, have led to his selection of work in an area where he can contribute more to society than he has in the past — urban planning and development. He hopes his systems background and thinking can be applied to social problems. His main learning objectives, he is quite sure,

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are to obtain training and a degree in urban planning. He also has economic problems since he must find a source of income while he retrains.

As a result of his discussions with an educational and personal consultant, he finds that his needs can be met by the Learning System. He discusses the realities of his switch to a social science field at his age, and is fairly reassured that he would be capable of making the change. He suggests, however, that he would like to take some self-evaluation instruments to check his capabilities in the area he has chosen and his stamina to undertake the difficult psychological problems of the change. In his discussion of what urban planning entails, he learns that he would be dealing with people who are quite different from him; since he had never interacted with different types of people on his former job, he adds to his list of objectives training in interpersonal communications. In addition, the personal and educational consultant helps him find an evening job as a waiter, to provide on income and to allow him free time for learning.

As he is about to leave, the consultant reminds him that the Learning System is a two-way street and asks if there are any resources he has to offer to others. Mr. Miller has never thought of himself in this way, but after the initial surprise he indicates that he could serve as an expert resource in structural engineering, and, he believes, in woodworking, his hobby. The consultant gives him the resource data forms to complete, and explains how he might, later on, play the tutor, personal and educational consultant, or learning resource consultant roles.

After taking and grading his self-

evaluations, and assuring himself (in consultation with the consultant) that he is capable of making the change, he goes to see a learning resource consultant. He indicates to the consultant that since he wants a degree in his new field, he would like to go to a formal university for this part of his training. However, he is not satisfied with only simulated learning, and would like also to apprentice himself to someone or some agency in The City doing urban planning. The resource consultant consults LORIN, and indicates that both the state college and state university offer programs in urban planning. Together they compare the programs for cost, entry and quality, and Mr. Miller agrees that the college program meets his needs better. LORIN also indicates that the Department of Urban Planning of The City has need for a quarter-time apprentice, and Mr. Miller needs no urging to sign up. Since he is a little unsure about his interpersonal communications objective, and what kind of resources that entails, he questions the resource consultant. The consultant explains a little, and then suggests a resource called a "mini-lab," in which the techniques involved are demonstrated. Mr. Miller is off and learning.

Ms. Miller, 38, was a schoolteacher before coming to The City. She understood before moving that there were no schoolteachers in the Learning System; now she is faced with coming to grips with what that means. Her personal and educational consultant is most helpful in this regard, having been a teacher herself five years before. The question of an income is paramount, since Mr. Miller's income will need to be supplemented. Ms. Miller

could teach in the structured center part time — although, the resource consultant points out, this will slow down her adjustment to the Learning System if that is what she really wants. Ms. Miller, like her husband, is adventuresome and willing to try to get out of the schoolteacher mold. She and the consultant agree that she could perhaps wait a month before starting work so that she can try out some new experiences first. One idea suggested by the consultant really appeals to her — learning together with four-year-old Jennifer. It will help her learn new ways of helping people learn, and will help her perceive the world in a new way.

Ms. Miller also has as a learning objective becoming a better consumer. She mentions in passing an interest in music she has never had time to pursue, and the consultant picks up on it. She suggests that this might be a good time to begin. Ms. Miller is more than happy to offer herself as a resource, but is very careful to avoid becoming a "teacher" again. She starts out by offering herself as an expert resource in an area much in demand — helping women learn how to fix their automobiles.

The learning resource consultant explains the learning resources available for her needs, especially the people roles in the Learning System. He suggests that she might start by participating in the Learning System simulation and in a group encounter for ex-teachers. She agrees with the simulation idea, but objects to the encounter. The consultant asks if she would like a buddy, and she agrees with that idea. She says she would like to hold any further decisions until she has had more time to learn about the Learning System, and says

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she will drop by again next week.

Ralph, an average student in junior high school before coming to the Learning System, has a completely different type of interaction with his personal and educational consultant. Ralph expresses two concerns after much probing by the consultant — first, that he really does not know what he wants to learn since he has never been asked that before; second, that he feels he should have his parents in on approving the decisions he makes. The consultant explains that both of these reactions are fine and normal, and suggests that he might want to explore the Learning System with a buddy for a week and then return to see her with his parents.

Ralph gets along fine with his buddy, Jim, and they both discover that they are baseball nuts. Jim suggests that they might spend the morning at the Stimulus Center, and then, in the afternoon, play baseball with Jim's friends. At the Stimulus Center, he puts on a set of headphones for his first lesson in Japanese; is impressed by several learners using the computer to learn to read, and by light interactive with video displays; gets into a film being made by other learners; and plays a game with the computer but loses. The ball game is great fun and Ralph makes some more friends. One of them suggests he write up the game for the newspaper. He tries for several hours with Jim at his side, but gives up in tears when he can't do it. Jim suggests that he spend the evening with him in his "peer/family" group. Ralph goes and hears them talking about what went on that day. One of the other group members mentions that he failed in something that day, and the group immediately supports him — indicating that it

was not his fault and that failure was okay, suggesting other ways he might try to learn, and recommending ways of evaluating the resource that really failed. Heartened by this response, Ralph gets into the discussion and relates his experiences. The group reinforces his participation, and he comes out of the session with the resolve to spend some of his time learning to write sports stories.

A week later, Ralph and his parents meet with the educational and personal consultant and together they develop a list of things Ralph wants to learn. Ralph's parents want him to go to college. After discussions with the consultant they seem satisfied that the learning objectives Ralph has selected will not only meet his needs but also will provide him with the skills he needs in areas such as math and reading, and will also help him develop his self-confidence. Ralph's learning experiences are flexible and take advantage of day-to-day occurrences as well as the pre-planning which he, his consultant, and his parents have done.

On one of his many excursions around town one day, Ralph is prevented by a policeman from crossing a street against the light. Angry, embarrassed and puzzled, he later talks to a learning resource consultant about the incident. To his question about why there are such laws that limit his freedom, the consultant suggests a learning activity that would help him understand. Vincent is a 15-year-old boy who had, some time before, investigated the same kind of question. The consultant introduces them. Vincent points out the path he had followed and Ralph eventually finds himself talking to the policeman who stopped him, visiting City Hall,

and utilizing tapes and slides on how laws are made. With the help of a filmmaker and Vincent, Ralph creates his own learning activity and learns how to follow a problem to its solution using all possible resources. He is now an expert resource for others in this area.

The baby of the family is four-year-old Jennifer. An outgoing child whose energy and endless questions often wear out her mother, she responds immediately to the environment of the early childhood center, which is part of the Stimulus Center she and her mother visit. Ms. Miller watches Jennifer, interested in seeing what she likes and what she can do. Stimulated by what seems to be an endless variety of toys, Jennifer flits from carpeted reading corners, to tables piled high with things to count and measure, to a sandbox, to an area filled with construction materials, to a dollhouse, to a music area, to see the animals, to a painting group. She stops to listen to a story, helps some other children get cookies ready for the oven, puts on some adult clothes and becomes part of an impromptu play. There is no question that Jennifer is content to stay here. She especially enjoys interacting and playing with her mother, who begins to understand her daughter better through learning with her. One day, when Jennifer starts to do some simple number work, her mother notices that she is counting on her fingers. Believing she is ready for more abstract reasoning, she encourages her, using parts of a learning activity specifically designed to do this. Ms. Miller's initial concern about leaving Jennifer at the early childhood center while she works part-time evaporates as she meets with other parents at the

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center and learns about the programs available. Also, a 17-year-old girl serves as a tutor for Jennifer when she is gone. Ms. Miller also spends considerable time taking Jennifer on walks around The City to increase her learning environment.

Robert Miller is a 15-year-old high school “dropout” from a traditional school system. At first, he finds it hard to believe that his contact, Mr. Green, is really interested in what he, Robert, wants to do. Mr. Green is patient. A perceptive man, he realizes that he is dealing with a student trained in a system where failure is blamed on the student and that Robert, who has not been able to achieve success in the traditional system, has found that failure draws attention to himself, and in a negative way fulfills his need for recognition.

Robert goes through his Orientation, enjoys wandering around with his buddy, and discusses the alternatives offered him. He is asked if he wants to join a group of students studying together and on their own for the college entrance examinations. He is exposed to the possibilities of reading law with a local lawyer, helping in an early childhood center, working with a veterinarian, learning to fix cars, assisting in a printing shop, helping in a local plant nursery, and others. He is impressed by being taken seriously. Robert decides that, for the present, he’d like some on-the-job training in auto mechanics. He is interested in cars and has tinkered a bit with his friends’ cars. Mr. Green is well aware that his past history of failure probably means that it will happen again. Rather than suggesting that Robert work part time at a local garage, he suggests a repair center manned by expert resource

professional mechanics where he will be closely supervised, where any “failure” will be short-lived, and where he will receive help immediately.

Things go well for a while, but it doesn’t last. Robert begins showing up for work late, not showing up at all, skipping out, failing to complete jobs in the time allocated and, finally, he manages to break four parts that are expensive to repair. Naturally, he blames Mr. Green, the mechanics, and others. Mr. Green neither yells at him nor feels sorry for him. Instead, he and Robert’s buddy persuade him to join an evening peer/family group with kids his own age. Here he finds he is not alone in having problems; the other kids do, too.

Mr. Green then encourages Robert to help teach drawing at an early childhood center (his talent for drawing was discovered during the Orientation period) because he feels he needs to be in a situation where people will respond more quickly to him — as young children will — and because he needs to do something he can do successfully. Mr. Green asks Robert’s immediate supervisor to pay specific attention to and respond immediately to positive actions by Robert.

Mr. Green goes further. Counseling is recommended for both Mr. and Ms. Miller and for Robert, since there appears to be some connection between Robert’s problems and his relationship with his parents. Through counseling, they begin to understand one another. The Millers have learned to react to Robert’s failures by making constant, negative accusations and they, too, need to learn to accentuate the positive. For Robert, his “failure” at the repair cen-

ter becomes a positive learning experience and he can go forward from there. As a matter of fact, he becomes excited by his success with the teaching and drawing experiment and he decides to learn more about art and child development.

June is a very intelligent and sensitive girl who is completely turned off by school. While doing well, and seemingly college bound, she began to realize the authoritarian, structured, compulsory, irrelevant, and dulling effect of school. She physically stayed in school for a while, but mentally dropped out. From a sense of boredom and loneliness she turned to drugs. In her quest for companionship, she turned to free love. She became involved in left-wing political activities and was arrested once for demonstrating.

In her initial contacts in the Learning System, she is very hostile. She does not trust the personal and educational consultant she goes to see, and refuses to take any self-evaluations since she is sure that the data will be used by the Learning System bureaucracy to hurt her. The consultant realizes that all these attitudes are correct for the educational system and society from which she comes; further, he realizes that no amount of talk will help to change those attitudes, but that they will change as the Learning System proves to her by its actions that it is different. She refuses a buddy and ignores his suggestion to visit the Unstructured Center and the Stimulus Center; she storms off into The City by herself.

After several days June stumbles across the unstructured area quite by accident. She is fascinated by the light show on the canvas and stops to watch. She is invited to join in drink-

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ing and smoking by the others and does so. It isn't till she has been in the crowd for about an hour that she spots the personal and educational consultant, now a learner, attempting to build a dome across the field. Panic-stricken that he will "tell on her" she attempts to leave. The other learners assure her, however, that that is not a problem here.

June really does not believe it until a week has passed and nothing has happened. She decides that she can go to see him again and test out how free the system really is. She tells him her interests are in radical politics, communism, living on a commune, and the oppression of women in the United States. Without flinching, he offers to allow her to use LORIN to locate communes seeking members and resources on the other areas, or to put her in touch with a buddy who can help her find people who have refused to be listed in the system. She decides on a compromise, and uses LORIN to obtain resources on communism and the oppression of women, while agreeing to meet the buddy to be put in touch with other resources.

While each of these people represent extreme stereotypes, the portraits are close enough to reality to recognize in each of the Miller family some adult or child currently involved in, or ignored by, the educational system in some way. None of the people is meant to be portrayed as bad or even misled. They are merely different people with different problems and different needs. The scenario has attempted to show how six people with extremely differing needs can begin to become acquainted with and use the resources of the Learning System. It has not shown, in all its subtleties, all facets of

the everyday operation of the system for all learners — such a task would be virtually impossible. However, the freedom and resources evident to the learner in his introduction to the Learning System are indicative of the freedom and resources available throughout the Learning System at all times.