The Learner and the Library: There's More to Learning than Meets the Eye

DOROTHY MACKERACHER

LEARNING IS A NATURAL process, a set of activities which occurs within the individual at both conscious and unconscious levels. It begins in response to a need to be met, a problem to be solved, specific life conditions to be coped with, a desire to be achieved, or just plain curiosity. It can initiate change or be a response to inner or outer changes in the physical, social, emotional, mental, or physiological aspects of daily life. Learning results in changes in the meanings an individual uses to make sense of life experiences; in the skills and strategies she or he uses for acting on, reacting to and interacting with other persons and life events; and in the values and attitudes which affect actions and intentions. Learning involves a sequence of cyclical and repetitive activities, some of which can be observed by others but most of which can be experienced and known only by the individual learner.[1] Learning, as described in this article, is assumed to be a process under the control and direction of the learner, but influenced by interactions with others. Librarians, for example, have a unique opportunity to influence learning activities by providing the material resources and human services to assist learners as they extract information and ideas through reading, hearing or seeing the meanings and values which others have given to life experiences.

This description of learning offers a number of basic ideas which are fundamental to understanding the learner-centered approaches proposed in other articles in this journal. Descriptions of learning which

Dorothy MacKeracher is Research Officer and Associate Instructor, Department of Adult Education, Ontario Institute for Studies in Education, Toronto, Canada.

are not learner-centered tend to focus on how the learner responds to certain teaching strategies, to specifically designed resources, to structured experiences, and to facilitative interventions. That is, such approaches focus primarily on the specific actions of the person designated as the teacher, facilitator, counselor, advice-giver, or whatever (referred to in the remainder of this article as the "facilitator" of adult learning); and secondarily on how the learner responds to these actions. For example, a nonlearner-centered approach might focus on the content of a lecture by a noted expert and subsequently on the quality or quantity of what was learned as a result of this lecture. Or a library might focus primarily on the most efficient organization, from the library's perspective, of a card index file and secondarily on solving the problem of helping individuals learn how to use the index.

The learner-centered approach described here focuses primarily on the actions of the learner related to his or her own learning process; and secondarily on the responses to the learner's actions by the facilitator of adult learning. This approach reflects a current and persistent trend in adult education. It is one which suggests that many librarians, as facilitators of adult learning, might want to shift their attention from a primary concern for library organization and efficiency to a primary concern for individual learning needs. We must hasten to add that our concern is not to propose an either/or choice reflecting a dichotomous conflict between the learner-centered approach and other approaches; but rather it is to discuss ways in which the learner-centered approach can be used to enhance other approaches, to suggest creative alternatives to traditional library activities, and to raise the consciousness of librarians about the diversity and uniqueness of the needs, actions and intentions reflected in the personal learning of individual library users.

The first part of the article describes learning as an individualized process from which general approaches to facilitation can be derived. To "facilitate" in this context means to help a learner carry out some aspect of his/her learning activities, rather than the more traditional notion of teaching. The second part considers some conditions, both within the learner and in learning environments, particularly libraries, which affect the learning and facilitating processes. The third part addresses the issue of using the learner-centered approach to examine alternative strategies for facilitating the learning activities of library users. Since I have made a basic assumption that learning is under the control and direction of the individual learner and that the one adult learner about whom I have absolutely reliable information is myself, I will use my knowledge of my own learning processes to illustrate various points throughout the article.

The article summarizes some state-of-the-art thinking about learning and facilitating. It also, by implication, indicates some future directions for the field of adult education in general and for public librarianship in particular.

Learning as a Process

To describe learning as a process is to emphasize its active nature.[2] There are several aspects to this active nature. As healthy human beings, all of us actively seek to make sense of our internal (emotional, mental and physiological) environments and external (social and physical) environments by reducing the unknown, unpredictable and ambiguous aspects to a manageable level, by giving meaning and value to events and experiences in such environments, and by devising a set of strategies to guide current activities and future intentions. All adults engage in learning at some level of conscious or unconscious activity. The degree to which we actively (i.e., deliberately) engage in seeking information, assigning meanings and values, and devising and implementing strategies, determines a specific profile of our activity level as learners and establishes our individuality as learners.

The process of learning is described by various writers and researchers in different terms. Most writers agree that learning involves a sequence of activities: some observable, some known only to the learner, and some logically inferred.[3] For example, information seeking is observable, while decision making is known only to the learner. If we know that learning activity *A* is followed by activity *C*, then we tend to infer that activity *B* (e.g., problem solving), while unknown and unseen, is probably occurring within the learner at some unconscious or partially conscious level.

In this article, I am assuming that the learning process includes the following activities:

1. seeking out and taking in information (making sense);
2. interpreting and valuing information (making meaning);
3. using meanings, interpretations and values in solving problems, developing strategies, making decisions and creating intentions (planning and deciding);
4. behaving physically or performing in ways which are guided by intentions (acting);
5. interacting with inner and outer environments to get reactions to one's meanings, intentions and actions (getting feedback); and
6. seeking new information (making sense again).

I am also assuming that the learning process is affected by various internal and external conditions. Some conditions, such as individual preferences for certain types of information and approaches to learning, can be used by a facilitator to improve the quality of help offered to the learner. Other conditions, such as stress, anxiety and disruptive change, must be recognized and acknowledged for their potential in affecting the learning process.

Making Sense

To make sense of our environments, we actively search out information about those environments by seeking social, emotional, mental and physical stimulation and by taking in information through sense receptors. The receptors in our eyes, ears, skin, mouth, and nose provide information from and about our external environments; those in our inner ears, muscles and other organs provide information from and about our internal environments. Stimuli in the form of nervous impulses, chemical levels and hormonal regulators become a flow of information to the central nervous system. This information must be interpreted or given meaning and value in order to be useful in learning. The flow of information is modified by such conditions as sleep, emotions, stress, fatigue, anxiety, physical fitness, health, diet, and disability; but it stops only with death.[4] The brain requires this continuous flow of information to remain healthy. In fact, under conditions of sensory deprivation or boredom (as well as acute distress, exhaustion, high body temperatures, and malnutrition), the brain will invent its own information to keep itself active.[5] Depending on what generation you belong to, this phenomenon is variously referred to as burn-out, cabin fever, tripping out, or hallucinating. In persons over 65 years, the same phenomenon is too often viewed as the onset of senility—an interpretation which is usually wrong and potentially damaging to the individual.

As in all aspects of the learning process, each individual has a preference for certain types and sources of information and actively attends to and seeks these out. Most learners also ignore or actively avoid, through selective inattention, other types and sources.[6]

As one type of learner, for example, I have a preference for visual information—both verbal and nonverbal—and a tendency to selectively ignore auditory information. I have trouble obtaining information on the telephone and avoid it whenever I can. In a library, I prefer to get a book, map, picture, or statistical table and *see* the information for myself. When a librarian tries to *tell* me the information, I become

anxious and my somewhat inadequate listening skills become progressively worse. I can imagine that there are individuals with the reverse problem, and others who must both *see* and *hear* the same information to make sense of it. Research has shown that redundancy in information, up to an optimal level, enhances learning.[7] Redundancy here means excessive repetition of information. Personal preferences for certain types of information suggest that the learner would view his or her preferred type as essential and all other types as potentially redundant. Libraries, therefore, help learners when they offer information of all types.

Felt or kinesthetic information (i.e., stimulation which comes through the mouth, skin, inner ear, muscles, and internal organs) seems to be a type which, while preferred by many learners and ignored by others, is routinely ignored by libraries, except through the provision of braille books. Libraries sometimes provide kinesthetic displays of crafts, artifacts or models; but they often protect these behind glass, an approach which negates the tactile quality of the display. Museums, as information providing institutions, are more likely than libraries to offer kinesthetic information through hands-on exhibits. Libraries have become highly organized and efficient in distributing visual and auditory information, but it is a service which does not offer the preferred type of information for all adult learners.

Making Meaning

To give meaning and value to the general flow of uninterpreted information from current experience, each learner draws on past experiences.[8] Our experiences provide us with a general framework or perspective from which we search for and discriminate patterns. These patterns are derived from the similarities and differences we perceive in information. Each person's patterns result from using personal strategies to compare incoming information with existing meanings and to identify new patterns. This process allows us to create meaningful order from the potential chaos of life experiences.

Order can be created in several ways.[9] Existing meanings and values can be imposed on incoming information to filter out irrelevant, ambiguous or incongruent information. This process does not lead to learning, but it does maintain the status quo; that is, existing ideas tend to be reinforced. For example, if a learner views a library as offering only traditional services and a local library attempts to establish a new and interesting service, the learner may filter out information about the library as an innovative institution and continue to think of it as

unchanged and unchanging. Alternately, patterns and meanings can be newly created or old patterns reorganized and appropriate meanings and values assigned. This process allows for learning in that meanings and values change on the basis of experience.

Each pattern is given meaning and value, and is integrated into the general framework. Some patterns are assigned representational words which describe the associated meaning. Simple patterns are combined to form complex patterns and are assigned new meanings and values, and so on. Meanings are our conceptual interpretations for direct experience; values are our emotional interpretations.

By our adult years, we have developed a variety of meanings and values derived from two major sources, personal and social. Those experiences which are ours alone, the personal experiences we know from within ourselves, provide personal meanings and values. They are unique, idiosyncratic, often unarticulated, and sometimes articulable. For example, my personal experience with librarians informs me that they probably can't help me anyway; so I rarely ask for help unless I am really stuck. As I wrote this article, I realized I had to articulate my experiences with libraries and librarians. The previous statement represents my first attempt to express my library-related experience in words.

Those experiences which form part of our common heritage, the social experiences we know because we have been told about them, provide social meanings and values. These are derived from collective experiences of the social groups in which we are members. Appropriate and approved social meanings and values are learned through socialization, often during childhood. The words associated with social meanings and values provide a common language through which we can communicate with others.[10] For example, in spite of my personal experience with librarians, I have been taught to believe that libraries are important repositories of social and cultural information and traditions; and that I could share in these traditions if I would just go in and ask.

Our personal meanings and values tend to be structured in forms corresponding to the forms in which information is taken in—visual, auditory, kinesthetic, and so on. We each have a preferred form for structuring our own patterns.[11] Our preferences are viewed as part of our individual learning style. An individual who prefers visual patterns will turn most incoming information into visual structures first, then search for patterns and assign meanings. Visual patterns tend to become images, maps and models; and knowing something is equated with

"seeing it." Auditory patterns become rhythms, tone patterns, sounds, and melodies; and knowing something is equated with "hearing it." Kinesthetic patterns become sensations, urges and feelings; and knowing something is equated with "feeling it."

Our basic patterns and their meanings and values can be communicated to others directly as visual, auditory or kinesthetic art forms such as paintings, music or dance; and indirectly through the use of descriptive words.[12] Many adults have developed meanings and values from past experiences and, after assigning descriptive words to their meanings, have lost the connections between the words and the original experiences. Other adults have developed complex meanings and values to which they have not assigned descriptive words.

Our social meanings and values tend to be learned initially as a sequence of words, often without the attendant visual, auditory or kinesthetic experiences. The building of connections, therefore, between social and personal meanings, and the connecting of social meanings to appropriate images, sounds and sensations is a primary function of the facilitator of adult learning. Another function is to help adult learners describe, in words, those experiences which have not yet been articulated.

As one type of learner, I have a tendency to turn all incoming information into visual patterns within which I can *see* meaning. If I can't see something in my mind's eye, I have trouble understanding it—and that includes seeing the point of the social meanings and values I have learned over the years. Once I have *seen* it, I can then translate my image into words for other learners. If I were a better artist, I would be drawing this article rather than writing it. As a writer, I have an image in my mind of what I want to convey to you, the reader. It is this image that I am translating into words. Even when I have a clear image of the meaning I want to convey, I must see the words appear on the page as I write so that I can order and reorder them to my (visual) satisfaction.

I know that other learners deal with information in other ways. I am fortunate in that our society has provided more descriptive words for the meanings and values based on visual patterns than for those which are auditory or kinesthetic. It is important that adult educators be able to recognize that many adult learners cannot describe what they want to learn or need to know because their patterns are structured in formats which are not easy to translate into words. For example, an adult who *feels* uneasy about dealing with doctors, may come to a library for assistance and not be able to explain what kind of information she or he needs, because the kinesthetic patterns of meaning she or he is attending

to (i.e., the felt symptoms of needing to learn something), cannot be easily described in words.

In helping adults to learn, a major concern for the facilitator is to assist the learner to make sense of information and develop his or her own patterns of meaning. When a learner is influenced to adopt the facilitator's patterns of meaning, the results are often disastrous. The learner may appear to understand—a good technique for placating the facilitator—but go away not having made sense out of the information he or she has been given. It is always a good facilitating technique to try to start with the learner's existing meanings and then connect these, through translation, to the facilitator's meanings, or to the standard terminology used in the content area being learned.

Planning and Deciding

Information, with its associated meaning and value, is used to solve problems, assess alternatives, plan for future actions, and decide on immediate responses. This phase of learning activity occurs at various levels of consciousness. Much of the activity we call thinking is carried on at levels below consciousness.[13] Subconscious thinking usually involves the use of images, sounds and sensations as representational markers for meanings; while conscious thinking involves the use of words as well as images, sounds and sensations as representational markers which can be organized and reorganized to the learner's satisfaction.

Making sense and meaning, as well as thinking, are private activities, carried on solely within the learner. If a facilitator is to help a learner in these learning activities, then the learner must be both willing and able to make them public through descriptive words. Facilitating at these steps in learning, therefore, is limited by the learner's ability to accurately describe the related activities. The facilitator can help by knowing and suggesting alternative words to describe subconscious learning activities.

Acting

The activity of thinking and problem solving allows the learner to develop plans. These are usually plans for action steps to be taken in relation to the content or skill being learned or the problem being solved. Plans are future oriented in that the learner intends to do something at some future time, whether one second, one hour, or one year ahead. Plans are turned into physical or muscular actions. A plan or decision to act might be as fleeting or immediate as shifting the focus of the eyes; as permanent or long-range as learning to be an archivist.

Each learner has a preferred style and setting for acting. Some learners appear to be fearless in testing out new actions in novel settings. Other learners may develop new meanings or acquire new skills and then be reluctant to test these out in interactions with others. Meanings and skills which are never tested out in real or practice situations, can never be confirmed, acknowledged or commented on by others. For most learners, the acknowledgment they receive from others reinforces what they have learned and encourages them to continue.

Getting Feedback

As the learner acts, she or he receives feedback or information about actions and their consequences on both internal and external environments. Immediate reflexive feedback comes from sense receptors in the muscles, inner ears and internal organs. This feedback tells the learner if the muscular action was carried out as intended. While this type of feedback cannot be facilitated by others, all facilitators should be aware that immediate reflexive feedback is the first indication the learner receives about actions. If the learner feels himself being clumsy (and values this information negatively), he may withdraw immediately from a learning environment. That is, the learner usually is the first person to assess his own actions. Note that immediate reflexive feedback is always kinesthetic and, hence, is ignored by many learners. Slightly delayed, reflexive feedback comes from the learner's eyes and ears as she sees herself act or hears herself talk. We can never see or hear ourselves exactly as others see and hear us. Therefore, our perceptions of ourselves are usually distorted, and our assessment of our own learning may be equally distorted.[14] Facilitators need to be sensitive to the possibility that a learner seeking help may be assessing his or her appearance negatively while also trying to attend to information being offered by the librarian. Such a situation may cause the learner distress because it requires that his or her sensory abilities work overtime.

We also obtain feedback by reflecting on our own actions, often hours or days after the event.[15] Feedback obtained through both reflexivity and delayed self-reflection contribute to our self-concept—that is, to the meanings and values we assign to ourselves as functioning human beings. Self-reflection allows us time to assess and reorganize our meanings and values. It is an important process in helping us learn from our own experience and assists in connecting our personal experiences to socially accepted meanings and values.

We also receive feedback through interacting with persons and objects in our environment. When others smile immediately after we act, the smile becomes feedback which we interpret through the mean-

ing we attribute to a smile. Facilitators should be aware of the fact that interpersonal feedback, particularly in the form of nonverbal behavior, is important in that it has the power to encourage the learner to try again, move ahead or quit on the spot. Objects also provide feedback. When an object, such as a computer, is designed to respond to the learner, the feedback provided is immediate. The immediacy of computer feedback, particularly when the learner has made an error, may initially be overwhelming. Some adults have never learned how to cope with immediate feedback, and initially respond to a computer with anxiety. Once they have learned to cope with immediate feedback, they are inclined to become frustrated when the computer does not respond immediately. Libraries which install computer terminals for access to information must help novices to cope with their emotional responses to a machine—a wholly new response for most adults—and to develop new strategies appropriate to computer learning.

Most resources in libraries are not interactive. Some require a librarian to mediate between the learner and the information being sought. In other words, librarians are most helpful when on hand to provide feedback so that the learner knows she or he has achieved something, and also has an opportunity to feel good about it. Most library staff appear to have neither the time nor the facilitating skills necessary for providing feedback to individual learners.

The most important factors contributing to the facilitating quality of feedback are that: (1) the greater the delay between action and feedback, the less effective the feedback becomes in helping the learner; and (2) feedback from persons should, whenever possible, be descriptive of actions rather than prescriptive about improved actions.[16] Telling a library user what she *should* have done can be counterproductive by irritating the learner.

Making Sense Again

All feedback becomes new information to be taken in by various sense receptors and recycled through the sequence of learning activities already described.

Conditions Affecting the Learning Process

The learning process can be affected by a wide variety of internal and external conditions. Examples of internal conditions which influence learning are health, fatigue, diet, stress, emotions, perceptions of oneself as a learner, anxiety about success or failure, past experiences

and personal learning strategies. Examples of external conditions which influence learning are the kinds of persons available for social interactions, the physical setting, the quality and quantity of information available, and access to opportunities to test out new meanings and skills.

In this article, I will limit the discussion of factors affecting learning to the learner's past experience and current learning strategies, to basic motives for learning, to issues related to stress and anxiety, and to the quality of facilitating which might be provided in a library setting.

Learning Strategies

While we create meanings and values from our daily experiences, we also create strategies for making sense and meaning, and for guiding current learning activities. Various researchers in the field of learning describe these strategies as styles.[17] Three such styles need to be described here. A cognitive style describes a preferred strategy for *making* sense and meaning.[18] A learning style describes a preferred strategy for *changing* sense and meaning.[19] A problem-solving style describes a preferred strategy for asking questions which will result in gathering information, for using that information to develop meanings which will answer the questions, and for deciding subsequent actions.[20]

There are many such styles; some are more useful than others in specific settings. From a librarian's perspective, useful ways to think about styles might include the following.

First, some learners take an active approach to seeking out information by going to many different information sources. Others either wait for information to come to them or seek information largely from their own experiences or their immediate surroundings. Learners who actively seek information from many sources are likely to use libraries as information sources. Learners who are more passive or self-reflective about seeking information are less likely to use libraries. Reaching these latter learners may mean that the library has to take the information to them through various communicating strategies.

Second, some learners prefer very concrete information, specific details, drawings, how-to books with plans, and so on. Other learners prefer more abstract information—general discussions, verbal descriptions, books that address the issue of "why" rather than "how."[21] Still other learners will use any type of information as long as they have the opportunity to abstract their own meaning and not be constrained by the meanings (or values) of the author or the information source. Libraries can facilitate adult learning by deliberately seeking out and

providing different types of resources, in different formats (e.g., visual, auditory, kinesthetic, verbal, nonverbal), for any given content area.

Third, some learners will seek interaction with other persons as a deliberate strategy in their learning process.[22] They may seek information, ask for help in clarifying problems or ideas, and accept comment on their own ideas or activities from these other persons. Other learners prefer to approach material resources, such as books or computers, without assistance from other persons. They prefer to figure things out for themselves. Librarians need to become sensitive to the individual preferences of their clients in seeking or avoiding interaction with others as a strategy in the learning process.

Fourth, some learners prefer to approach learning tasks through a series of steps, each following logically from the previous step. Such learners tend to select and use only that information which they perceive as being directly relevant to each step in the learning process. Others approach learning in more holistic terms, often gathering large amounts of redundant information before identifying patterns of meaning. Serialists, on the other hand, build up patterns of meaning, adding or subtracting as they go. Holistic learners often appear to be getting nowhere; then identify a pattern of meaning in what appears to be a flash of insight.[23] Serialists can usually explain how they are learning; holistic learners have trouble explaining the process they are using. Holistic learners will probably read this article in a piecemeal fashion, creating their own meanings as they go. Serialist learners will probably try to understand each paragraph as they read, page by page, through the entire article.

The styles in these four different areas suggest that librarians could develop a profile of different types of learners based on the type and level of activities involved in the learning process. Such profiles might be developed to describe adult learners in terms which are specific to library concerns. For example, the learner who wants to look at one or two pages in ten different books (but rarely reads an entire book) has different needs than the learner who wants one book which tells all. While all learning styles could not be described in such a profile, librarians could use such approaches to increase their awareness of individual learning strategies and needs, and relate that awareness to resource collecting and reviewing, to staff development, and to reader advisory and other services.

Past Experience

Past experience provides the raw material from which we organize and reorganize meanings and values related to ourselves and to the

world in which we live. Researchers in the field of learning generally refer to meanings and values as our personal constructs, our world perspective or our self-organizing model of reality.[24] Whatever term is used, we all receive information and make sense of it through a set of predetermined meanings and values, using a well-established set of strategies.

This model of reality has several characteristics which are important to both learner and facilitator. First, the various components of the model accumulate over time. The model is open to change; as time passes, the model is increasingly likely to be reassessed, reorganized and redefined on the basis of new experiences. The model gives meaning to past experience through the learner's biography, self-identity and sense of purpose in life.[25] These aspects of past experiences each have a cognitive or meaning component, and an emotional or value component. For example, my self-identity includes both the meaning or concepts I create for myself as an individual, and the value or esteem I hold about myself. These components of past experience are constantly adjusted on the basis of new experience so that all three remain consistent with each other and are integrated as a whole or complete perspective.

Second, each learner has an important investment in maintaining the integrity of his or her model of reality, even in the face of disruptive change or disconfirming information. If the learner feels the valued aspects of his or her model have been rejected, discounted or simply ignored by others, particularly by a facilitator, her or his response may be to feel rejected, discounted or ignored as a person. In such cases, a learner is likely to withdraw from the learning situation.[26] Clearly this issue must be of direct concern to readers' advisors, reference desk staff, and other front-line personnel.

The balance between change on the basis of new experience and nonchange as a form of self-protection is constantly in flux. The learning engaged in by most adults allows them to maintain integrity by modifying the meaning of incoming information so that the various components of their model of reality can remain congruent with each other. Such learning maintains the status quo with only minor adjustments in actual behavior. For example, when someone tells me I have done a task particularly well, I usually counter with, "Well, maybe, but I thought I could have done better." I have acknowledged the feedback but modified the meaning so I won't have to change my self-image.

However, some adults also go through a learning process referred to as perspective transformation.[27] In this process past and current experiences are reinterpreted and meanings reorganized to allow for the

assimilation and accommodation of experiences which contradict existing meanings. This process leads to adaptation,[28] to basic changes in the organizing model by which we make sense of experience and, usually, to changes in actual behavior. I can still recall the day I was forced to acknowledge, after seeing a videotape of my actions, that I certainly did look competent—a bit of feedback that I had been successfully modifying all my life. Note that this feedback only made an impression on me when I *saw it for myself,* the same way others had always seen me.

A facilitator of adult learning often feels rewarded when a learner makes a joyful discovery or changes important aspects of behavior. Therefore, learning to facilitate perspective transformations in others has the potential for offering the facilitator profound feelings of success and satisfaction.

A facilitator can be most helpful to an adult learner when the first step in the facilitating process acknowledges and indicates respect for the learner's existing biography, self-identity, inner purpose and integrity and their attendant meanings and values (however inappropriate these may seem). When I go to a librarian for assistance, I feel good about myself when she or he appears to accept my identity as a self-directed learner who prefers to interpret information without assistance. When I am not given this opportunity, I feel my approach to learning has been discounted, my needs have gone unrecognized, and I have been rejected, at least in part, as a unique individual. I rarely go back to that librarian for help.

Our existing model of reality allows us to make sense of current experience on the basis of organized patterns of meaning. However, this same model also limits what we are likely to pay attention to and how we are likely to interpret what we see, hear or feel. There is an ongoing debate in the field of learning about whether we see (or hear) first and then interpret, or interpret first and then see.[29] In reality, both processes proceed simultaneously. However, the process of giving an experience meaning first, and then gathering the information to confirm our expectations, seems to take precedence in the busy and sometimes stressful world of the average adult. To help an adult see (or hear) first and then interpret, we may need to help that adult find the time and space for quiet contemplation and self-reflection free from stress and ongoing novel experiences. We cannot assume that a library is the best place for such quiet activities, but the design of its overall environment should take this issue into account.

Our past experiences contribute to our learning strategies in other ways. The social meanings and values we all acquire, through the

process of socialization, provide us with approved meanings and values for our roles in life. During professional training, librarians learn how to behave, what to value, and what terminology is most suitable for use in a library. These behaviors, values and meanings, plus the associated words, are useful in the library setting, but may not be understood or valued by persons in other settings, nor by library users. A library which values silence is not likely to facilitate the adult learner who learns best by talking to himself. And the librarian who tells the learner that "information on interlibrary loans" is "available on microfiche" and "the readers are next to the vertical files," may be speaking a foreign language as far as some adult learners are concerned. Every professional who acts as a facilitator for adult learning must be prepared to recognize her or his own jargon and to translate words with specialized meaning into the layperson's meanings.

Stress in Learning

Stress is a term which is applied to the behavioral response of an individual whose sense of survival or security is threatened at some level. The threat may be real or imagined, serious or minor. Anxiety is a stress-like response in which the threat remains unarticulated or unidentified. In all cases, the general response is similar, although the level of intensity varies. The individual's breathing becomes faster and shallower, blood pressure rises, physical and mental activity increases.[30] This is an arousal response and also occurs when interest is heightened or emotions are aroused. An emotion is an arousal response which has been given meaning and value within the context of a specific situation. In all arousal responses, the physiological changes initially promote increasingly organized, effective and efficient behavior. As the level of intensity increases beyond the optimum level, arousal behavior becomes increasingly disorganized and is called distress.[31]

In learning situations, the organized aspects of aroused behavior are characterized by increased attention and activity, enhanced interest and enthusiasm, and often increased levels of talking, laughing and coughing. Such behavior can be interpreted by an uninformed observer as child-like and the individual using it may be labeled as childish. An adult who is so labeled may withdraw from the learning situation because the label itself may be interpreted as a threat by the individual.

In learning situations, the disorganized aspects of arousal, or distress, are characterized by increased confusion, inattention, distorted perceptions, misinterpretations, declining activity levels, and deteriorating communication skills.[32] The learner may focus exclusively on

one issue and ignore all others, even those which are essential to the content or skill being learned, or the problem being solved. Such behavior can be interpreted by an uninformed observer as disinterest, lack of motivation, apathy, or even stupidity. An adult who is so labeled will almost certainly withdraw from the learning situation.

Arousal is essential for learning. It can be increased up to and beyond the optimum level by uncertainty, novel situations, ambiguity, or information overload. A facilitator needs to be able to assess the learner's current arousal level (i.e., anxiety, stress or emotions) and have some awareness of how much additional information or ambiguity that person can absorb without becoming distressed. Front-line personnel in libraries can learn to identify the characteristics of aroused and distressed behavior and can use this information to improve their facilitating strategies. A facilitator can initially help the learner identify the cause of her or his distress; then alleviate the associated anxieties before trying to provide information. Often, learner anxiety is associated with the fear of being rejected for asking a question or needing help.

Motivation

Motivation is usually defined as a tendency to produce organized behaviors, strategies for action which are designed to orient the individual toward something, someone or some event.[33] Action tendencies related to learning are similar to the personal styles described earlier. They are described in a wide variety of terms, such as approach/avoidance tendencies,[34] internal/external locus of control,[35] achievement/affiliation needs,[36] and tendencies toward mastery, belonging and affection.[37] That is, motivation, or action strategies, describe the ways in which the activity of learning, and its associated energy, is directed toward learning tasks; the apparent source of control over this energy; and the general goals which might exist in company with specific learning goals. The categories described above should not be viewed as mutually exclusive. Most human behavior involves some degree of all action strategies.

The basic assumption in any explanation of motivation is that a healthy person is normally motivated and acts in accordance with her or his preferred action strategies. The learner does not need to be motivated by external measures. Therefore, as facilitators, our major concerns should be in two areas. First, we must avoid demotivating the learner by such approaches as discounting his self-identity, existing meanings, or personal perspective of reality; increasing her level of arousal through information overload; insisting on offering assistance in a style which is

not in keeping with his preferences; and providing judgmental rather than descriptive feedback.

Second, we must ensure that we do not impose our own expectations about what constitutes appropriate motivation. Learners can be helped to redirect their action strategies so that the ways in which they use their existing energy become more effective. For example, a learner with strong tendencies toward belonging may need to be encouraged to read, not only as a solitary activity, but also as an activity which can contribute to the discussions of a reading group or book club.

Conditions Affecting Facilitation Processes

Each facilitator is as much a learner as the next person. Our major learning task, as facilitators, must be to learn about learners and the learning process. In carrying out this learning task, each facilitator uses the same types of activities and personal strategies as have already been described for learners.

In this article, I am (it is hoped) facilitating your learning about learners, through the medium of writing. I bring to this task the full weight of my past experience, through my own meanings and my personal learning styles and action strategies. Because the medium of the written word is not interactive, I must ensure that I describe my images as often as possible in your terms. Although I cannot interact directly with you, I have been interacting with the issue editor who reads my work, then suggests how I can simplify my jaron and provide library-related examples.

My point here is that to be a good facilitator, I must become knowledgable about my own meanings and values, styles and strategies, in addition to having the same understanding about the learners with whom I work. Only when I understand both sides of the learning-facilitating interaction can I determine ways to improve my facilitating strategies.

Within the learner-centered approach, I can distinguish three basic strategies for facilitating adult learning in library settings. I have labeled these the directing, enabling and collaborating strategies. All require back-up services in the form of extensive resource collections; all are time-consuming and labor-intensive.

The Directing Strategy

In the directing strategy, library services would essentially be reactive in that front-line personnel would respond to learner requests that

are specific in terms of the content (knowledge or skill) to be learned. In this strategy, librarians would have a low involvement in the learner's process of learning but a high involvement in the content to be learned. Librarians would serve as question-answerers, prescribe the best information sources available, and do research on behalf of the user. The answers provided would, as far as possible, be in the learner's preferred format.

My assumptions about the consequences of this strategy are that the librarian would learn a great deal about the content and that the learner might get an answer which made sense in the context of his/her learning needs. This strategy would also provide the librarian with feedback about the quality of the answers provided. In this way, the librarian would have an opportunity to feel both successful and helpful—human needs which tend to be pronounced among service-providers.

The Enabling Strategy

In the enabling strategy, library services would be designed to be responsive to learner requests for assistance in the various phases of learning or problem solving. The learner might not be able to ask for answers to specific questions; and might need help in articulating experiences and clarifying meanings, in obtaining sufficient information to determine relevant patterns of meaning, and in interacting with others to get feedback about alternative ideas or tentative plans. Libraries would offer one-to-one learning facilitation services. The learning needs of specific groups of learners might be anticipated and specially designed courses offered such as writing term papers, conducting library research, or searching electronic information networks. Librarians would serve as facilitators with a high involvement in the learning processes of users and low involvement in the content to be learned. Librarians would need to be well trained in the use of facilitating and counseling skills.

My assumptions about the consequences of this strategy are that the learner would receive competent assistance in conducting his/her own learning activities, but the librarians might never receive direct feedback on the adequacy of their facilitating activities. Without such feedback, librarians might feel doubtful about how helpful they had been and become discouraged.

The Collaborating Strategy

In the collaborating strategy, library services would be organized so that librarians could become co-learners when working with individual

users and co-developers in planning and implementing learning programs or courses for various groups of learners. Librarians would need to be well trained in both facilitating and counseling skills, as well as in consulting and program design skills. Libraries would become centers for activities in which personnel would be directly involved. Librarians would have a high degree of involvement in learning processes—both their own and those of library users—and high involvement in the content to be learned.

My assumptions about the consequences of this strategy are that learners would obtain effective services for facilitating their own learning, and that librarians would receive satisfying levels of feedback about their contributions to learning activities in general. The energy generated both within the library and among learners and librarians would contribute to the further expansion of library services of this type.

The choice of library strategies is partly a function of the meanings, values, skills, and styles relevant to adult learning, held by librarians; and partly a function of the identified learning needs and styles of individual library users. This article will have achieved its goal if it raises awareness about the uniqueness of individual learners, promotes reflection on the interrelationships among libraries, librarians and library users, and contributes to informed decision making about library services.

References

1. Much of the background research discussed in this article is reported in Brundage, Donald H., and MacKeracher, Dorothy. *Adult Learning Principles and their Application to Program Planning.* Toronto: Ontario Ministry of Education, 1980. See also, Woodruff, Asahel, D. "Cognitive Models of Learning and Instruction." In *Instruction: Some Contemporary Viewpoints,* edited by Laurence Siegel, pp. 55-98. San Francisco: Chandler Publishing Company, 1967.

2. Hebb, Donald O. *Textbook of Psychology,* 3d ed. New York: Holt, Rinehart, and Winston, 1972; and Rogers, Carl R. "The Facilitation of Significant Learning." In *Instruction: Some Contemporary Viewpoints,* pp. 37-54.

3. Hart, Leslie A. *How the Brain Works: A New Understanding of Human Learning, Emotion, and Thinking.* New York: Basic Books, 1975.

4. Hebb, *Textbook of Psychology;* and Brown, Barbara B. *Supermind: The Ultimate Energy.* New York: Harper & Row, 1980.

5. Toffler, Alvin. *Future Shock.* New York: Random House, 1970.

6. Norman, Donald A. *Cognitive Organization and Learning.* La Jolla, Calif.: Center for Human Information Processing, 1973; Treisman, A., and Geffin, G. "Selective Attention: Perception or Response?" *Quarterly Journal of Experimental Psychology* 19(1967):1-17; and Katz, Daniel, and Kahn, Robert L. *The Social Psychology of Organizations.* New York: John Wiley & Sons, 1966.

7. Hart, *How the Brain Works.*

8. Kidd, J. Roby. *How Adults Learn,* rev. ed. New York: Association Press, 1973; and Knowles, Malcolm S. *The Adult Learner: A Neglected Species,* 2d ed. Houston: Gulf Publishing Company, 1978.

9. Jantsch, Erich. *The Self-Organizing Universe: Scientific & Human Implications of the Emerging Paradigm of Evolution.* New York: Pergamon, 1980.

10. Torbert, William R. *Learning from Experience: Towards Consciousness.* New York: Columbia University Press, 1972.

11. Bandler, Richard, and Grinder, John. *The Structure of Magic,* vol. 2. Palo Alto, Calif.: Science and Behavior Books, 1976.

12. Ibid.

13. Hart, *How the Brain Works.*

14. Satir, Virginia. *Peoplemaking.* Palo Alto, Calif.: Science and Behavior Books, 1972.

15. Fales, Ann W. "Transition, Loss and Growth: Process of Positive Adaptation." *Educational Gerontology,* 7(Dec. 1980):315-29.

16. Torbert, *Learning from Experience.*

17. Cross, K. Patricia. *Accent on Learning: Improving Instruction and Reshaping the Curriculum.* San Francisco: Jossey-Bass, 1976.

18. Messick, Samuel, et al. *Individuality in Learning: Implications of Cognitive Styles and Creativity for Human Development.* San Francisco: Jossey-Bass, 1976.

19. Kolb, David A., and Fry, Ronald. "Towards an Applied Theory of Experiential Learning." In *Theories of Group Processes,* edited by Cary L. Cooper, pp. 33-57. New York: John Wiley & Sons, 1975.

20. Kolb, David A., et al. *Organizational Psychology: An Experiential Approach,* 3d ed. Englewood Cliffs, N.J.: Prentice-Hall, 1979.

21. Kolb, and Fry, "Towards an Applied Theory of Experiential Learning."

22. Taylor, Marilyn. "The Social Dimension of the Learning Process Where Learning Constitutes Perspective Change." In *Communication Studies in Canada,* edited by L. Salter, pp. 131-46. Toronto, Ontario: Butterworth, 1981.

23. Entwistle, Noel. *Styles of Learning and Teaching.* New York: John Wiley & Sons, 1981.

24. Kelly, George A. *The Psychology of Personal Constructs,* 2 vols. New York: W.W. Norton, 1955; and Jantsch, *The Self-Organizing Universe.*

25. Marshall, Victor W. "No Exit: An Interpretive Perspective on Aging." *International Journal of Aging and Human Development* 9(1978-79):345-58.

26. Kidd, J. Roby, *How Adults Learn.*

27. Mezirow, Jack. "A Critical Theory of Adult Learning and Education." *Adult Education* 32(Jan. 1981):3-24.

28. Ginsburg, Herbert, and Opper, Sylvia. *Piaget's Theory of Intellectual Development: An Introduction,* 2d ed. Englewood Cliffs, N.J.: Prentice-Hall, 1979.

29. Toch, Hans, and MacLean, Malcolm S., Jr. "Perception, Communication, and Educational Research: A Transactional View." *Audio-Visual Communications Review* 10(Sept.-Oct. 1962):55-71.

30. Selye, Hans. *Stress without Distress.* New York: Signet Books, 1974.

31. Brown, *Supermind.*

32. Ibid.

33. Hebb, *Textbook of Psychology.*

34. Dollard, John, and Miller, Neal E. *Personality and Psychotherapy.* New York: McGraw-Hill, 1950.

35. Rotter, J.B. "External Control and Internal Control." *Psychology Today* 5(June 1971):37-42, 58-59.

36. McClelland, David C. *The Achieving Society.* New York: Halsted Press, 1976.

37. Angyal, Andras. *Neurosis and Treatment: A Holistic Theory*. New York: De Capo, 1982; and Jones, Richard M. *Fantasy and Feeling in Education*. New York: New York University Press, 1968.

This Page Intentionally Left Blank