6 Deciding to begin

"Which of all these things is really my *strongest* interest?" "What's the most useful knowledge for finishing this job successfully?" "What books should I take home this time?" "Which course should I take this year?" Before he even begins a learning project, a person faces questions like these. He must decide whether to proceed and what to learn.

As part of this decision making process, he may take several steps. For example, he may set an action goal, assess his interests, seek information on certain opportunities, choose the most appropriate knowledge and skill, establish the desired level or amount, and estimate the costs and benefits of obtaining it.

Throughout the book, to refer to these steps or tasks or decisions, we will use the term *preparatory steps*, or simply *steps*. These terms have the important advantage of being brief and convenient. Other terms, though, could have communicated the meaning just as well. Such phrases include (1) the learner's planning, deciding, and arranging steps; (2) the learner's decisions, tasks, and arrangements; (3) the steps in the learner's decision-making process; and (4) the learner's program-planning steps.

This chapter discusses the preparatory steps involved in deciding whether to proceed with a given learning project, and in deciding just what knowledge and skill to learn in that project. The learner's competence at performing these steps, and the help he needs, are emphasized.

Deciding whether and what to learn is crucially important in most learning projects. Thoughtful, appropriate decisions lead to successful projects; a poor decision may lead to failure or quitting.

The steps involved in deciding to begin a learning project are often difficult. At the same time, surprisingly little help is available for the adult when he is deciding what to learn or whether to proceed. Efforts are needed to develop better ways of helping adults with these crucial steps. This is a relatively unexplored frontier. Creative and innovative developments could dramatically increase the appropriateness and effectiveness of adult learning.

How Thoughtful and Successful are These Decisions?

How thoughtful, competent, and successful are adults in setting their learning goals? Do they usually spend sufficient time and effort at this stage, or do they just "jump into" a learning project without much thought? Even if the adult does perform this task, does he have much skill at it? Or does he lack the ability to define his real problems, interests, needs, and long-term goals?

As with other decisions in his life, the adult may make the decision to begin a learning project without much thought or effort. All of us probably begin a few of our learning projects "on the spur of the moment." Some major decisions in life are made without careful thought and clear goals in mind.

Some persons seem to drift into many decisions and activities without being aware of their own major characteristics and problems, and without realizing the long-term consequences of their decisions. Their learning projects may lack clear goals, or may be based on a superficial or inaccurate understanding of their real problems, interests, and needs. Their learning goals may be almost clichés or slogans: they want to "learn about other countries" or about "human nature"; they feel they should "keep up with the news" or "become a better parent." They probably do not have any long-term action goals or learning goals. Some persons seem to fill or kill time rather than striving to move ahead in some way. They may choose a course or book, for example, as soon as they hear about it, without much thought about its appropriateness.

Not all quick decisions are poor decisions, of course. When moving to a new country, an individual may just assume that he will try to learn the language and customs of that country. Sometimes we just "know" that a certain book or course is right for us.

On the other hand, some adults think very hard about their decision before beginning a learning project. They may jot down the various possibilities, and may carefully consider the positive and negative aspects of each possibility. In order to make a better decision, the person may even gather certain information or advice. For example, he might attend a demonstration lesson or a special gathering for meeting the instructors.

Many of the preparatory steps will occur before the first learning episode, or shortly afterwards. Throughout the learning project, though, the learner may occasionally spend some time at these steps. For example, he may reexamine some of his original decisions and estimates, consider switching to related subject matter, or decide whether to continue and when to stop. Even when he has turned the detailed day-to-day planning over to someone else, he will occasionally think about whether he should continue the project.

There may be certain types of persons who generally are more thoughtful or competent than others at setting their action or learning goals. Such a person may be marked by the ability to think conditionally about himself, and by a lack of confusion

or tentativeness about his present self (Winter, Griffith, & Kolb, 1968). He may tend to be quite open-minded (Rokeach, 1960). Such a person may also fit into the fourth stage (positive interdependence) of conceptual development in the framework developed by Harvey, Hunt, and Schroder (1961). He may also have some of the characteristics listed in Appendix B.

It is sometimes said that a person's present beliefs and attitudes will make him shy away from any effort to learn subject matter that might challenge them. A militaristic person, for example, may be reluctant to read about peaceful ways of handling conflict. In addition, when he does happen to meet beliefs and attitudes that are not compatible with his own, he may ignore or reject them.

Although these problems do occur, at least two factors present a more encouraging side of the picture. First, the phenomenon is not as widespread as some pessimists suggest. Rokeach (1960), for example, argues: "We do not agree with those who hold that people selectively distort their cognitive functioning so that they will see, remember, and think only what they want to. Instead we hold to the view that people will do so only to the extent that they have to, and no more. For we are all motivated by the desire . . . to see reality as it actually is, even if it hurts [pp. 400-401]." Second, we have found several examples of a person setting out to develop or change his beliefs and attitudes. As other people become more competent at goal-setting and planning, they may increasingly initiate efforts to change their own beliefs and attitudes.

The Preparatory Steps

At first thought, deciding to begin a learning project seems a fairly simple matter, consisting of only two or three steps. Interviews suggest that just the opposite is true in many cases: the decision-making is complex and may entail a large variety of steps.

A tentative list of possible steps that may occur as part of deciding whether to begin a learning project has grown out of interviews and observations. No one learner will perform all these steps, of course. In fact, it is quite common for a person to perform only a few of these steps, and to do so fairly easily and quickly. Each step in the list, however, is performed by at least *some* learners. The following list can give the reader a sense of the complexity of some decisions to begin learning.

1. The person decides to turn his attention to the question of what or whether to learn.
2. He tries to increase his general competence at performing these preparatory steps.
3. The person decides which steps to perform, and in what sequence. He may also decide how carefully to perform each step, or how much time to spend at each.

4. He tentatively or definitely adopts, modifies, or drops some action goal (or some desired *level* for an action goal). Or he assesses the strength of his desire for achieving that action goal or level. The action goal could be to perform some responsibility or task at a certain level, to accomplish something, to pass an examination for credit, or to impart something to others.

   As part of this step, the person may perform several other detailed steps. Perhaps, for example, he (a) sets long-term life goals or career goals, or examines his philosophy of life or his basic values; (b) estimates the probable benefits from some action goal or level (that is, estimates the benefits flowing from box C in Figure 2); (c) estimates the present or future needs or problems of some organization or of society; (d) tries to assess his own major strengths and weaknesses, and to develop a more accurate and precise perception of himself, perhaps by comparing himself to certain other persons; (e) estimates the effectiveness or suitability of his current actions or policies in one particular area of his life, or becomes aware of (or dissatisfied with) errors or weaknesses in his performance (or its consequences) in that area; (f) becomes more clearly aware of some problem or decision that he should tackle, or of its importance or urgency; (g) arranges his action goals according to their relative priority, or establishes a schedule or sequence for accomplishing certain action goals; (h) makes an action goal precise and specific rather than general and vague; (i) gains information about the level of performance that he is potentially capable of attaining, or about his probable ability to attain the action goal; (j) sets a very specific level of performance that he wants to achieve; (k) narrows or limits or decreases his action goal to a more realistic level; (l) adopts a supplementary action goal that will require relatively little effort if he is working at the major action goal anyhow; (m) modifies an original action goal into something more elaborate or complex; (n) tries to become clear about the goals and perceptions of the individual for whom he is performing the task; or (o) develops greater confidence or hope in his ability to achieve the action goal at the desired level.

5. Because he believes that *some* sort of knowledge and skill will help him proceed toward his action goal, the person tentatively or definitely decides to spend some time learning *something* useful, but is not yet certain just what. His next step might then be 11 or 12.

6. Without having any particular knowledge and skill in mind yet, the person recognizes his need for some additional knowledge and skill as a base for (a) certain further knowledge and skill that he definitely wants, or for (b) a better understanding of the events or content in some definite future situation. His next step might then be 11 or 12.

7. The person decides to gain some pleasure or self-esteem by just possessing some additional knowledge or skill, apart from any desire to use it. As part of this step, the person might reflect on his personal characteristics, his basic values, his

philosophy of life, his ideal self, or his long-term goals. The next step might then be 11 or 12.

8. Without having any particular knowledge and skill in mind, and without having any idea whether the major benefits will come from using or possessing it, the individual tentatively decides to learn *something*, or to improve himself *somehow*, or to take *some* course, or to read *some* book.

9. Because he is considering certain learning activities or opportunities, the person tries to estimate more accurately or precisely just what knowledge and skill he will probably gain from them. (This step can be important when the triggering event for a learning project is a specific opportunity, method, resource, or group for learning.)

10. Because he is already considering setting out to gain certain knowledge and skill, the person tries to estimate more accurately and precisely the probable benefits. For example, he tries to estimate just how relevant the knowledge or skill could be as a means of achieving a particular action goal, as a base for further learning, or as a means of obtaining the benefits that flow directly from box B in Figure 2. The knowledge and skill are considered only at a very comprehensive level. The learner might actually list his educational objectives (learning objectives, or desired changes in overt and inner behavior), or he might simply want to learn "the contents of those two books" or "the subject matter covered by that course."

11. The person tries to increase his awareness of the range and variety of relevant knowledge and skill available to him (and even of certain knowledge and skill that might become available to him if he took certain additional steps).

    As part of this step, he might try to remove some self-imposed restriction. That is, he might test his assumptions about certain knowledge and skill being inappropriate. Eliminating these inaccurate assumptions is often a significant step for learners within an educational institution (when choosing a topic for an individual learning project, for example, or when choosing a thesis topic).

12. The person tries to become more accurate or precise about just what knowledge and skill would be especially relevant for his purposes or desired benefits. Although the knowledge and skill are still considered at a global level, they become clearer and more refined.

13. The person tentatively selects certain definite (but comprehensive) knowledge and skill to learn during at least the first few learning episodes. This enables him to proceed further with his thinking; in particular, he can now estimate the additional benefits and the costs of this knowledge and skill.

14. The person develops a more precise or accurate estimate of the direct benefits he is likely to receive (pleasure, self-esteem, pleasing or impressing others) from certain aspects of the learning episodes themselves – from box A in Figure 2. Or he tries to become more certain that the learning project will actually produce these benefits, or that he wants them. Often the person will have certain

knowledge and skill in mind before considering these benefits; at other times, though, the person will experience one of these needs or desires first, and will then tentatively select the most appropriate knowledge and skill for providing the desired benefit.

15. The person estimates more precisely or accurately (a) his previous level of relevant knowledge and skill, (b) how far he has progressed from that previous level, (c) his current level, (d) the desired or required level, (e) whether there is still a gap between the current and desired level, and/or (f) the amount of knowledge and skill needed to close the gap.

16. He estimates the probability of being able to learn the desired knowledge and skill successfully, or he tries to increase his confidence in his ability to do so.

17. The person tries to find out whether this particular learning project (or learning projects in general) seems appropriate, normal, and acceptable to others. His certainty may increase dramatically if one other person supports or encourages his intention to learn.

18. The person becomes more precise or accurate in his estimates of the various costs of the learning project. These costs can include (a) time for planning, arranging, and learning; (b) money; (c) the sacrifice of other things that would be possible if that time or money had not been spent at the learning project; (d) space for equipment or books; (e) frustration, difficulty, effort, the need to perform boring or unpleasant learning activities, or other negative feelings; (f) unpleasant physical consequences (such as aching muscles after practicing tennis, or an odor in the apartment after cooking); (g) negative reactions in other persons, including their feeling that the learning project is strange or peculiar; and (h) the need to accept help from others, or to put himself in the hands of some person or group.

19. The person decides how to find the time (how to fit the learning project into his daily life) or how to obtain the money.

20. He tries to think of some way of increasing certain benefits or reducing certain costs, either by making some changes in his environment or by dealing with his emotional reactions.

21. The person estimates the probable cost-benefit ratio, or payoff, for the learning project. He may also compare the probable payoffs from various possible activities, and then select one of them or set priorities among them.

22. He decides whether to actually begin or continue the learning project, or at least whether to proceed with the next few learning episodes.

23. He decides the amount to be learned (or the level of knowledge and skill to be achieved, or the readings or other activities to be completed) within a certain period of time. Or he sets or accepts a final deadline and/or a series of intermediate deadlines. Examples of target dates are (a) the starting date for a new job, (b) the departure date for a trip, (c) the expected date of birth of a child, and (d) the date on which the person is scheduled to deliver a speech.

24. The person frees himself for learning (or decides how to free himself) by reducing (a) his fears, (b) his problems or mental blocks, (c) any strong needs that interfere with his commitment to learning, (d) any demands on his time and energy that reduce the amount available for learning.
25. He tries to understand his occasional lack of motivation for learning something that he "should" learn (learning to care for a first child, for example), or figures out how to deal with his worry or concern about this lack of motivation.
26. The person assesses how satisfied or dissatisfied he is with his general progress in a learning project.

Any given learner will omit several of these steps, and may perform several others very quickly. Some of the steps, though, may be performed several times during a learning project. As he proceeds with the learning, for example, the person's estimates will be revised as a result of actual experience. At various times, too, he may reconsider whether to proceed with learning the same knowledge and skill, whether to stop, or whether to shift to a related but different body of knowledge.

It is clear that deciding whether and what to learn can be a very complex process. In fact, our list contains more than 60 conceptually distinct steps if we add the various steps included in 4, 14, and 18 to the total.

Actual Help

A person may experience some difficulty or doubt when deciding what to learn, or when deciding whether to begin or continue learning. Consequently, he might benefit greatly from some advice, information, encouragement, or other help.

As the learner becomes aware of just which of the preparatory steps are most troublesome, he may plan how to get help with them. Then he may actually seek and obtain that help. A helper (or printed materials) may simply encourage the learner to spend a little more time thinking about whether and what to learn. Or the helper may make him aware of the benefits to be gained from performing one of the 26 steps. At other times a helper will correct certain erroneous perceptions or assumptions, will stimulate or encourage the person to consider learning certain subject matter, or will respond to a request for specific information or advice.

A helper can also point out learning objectives that are too ambitious, that will not really be relevant to the action goal, that are not important enough to sustain the motivation for very long, or that will be almost impossible to attain because of a lack of resources. In several interviews concerning such problems, Heather Knoepfli found in an unpublished study that the learner will actively deal with such a problem as soon as he becomes aware of it. This means the helper can be open and direct, and can operate at a rational, cognitive level. There is little need for him to operate at an emotional, subtle, or subconscious level.

Additional Needed Help

Although adult learners do obtain some help while deciding whether and what to learn, they need even more help than they now receive. This was demonstrated in one study (Tough, 1967) that asked college graduates the following question about choosing the goal in one of their learning projects: "With this task, would you have liked *more* assistance than you actually did receive from other people?" More than one quarter replied affirmatively.

Perhaps difficulty in obtaining appropriate help at the goal-setting stage is common in various aspects of life, not just in learning. In particular, it may be that people in our society are generally incompetent at diagnosing what is wrong or what should be improved. As I reflect on my experiences with certain auto mechanics, furnace repairmen, and medical doctors, I wonder whether they diagnose a problem too quickly. They do not seem to ask many questions, nor gather many data by observation. They do not seem to list a variety of hypotheses, and then eliminate some by gathering additional data through questions, observations, or tests. Perhaps many adults also lack competence or thoughtfulness in diagnosing their own action problems and learning needs, and in helping others do the same; they could benefit from appropriate help in this area.

The need for help in setting learning goals is common in some independent study programs in schools and colleges. Educators sometimes assume that the essence of these programs is simply to give the students more freedom. They sometimes overlook the need for helping the students, with skill but without subtle influence, in deciding just what to learn.

Moving Toward Better Help

Certain learners already have expert help available while setting their learning goals. Certain athletes, for example, receive a great deal of help from their coaches (and from films of their performance) in diagnosing their weaknesses. Their coaches help them determine which aspects of their performance to improve. The professional football quarterback is helped to decide what proportion of his time to spend at improving such skills as passing, running, and ball-handling. The boxer, the baseball pitcher, and the hockey player also receive a great deal of help with diagnosing weaknesses and setting specific goals for improvement. The political candidate facing a major election campaign, and a person setting out on a career as a writer, may seek and obtain expert help in selecting specific characteristics to be improved. Throughout the world there are no doubt many other examples as well.

In many other situations, though, expert help is rarely sought or even available, despite the enormous dividends (to the individual himself, his employing organization,

or his society) that could result from such help. Suppose we could provide expert, intensive, inexpensive help to the promising young researcher or theorist, to young teachers and professors, or to students beginning a doctoral program. Suppose a company, government department, university, or other organization provided such help to any executive who was facing major new responsibilities. Suppose that all couples could obtain free but competent help in setting their learning goals during the year before their wedding and during the first two years of their marriage, or when expecting and raising their first child. Surely the small investment made by society or an employer in these cases would produce considerable benefits.

Perhaps a competent "learning consultant" should be available to any person in a community who wants help in setting either life goals or learning objectives. A small amount from local taxes could be provided for this service, and a small fee could be charged.

Learning consultants should also be provided by companies for their key personnel, and by associations for their members. Very few of the 70 managers interviewed in one study had any clear aims or learning goals, let alone priorities among them (Dill, Crowston, & Elton, 1965). They lacked practice and skill in formulating learning goals, and certainly did not have access to a specially trained learning consultant.

School teachers would also benefit greatly from competent help (when they want it – not just when an "inspector" arrives) in diagnosing their highest priority areas for improvement. Not every teacher's needs can be met by a large-group, in-service training program.

Goal-setting consultants could also be provided for certain specific subject matter areas. One agency might provide a consultant for anyone who wanted to become a better parent. Another agency might specialize in helping people choose their particular goals in understanding themselves and others. Another might help with plans for learning that are connected with various home improvement projects. All of these consultants would help the person to establish his *specific* learning goals, and might also help him with certain subsequent steps in the learning project.

A shift

Manufacturers, governments, special interest groups, and even adult educators have typically had certain messages or other subject matter as their starting point. They have then done their best to spread that subject matter to as many persons as possible, regardless of whether the content is useful to them. The typical methods have included advertising campaigns, mass media, lectures and speeches, and content-centered courses. Impressed by the size of this barrage of messages, Whyte (1952) asked *Is Anybody Listening*?

Perhaps there is now some shift toward accepting the individual's needs and interests as a more appropriate starting point. Communication theory now recognizes that communication can be a dialogue and can include listening (Matson & Montagu, 1967). "Student-centered" (usually, though, in the sense of group-centered) teaching has become more popular. Adult educators have increasingly realized that most adult learning begins because of a problem or responsibility, or at least a question or puzzle, not because of a grand desire for a liberal education. They have at least paid lip service to beginning with the needs of the learners, though this often means assessing the needs of a group of learners (or an even larger clientele) rather than individual learners.

We must become much more competent at helping individuals to clarify their life goals and their related learning goals. Some persons are very vague or even inaccurate in defining their goals. Many persons could become clearer and more accurate about their unique goals. What gives them pleasure, happiness, and self-esteem? In what ways can they best contribute to the world? What assumptions, perceptions, and unrecognized long-term goals are, in fact, affecting their decisions about career, family, housing, possessions, entertainment, and learning? A book edited by Buhler and Massarik (1968) has shown the complexity of the process of goal-setting, and of achieving some suitable integration of major goals. A person's entire life seems to be guided by certain subconscious or conscious directions and goals, which might be called "the human being's intentionality toward fulfillment [p. 403]." As his real goals become clearer and more detailed, the person can discover conflicting goals, detect clusters of related goals, set priorities, and begin to feel that his goals are integrated and his life is whole.

Once the person has selected his action goals, the learning counselor could then help him select the knowledge and skill needed to achieve them. Some defenses, fears, and other obstacles to learning may have to be reduced. The counselor could help him estimate the costs, and the benefits for *his* goals, of various possible learning projects. Indeed, the person could be helped with any of the 26 detailed steps listed earlier. In addition, the person could be encouraged and helped to gain more knowledge and insight from many aspects of his daily life. He can learn from people, television, casual reading, entertainment, and work, even when the desire to learn is only 10% or 30% of his total motivation.

Let us hope, then, that there is some shift from coercing or persuading people to learn, and from shouting our messages at them through advertising and lectures, toward helping the person decide what learning is best for *him*, and then helping him pursue it.

Who can provide the help?

In many learning projects the person does not need any help in deciding what knowledge and skill to gain. In some learning projects, a spouse, friend, neighbor,

or colleague can provide sufficient help. In other learning projects that are immediate and short-term, the person would probably not spend much time seeking help in deciding whether and what to learn. (Developing his general competence beforehand at goal-setting is probably a more useful approach for this sort of learning project than immediate counseling.)

Help in selecting certain learning projects can be provided only by an expert in the problem area or subject matter. For many other learning projects, though, more competent general help is clearly needed. Such counseling is especially beneficial when the individual is selecting his major areas of interest or when he is deciding about *major* learning projects and priorities.

Various sorts of printed materials, as well as a human counselor or consultant, can help a person set his goals. A workbook could be developed to outline the entire range of knowledge and skill open to mankind – the complete potential curriculum for adult learning. It could help the reader to determine his own high priority interest and needs. A simpler version of the book might be entitled "What are *you* going to learn this year?"

A few recent developments in the field of adult learning are intended to help an adult determine his own goals and priorities. In the graduate program in adult education at Boston University, for example, a student uses a "self-diagnosis" sheet to rate himself on more than 30 characteristics, and develops a corresponding list of relevant learning experiences. Malcolm Knowles (1968) has pointed out that some imaginative procedures are being invented for helping the adult diagnose his own strengths, weaknesses, and learning needs. These procedures include role-playing, critical incident process, simulation exercises, skill practice exercises, group observations, and self-rating scales.

Ideal characteristics

To ensure that the adult receives the best possible help in deciding whether and what to learn, the following factors are important:
1. None of the helper's influence results from providing inaccurate or unrealistic information.
2. None of his influence is harmful.
3. Most of the influence is sought by the learner, or at least eventually welcomed by him.
4. The helper does not try to produce much more influence than he actually succeeds in producing, and his concern for what or how much is learned is not greater than the learner's concern.
5. The help is designed for the particular learner.
6. Any influence exerted by the helper results from the learner's trust in his judgment, or from the helper's contagious enthusiasm, not from his control over certain future rewards or other consequences for the learner.

7. As a result of his interaction with the helper, the person develops a stronger tendency to learn in the future whenever he becomes aware of some problem, responsibility, or significant subject matter.

Pilot programs

At present, most attempts to help adult learners merely provide instruction and resources for them. There are few organized attempts to help adults make decisions about what to learn, or about which learning possibilities are highest priority. One of the most significant challenges that we now face is to develop pilot programs to provide better help with goal-setting.

Several psychologists have pointed out the importance of helping a person develop a clear picture of his real self. That picture could include the goals that are already, in fact, influencing his decisions and other behavior. In addition, we could help him develop additional action and learning goals that are especially appropriate for him.

An effective counseling service would also be an excellent way of discovering certain needs of an entire community. New programs of adult education could be developed to meet these needs. Also, several adults with a common interest could be encouraged to form an autonomous learning group.

Developing Competence at Goal-Setting

Let us turn now to the possibility of encouraging and facilitating the development of competence at goal-setting. In an earlier section, we raised the question of how successful men and women are in setting their goals. We turn now to the notion of increasing their success.

This can be a very efficient route to increasing the appropriateness and amount of adult learning. The cost-benefit ratio or payoff from resources directed at developing competence is probably even greater than it would be if the same resources were directed at providing better help.

At an early stage of helping an individual become more thoughtful and successful at setting his goals, we might simply try to increase his awareness. We find in our interviews that most adults have never recognized or examined the entire range of their learning projects. They have never seen the relationship between going to a conference, reading a serious book, taking a music lesson, and collecting information on the job. In fact, when we asked them to list their highly deliberate efforts to learn, these examples only emerged after a great deal of probing and stimulating.

As the person becomes more aware of all the things he has learned intentionally recently, and of all his current learning projects, he may become more thoughtful and careful in selecting the knowledge and skill for his future learning projects. The

person's increased awareness of his recent and current learning may also lead to an enhanced self-image. He may become more aware of his potential. He may begin to develop an exciting image of what he can become. He will realize, for example, that it is quite possible for him to become a dramatically better parent or shopper. He will see important possibilities for improving on the job. He will see a vision of the well-informed person that he could become in his knowledge of the world, its people, its past, and its future. He may see further possibilities for learning how to achieve greater joy and happiness, greater love and satisfaction in personal relationships, better understanding and expression of his emotions and body.

As part of his competence at goal-setting, the highly effective learner pays attention to his deepest inner feelings, drives, hopes, images of the future, needs, and dreams. He looks for these, sees them accurately, and accepts them. Throughout his lifetime, he will also be highly responsive to the requirements of the world around him. In the various organizations to which he contributes, he will be aware of his responsibilities and decisions that could be improved by learning beforehand. He will then set correct priorities among the various possibilities.

Further Research and Development

Four areas in which further work is needed emerge as highest priority.
1. Use exploratory interviews and relevant literature to modify the list of detailed preparatory steps. Using a lay version of the revised list, investigate the relative frequency with which each step is performed. When is each step performed, and how much time does the learner spend at it? How thoughtfully and successfully does he perform each step?
2. Study the help that competent learners want and need with the steps. Examine the actual help they receive, and their process of considering and seeking help. Which steps are especially troublesome? What goes wrong? With which steps do competent learners need additional help?
3. Design and test better help for the steps involved in deciding whether to begin a particular learning project. Provide the best possible help in a pilot program, and simultaneously collect data on its effectiveness and weaknesses. Design an even better program.
4. Develop effective ways of helping individuals become more competent at setting action goals and learning goals. One possibility is to provide excellent help while the learner is actually setting goals. In addition, various sorts of learning episodes *about* goal-setting might greatly increase the learner's competence. The learner might benefit from feedback on his strengths and weaknesses as a goal-setter. Perhaps we need a booklet on how to set goals.