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Chapter 6 – Building Confidence

Forethoughts

Why is the fellow in Figure 6.1 so confused? Maybe it's because he is trying to answer these questions:

What are the implications of the following quotation from the presocratic philosopher Heraclitus (540—475 B.C.) with regard to his attitude toward prediction and control? *Time is a child moving counters in a game; the kingly power is a child's.*

What, if anything, does Heraclitus' comment have in common with the famous question asked twenty-five hundred years later by Einstein (1879—1955)? *Does God play dice with the universe?*

Figure 6.1. Pondering Difficult Questions.

And finally, how are these issues related to your own outlook and expectations in life?

Introduction

In the present context, confidence refers generally to people's expectancies for success in the various parts of their lives. There are many psychological constructs and attitudinal concepts that help provide explanations for people's expectancy-related beliefs regarding the degree to which they can predict and even control the outcomes of their behavior. This also includes the "downside" of the concept which refers to lack of confidence or low expectancies for success.

   A central issue in this regard seems to be perceptions of control. Life can be frightening and depressing if you feel that you have no control over your daily events and future goals. It is much more comforting to begin each day knowing what to expect and ending each day with a satisfying feeling of accomplishment than to have no idea whether you will be safe or whether you will encounter unfair, frustrating actions from other people who are more powerful than you are. Yet, even when you have an overall positive sense of confidence based on a perception of having things under control, there are unexpected events that occur, some of them beneficial and some not. A car wreck is not something you expect at any specific point in time even though you know that there is always a possibility of a crash if driving is part of your life. Thus, if a crash does occur and it is not physically or financially devastating, you will probably adjust to it and carry on. It is an undesired but not totally unexpected event in your overall view of life. However, this expression of a reasonable view of the probabilities of an uncontrollable event is not shared by everyone. Let's assume you are a highly successful salesman and the top producer in your department. You are fully expecting to be promoted to sales manager, but the job goes to a newly hired MBA with little actual experience. This is an unexpected and inequitable consequence that can have devastating effects on your sense of prediction and control, not to mention your emotional attitudes! Experiences such as these, combined with the totality of experiences in your life and your overall personality traits, can have a huge impact on the degree to which you believe you can control all aspects of your life versus being subject to random and uncontrollable events. Furthermore, your underlying religious and philosophical beliefs can exert a strong influence on your feelings of being in control or having a somewhat more fatalistic attitude.

   A concern for control and predictability is an age-old human concern which is reflected in all mankind's musings and speculations about life as reflected in psychology, literature, and philosophy, and opinions vary greatly. Even in ancient Greece among the presocratic philosophers there were diametrically opposite points of view (Wheelwright, 1966). For example, Heraclitus, as quoted in the Forethoughts, expressed the point of view that change and randomness, if not outright whimsy, are characteristics of life. He is also well known for his statement that, "You cannot step twice into the same river, for other waters and yet others go ever flowing on," which suggests that change is constant even though things might appear to have a measure of stability. In contrast, Parmenides, another Greek philosopher from the same era, held the opposite point of view. He postulated that the physical world is an ungenerated, indestructible, permanent, and unchanging whole. Hence, knowledge can be obtained by applying reason to distinguish reality from appearances which results in predictability and control. That which we perceive to be change is only illusion, or appearances. The true underlying reality does not change.

This point of view was echoed to a degree by Einstein as indicated by his answer to his question about God playing dice with the universe was that "God does not play dice with the universe." In other words, he believed that there are immutable truths that would explain the permanent underlying reality of things. In contrast, just as in the opposing views of Parmenides and Heraclitus, the contemporary physicist Steven Hawking points out that from the point of view of quantum mechanics and the uncertainty principle in physics there is randomness in the universe which means that perfect prediction is impossible. This led Hawking (2005) to say, "Thus it seems that even God is bound by the Uncertainty Principle, and cannot know both the position, and the speed, of a particle. So God does play dice with the universe. All the evidence points to him being an inveterate gambler, who throws the dice on every possible occasion" (p. 1).

These few comments are intended to illustrate the agelessness of this issue of predictability and control and to underscore the relevance of this concern in people's lives, not to represent a rigorous exploration of presocratic philosophy and modern science!

In psychology, inquiry into the question of prediction and control tends not to be so dichotomous, but it is the basis of many concepts and theories concerning expectancy for success. The early part of this chapter contains explanations of many of the most salient concepts regarding the issues of confidence and personal control and the later part contains specific guidelines for creating strategies that help students build positive expectancies for success!

Psychological Basis for Confidence

Key Question for Confidence

How can I help the students succeed and believe in their ability to control their successes?

Anxiety and fear are much greater parts of students' lives than teachers realize. In an unpublished study by the author of this text, middle school children responded to a survey of motivational attitudes, one of which was fear of failure. Their teachers filled out a similar questionnaire in which they were asked to estimate the motivational attitudes of each student. There were many variations due to differences in subject matters and differences in students' actual opinions versus teachers' estimations of the students' opinions. For example, students in art classes rated their classes as being less relevant than English classes while the art teachers overestimated the students' perceptions of relevance. Both the English and the math teachers underestimated the students' opinions; that is, the students considered the classes to be more relevant than the teachers

predicted. However, there was one comparison that was consistent throughout the study: *virtually all of the teachers underestimated the fear of failure and anxiety expressed by the children*. The prevalence of anxiety and fear manifests itself in many ways, ranging from various types of avoidance, such as absenteeism and procrastination, to rebellious responses such as misbehavior in the classroom and aggression or bullying against other students outside the classroom. Even highly successful children who have a deep-seated fear of failure and of disappointing their parents or other social-reference groups are adversely affected by such feelings. When these fears are taken to the extreme, suicide is not an uncommon result.

For the majority of students, anxiety and fear are manageable and do not have detrimental effects on performance. In fact, a moderate amount of arousal in the form of anxiety or fear is normal when faced with a challenge, regardless of whether it is in a classroom, on a playing field, in the workplace, or in a recital hall. This is one of the things that stimulate people to maximum performance. However, it can become a debilitative force within anyone, and some students live with it all the time.

How can we understand this phenomenon and what can we do to help students overcome it by developing greater levels of confidence? Our goal in relation to building the motivation to learn in students is to help them develop positive expectancies for success. These positive expectancies can result from the students' perceptions of having some control over the outcomes of their behavior, their attributions for success and failure, their beliefs in their capacity for being effective, their self-fulfilling prophecies, the extent to which they have feelings of helplessness, and their sense of optimism.

Locus of Control

People differ in the degree to which they believe that they are responsible for the outcomes of their behavior or that external forces are the primary cause. For example, let's assume that Charlie is expecting a grade of *A* on a term paper but receives a *B* and he immediately blames the instructor for not providing clear instructions or grading the paper fairly. In contrast, Carolyn who was also expecting an *A* and got a *B*, immediately assumes that she did not read the instructions carefully or simply did not try hard enough. If we can assume that the two papers were highly comparable and the grading standards were objective, we could conclude that Charlie and Carolyn have very different views about the controlling influences in their lives. This characteristic was called *locus of control* by Rotter (1966). People who believe they will be rewarded appropriately by means of grades, recognition, money, privileges, or other tangible outcomes if they do a good job are considered to have an internal locus of control. In contrast, people who believe that being rewarded depends on luck, personal favor, or other

uncontrollable influences, regardless of how well or poorly they achieve, are considered to have an external locus of control. Naturally, there are some situations where almost anyone would predict that he or she would be rewarded for doing well as in a game of skill such as jump rope with a fixed reward for a specified level of performance, and other situations that most people would perceive they have little control over getting a reward as in guessing the outcome at a roulette table where luck is the primary influence if the machine is not being manipulated. But, what Rotter and other researchers found was that regardless of objective degree of control in a situation, some people will on the average have a more internal set of beliefs while others are more external. That is, they differ predictably in their tendency to interpret their control over the outcomes of their behavior as being internally or externally determined.

Rotter's introduction of this concept (Rotter, 1954), especially after he published the freely available *I-E Scale* that could be used to measure it (Rotter, 1966) resulted in a landslide of studies within a very short time (Phares, 1976; Rotter, 1972) and it continues to be of interest (Declerck, Boone, & DeBrabander, 2006; Ifamuyiwa & Akinsola, 2008). The role of locus of control in behavior has been studied in virtually every walk of life, but the focus here is on studies that established the meaning and validity of the concept and its role in motivation and learning.

In this regard, Rotter and others demonstrated that learning which occurs under conditions where the outcomes are perceived to be under the control of others can be very different from that which the learner perceives the outcomes to be under internal controls such as ability, skill, or effort. This is illustrated by learning outcomes under skill conditions that are quite different from the traditional findings of behavioral conditioning studies. It was a well-established principle (Bandura, 1969) in behavioral conditioning studies of reinforcement and performance that if one group of subjects receives reinforcement following every correct response (100% reinforce-ment) but a second group receives intermittent reinforcement after only 50% of the correct responses, there are different extinction patterns follow-ing a point where no reinforcements are given any more. Both groups would continue responding for awhile, but the group that had received 100% reinforcement would stop responding sooner than the group that had received 50% reinforcement. This was presumed to be because the 100% group was quicker to conclude that there had been a change in the rules than the 50% group (Rotter, Liverant, & Crowne, 1961).

However, when the concepts of skill versus chance are introduced the outcomes are different. If one group of subjects is told that success at an ambiguous task is so difficult that it is largely a matter of luck, but another group is told that success is due to skill and that previous research has shown that some people are better at the task than others, then the group receiv-ing skill instructions has extinction patterns that are the opposite of the general results in behavioral conditioning studies. In the group receiving skill

instructions, those who received intermittent reinforcement stopped working on the task sooner than those who had received 100% reinforcement when reinforcement was withheld. In other words, those who had been getting 100% reinforcement took longer to give up the perception that success truly was due to their skills than the group that had been successful only 50% of the time. In the group that was told success was a matter of luck, the results were the same as in traditional studies; that is, if they were getting 50% reinforcement, they would attribute a string of successes or failures to luck and would keep trying longer than if they had been getting 100% success and it suddenly stopped. It is important to note that under all of these conditions, success was under the control of the experimenters and due to the ambiguous nature of the task it was possible to convince the subjects of the skill versus luck components (Holden & Rotter, 1962; Rotter, Liverant, & Crowne, 1961).

This has interesting implications for school learning environments. Phares, in Chapter VII ("Locus of Control and Achievement in Children") of his book (Phares, 1976), reports on many studies done during the late 1960s and early 1970s that show an overall consistent relationship between internal locus of control and higher levels of school achievement even though there are some variations in the findings. There was even a positive relationship between locus of control and creativity that was found in one study (DuCette, Wolk, & Friedman, 1972). Most of these studies used the Intellectual Achievement Responsibility Questionnaire (IAR) (Crandall, Katkovsky, & Crandall, 1965) or the Bialer (1961) Locus of Control Scale. These results suggest that in spite of some of the inconsistencies in results and even though teachers are "powerful others" in this environment and are not always clear or equitable in their grading standards, there is still an overall perception that students have control over the grades they receive.

One reason that internals might have superior achievement is that internals tend to be superior in several aspects of cognitive processing. They were quicker than externals to deduce the relevant cues and rules in an ambiguous learning situation (DuCette & Wolk, 1973). Also, internals tend to be better at incidental as well as intentional learning. Wolk and DuCette (1974) presented textual material to subjects and found that internals remembered more of the content of the material, which was an indication of incidental learning, as well as performing higher on the intentional task of finding errors. In three studies conducted over three successive semesters, Dollinger (2000) found that internals had greater knowledge of incidental knowledge related to his course in Personality Psychology. During the third week of class, called Research Day, the students responded to a battery of questionnaires that would be incorporated into lectures at later times in the semester. One of these was a "Trivia Test" which included such things as the instructor's office hours, points needed for an A, the date of the next exam, color of the supplementary Course Packet at the bookstore, major topics in the class, the instructor's wife's name which was included because

she is also a psychology instructor, and other things which had been mentioned in passing during the first two weeks. In each one of the three semesters he found that internals had greater recall of incidental information and also performed better on tests even after controlling for GPA.

However, there are differences in perceptions of control in specific situations as well as differences in how internally oriented students react to success and failure compared to externally oriented students. Yeigh (2007) examined the relationship between trait-level locus of control and attributions for success or failure under conditions when participants responded to the operation-word task (Turner & Engle, 1989) which maximized the information processing load in their working memories. In this task participants are presented with a set of words followed by a relatively simple math problem to solve in their heads. After doing so, they are asked to recall the words. This task is repeated numerous times with increasing levels of difficulty. Yeigh found that participants with high trait–level perceptions of control attributed success outcomes to their efforts and abilities, both of which are internal causes. But, they attributed failure primarily to an external cause; in this case it was task difficulty. In contrast, students with low trait-level perceptions of control were divided between attributing successful outcomes to an internal cause, ability, and to two external causes - luck, and task difficulty. It is interesting to note that they did not attribute success to effort. But, following failure, they attributed their outcome primarily to internal causes (ability and effort) and partially to the external cause of task difficulty.

Yeigh concluded that with respect to the recall task, high trait-level internals were internalizing success and externalizing failure, while low-trait-level internals (which is to say, high trait-level externals) were externalizing success and internalizing failure. Furthermore, the high internals performed better initially, perhaps due to lower anxiety based on the expectation that they could control performance outcome. But, when they were faced with negative feedback their performance deteriorated. This could have been because of lowered confidence, but it could also be due to excessive cognitive load (Sweller, 1988, 1994). The internals have normally developed causal schemata in school settings in which they perceive ability and effort to be the primary causes of performance outcomes. But, as a result of experimenter manipulations in this situation, they found themselves failing at tasks at which they believed they should have been successful, so they engaged in internalized causal searches to find explanations for their failures. This type of metacognitive activity put an increased load on their working memory, which has a limited capacity, and interfered with their problem-solving activities.

This research has clear implications for instructional design in that interactions between motivational factors such as perceived controllability and information processing activities in the working memory can influence cognitive load and student capacities for effective learning. This

relationship is illustrated in Keller's theory of motivation, learning, and performance which specifically illustrates mental resource management at the interface between motivation and information processing (Keller, 2008b, Figure 5, p. 94). To design truly effective learning environments, teachers will need to consider student's causal models, including perceived self-efficacy, in relation to the challenge levels of the task and the types of feedback that are offered.

It may also be important to consider ethnic and cultural differences. Previous research has shown that people's locus of control perceptions are moderated by ethnic influences which are at least in part a reflection of socioeconomic status and by cultural backgrounds. Jessor, Graves, Hanson, and Jessor (1968) in a comparison of Anglo-Americans, Latin-Americans, and Native-Americans found that Anglo-Americans had the highest level of internality followed by Native-Americans. Latin-Americans scored the lowest. Numerous studies (see Phares, 1976, p. 152) find that African-Americans score in a more external direction than Anglo-Americans but that low SES students score more external than high SES students regardless of race. Muller, Stage, and Kinzie (2001) examined the relationships among ethnicity, locus of control, and science achievement among precollege students including ethnic representation from African-Americans, Asian-Americans, Latinos, and White males and females. They found that at the 8th grade level locus of control was strongly related to science achievement for every subgroup except Asian-American males. Furthermore, the differences at this grade level tended to remain stable through high school and combined with the overall lower level of participation of African-Americans and Latinos in high school science and math classes, are reflected in a large underrepresentation of these ethnic groups in science and mathematics classes in college.

With respect to cultural differences, Parsons, Schneider, and Hansen (1970) found no difference between American and Danish students. They had expected that the Danish students might score more externally because of the stronger central government authority in Denmark, but that was not the case. In a different kind of cultural comparison, Hsieh, Shybut, and Lotsof (1969) found that a group of Anglo-American high school students in Chicago scored more internally than a group of Chinese students in Hong Kong, but that American-born students in Chicago with at least one Chinese parent were more like the Anglo-Americans. The researchers explained that in the Chinese culture luck, chance, and fate are very much a part of life and that people consider their situations in life to be governed largely by things outside their control. This tendency toward externality in Asia could also be influenced by the overall religious/philosophical beliefs exemplified in Buddhism and some other belief systems which postulate the importance of accepting ones circumstances. In a different study of Asian and American cultures, Brown, Aoshima, Bolen, Chia, and Kohyama (2007) compared locus of control and learning

approaches among students in the United States, Japan, and Taiwan. They found that both Japanese and Taiwanese students scored higher on externality than the students from the United States but that they are not more likely to attribute learning outcomes to external versus internal factors.

These studies from the early 1970s and from the last few years illustrate the rather stable relationships between locus of control orientation, cultural and ethnic group affiliation, and school achievement. But, care must be taken in interpreting these results. There tend to be high levels of variance within each specific group. Thus, within a group that has a more external orientation than the others, there will be many people who are very internal in their locus of control perspective. This is one of many reasons why it is important to avoid type-casting anyone based on these categorical characteristics. However, it can be helpful in designing instruction to know the locus of control orientations of your students, especially if there are extremes. But, this requires collecting data from students in specific situations and not relying on generalizations from research.

Origin–Pawn Theory

The *origin–pawn concept* refers to the degree to which people believe they have control over their lives. Pawns, like the most restricted pieces in a chess set, feel that the locus of causality for their behavior is outside of themselves. In other words, according to deCharms who introduced this concept (de Charms, 1968), "A Pawn feels that he is pushed around, that someone else pulls the strings and he is the puppet" (deCharms, 1976, p. 4). Pawns tend to avoid challenges, behave defensively, feel powerless, and are negatively motivated. In contrast (de Charms, 1968), "An Origin is a person who feels that he is in control of his fate; he feels that the cause for his behavior is within himself" (deCharms, 1976, p. 4). Origins feel potent, optimistic, and confident, and they are accepting of challenges and positively motivated.

Like other motivational characteristics, people do not always behave as if they were Origins or Pawns in all aspects of their lives. It would be irrational to do so because there are situations where one has little or no control such as being a passenger in an airplane versus those situations that require high levels of control such as driving your own car. However, the value in this concept, like other motivational concepts, lies in identifying differences in *perceived* personal control that differ from the objective reality and have positive benefits for individuals or result in maladaptive behavior and underachievement. In this regard, the validity of this concept was established in several studies (reported in deCharms, 1976, p. 16) which illustrated that Origins had higher levels of achievement, people had more positive feelings about themselves and others when they felt like Origins, and they had more positive feelings toward others who demonstrated the qualities of Origins. Not only that, people remembered the productions (presentations) of Origins for a considerably longer period than the productions of Pawns. Viney and Caputi (2005) summarize a variety of studies confirming that people's

responses to Origin–Pawn measures are correlated with the actual degrees of controllability in a situation, yet there are individual differences reflecting people's Origin–Pawn orientations. Origins were shown to have more positive attitudes and higher status at work and more positive interpersonal coping strategies. Their scores were negatively correlated with fatalism.

This concept is normally measured by using content analysis of protocols created by the respondents. As in the Thematic Apperception Test, individuals provide tape recorded, handwritten, or e-mail responses to a stimulus such as

> I'd like you to talk to me for a few minutes about your life at the moment—the good things and the bad— what it is like for you. Once you have started, I shall be here listening to you, but I would rather not reply to any questions you may have until the 5-minute period is over. Do you have any questions you would like to ask now, before we start? (Viney & Caputi, 2005)

Or, specific leads might be used as in the following examples (deCharms, 1976) with school children: "When a child won't join in group activities . . .," "Sometimes he/she wished that . . .," or "The thing I like best about myself is . . . ."

All of the stories resulting from these stimuli are evaluated by means of a content analysis rubric that produces separate Origin and Pawn scores. As can be seen by the lists of characteristics in Table 6.1, raters look for clear distinctions between indicators of Origin and Pawn orientations. Trained raters can score the protocols with high levels of inter-rater reliability ranging from 0.87 to 0.93 (Westbrook & Viney, 1980).

This concept is sometimes compared to, or even equated with, locus of control. The two concepts do have some attributes in common, but there are also important differences. The Origin—Pawn concept focuses on a general sense of being in control of one's life and the things that happen in contrast to locus of control which is defined primarily by the degree to which people believe they have control over the consequences of their behavior. Also, this concept is presumed to represent a belief or attitude and is not considered to be a trait as is locus of control. Another difference in the formulation and measurement of this characteristic is that each dimension is scored separately. Locus of control, as introduced by Rotter and measured by Rotter's I-E Scale (Rotter, 1966), contains numerous pairs of items in which one item in the pair will represent more of an internal orientation and the other more of an external orientation. The respondent has to choose one item from each pair. This forces the results into a point along a continuum when, actually, people might have complex blends of internality and externality. The method used to score the Origin–Pawn concept is more likely to reveal these mixtures of beliefs.

Table 6.1. Indicators of Origin and Pawn Characteristics in Content Analysis (Based on Westbrook & Viney, 1980).

Indicators of an Origin orientation	Indicators of a Pawn orientation
1. Self-expresses intention (says that he or she intended, planned, decided; mentions plans, purposes, goals, e.g., "I planned the party," "we decided to have a child.").	6. Self-indicates that he or she did not intend an outcome (e.g., "I did not plan to have this baby," "I was in a car accident").
2. Self-expresses exertion or trying (describes his or her efforts to achieve some stated or implied result, e.g., "I'm trying to find out," "'it took quite a bit of energy to load the boxes").	7. Self-indicates that he or she did not try to bring about an occurrence (e.g., "I wasn't trying to fix it but when I bumped it, it started to go," "I made no effort to look after the orchids, but they bloomed profusely").
3. Self-expresses ability (comments on his or her skill, competence, e.g., "I became school champion," "I'm managing very well").	8. Self-expresses lack of ability (describes self as powerless, ineffective, incapable, a failure, e.g., "I couldn't attract a man," "I just couldn't help it").
4. Self-describes overcoming or influencing others or the environment (e.g., "I didn't let them stop me," "the hill was steep but I managed to climb to the top").	9. Self-describes being controlled, forced, prevented by, at the mercy of external forces such as other people, environmental forces, chance (e.g., "He wouldn't let me take the kiddies," "I don't want to be locked up in a place like this").
5. Self-perceived as cause or origin (e.g., "I took control during labor," "I produced the play").	10. Self-perceived as a pawn (events are described as unpredictable or uncontrollable (e.g., "The sickness struck me," "my car hit one side of the bridge and careened to the other side").

Considering that people with an Origin orientation tend to achieve better in schools, deCharms (deCharms, 1976) designed and implemented a large-scale study to see whether student's Origin perceptions could be strengthened and if this would result in higher achievement. He trained teachers in methods that would help create a learning environment to support Origin behavior. The classroom learning activities and assignments gave students a great deal of freedom and autonomy with the teacher playing more of a managerial role. He found that 6th and 7th graders who received Origin training for 1 year had a significant improvement in their Origin scores compared to a control group and that students who received

the Origin training during their 6th and 7th grades were significantly higher than those who received it for 1 year. There was a tendency in the school in which this study was conducted for the students to fall farther and farther behind the national norms as they progressed through school. This trend was reversed with the students who received Origin training, and that their gains persisted for at least 1 year, which was all he measured, following their training. This is in sharp contrast to the negative data received in most follow-up studies. Thus, there seem to be clear benefits from having or developing an Origin orientation and it appears to be possible to develop this orientation with the appropriate guidance and practice.

Self-Efficacy

Another concept related to the belief in personal agency is *self-efficacy* (Bandura, 1977) which is typically referred to as a person's belief that he or she can succeed in performing a given task. While true at one level, there is more than this to the concept as Bandura articulated it. More specifically, Bandura (1986) defines self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). In other words, a person's self-efficacy is comprised of a combination of beliefs related to three questions: Am I capable of doing the things that are necessary for success, developing a plan that will lead to success, and persisting in my efforts long enough to achieve success? The resulting strength of a person's self-efficacy is hypothesized to "determine whether coping behavior will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and aversive experiences" (Bandura, 1977, p.191).

Thus, personal estimates of self-efficacy have several influences on behavior. One of these relates to goal choice. There are aversive consequences to pursuing goals that one is not capable of accomplishing and rewarding consequences for success. Thus, there is positive coping value for people to develop personal estimates of their probability of success in pursuing specific courses of action and making rational choices to maximize success and this is also related to the amount of effort that one will exert. High self-efficacy leads to higher and more persistent effort, especially when faced with obstacles, and this leads to higher attainments. Thus, a positive spiral of expectancies, effort, and success which reinforces the positive expectancies is established.

Self-efficacy has been shown to be predictive of school achievement. Overall, students with higher self-efficacy perform better than students with low self-efficacy (Schunk, 1996). Thus, it serves as good indicator of academic performance. But, there are other factors to consider in regard to behaviors associated with self-efficacy and learning. For example, self-efficacy influences the way in which people approach preparatory activities prior to undertaking actual task performance activities, especially when one

also considers success uncertainty as it relates to the challenge level of the task. If people have high self-efficacy and low uncertainty, they are most likely to work directly toward task accomplishment without engaging in much if any preparatory activities. However, if people have a high sense of personal self-efficacy but experience some uncertainty about success due to the challenge level of the task, they are more likely to expend more time in planning and learning prerequisite skills that will help improve their probabilities of success (Bandura, 1982). Success uncertainty combined with high self-efficacy can actually stimulate higher levels of effort than when there is little or no success uncertainty. They will keep their attention focused on the task itself and ways of best overcoming obstacles and challenges. Salomon (1984) found that students high in self-efficacy spent more effort learning from material perceived to be difficult, such as learning from text, than from material perceived to be easy such as TV. With the easy material, the high self-efficacy students exhibited overconfidence, invested less mental effort in learning the material, and actually underperformed. With regard to people who have lower self-efficacy combined with success uncertainty, they are more likely to focus on themselves than on the task. That is, they focus on perceived personal deficiencies and also see obstacles as being more formidable than they actually are.

With respect to the origins of self-efficacy perceptions, Bandura lists four sources (Bandura, 1977). The first is actual *performance achievements*. Generally speaking, successful mastery experiences tend to build positive self-efficacy and failures lower them. Furthermore, an accumulation of mastery experiences across a variety of types of tasks in one's life strengthens a generalized sense of mastery that can help a person develop higher levels of persistence and success at tasks for which the person traditionally had low self-efficacy. For example, let's assume that a young man named Bob is uncomfortable in mixed gender social situations with his peer group. He feels that he is not good a casual conversations or at dancing. But, he is good in school tasks and in general handyman tasks. He enjoys using tools and doing projects at home as well as mastering his school subjects. As he progresses in school, his general sense of self-efficacy grows because of these successes. Then, he gets a job requiring a combination of problem-solving skills and repairing equipment. This requires him to interact with many different people at work, and he finds it easy to interact with them about job-related matters. His generalized self-efficacy continues to grow. Then, at an office party, he decides to make an extra effort to be outgoing and he succeeds. Here, in contrast to a purely social situation, he has many things in common with his coworkers. His self-efficacy about casual social interaction improves and over time, he is able to transfer his confidence to other situations that are not tied to work.

However, success does not always lead to improved perceptions of self-efficacy. If the task was perceived to be extremely easy or success was due to luck, then self-efficacy probably won't improve. Conversely, if a person fails at a task, self-efficacy might not decrease if the person felt that

he simply didn't try very hard to succeed. However, generally speaking, repeated successes at a given class of tasks will lead to positive self-efficacy and repeated failures to lowered self-efficacy.

A second source of information that can lead to improved self-efficacy is *vicarious experience*. Social comparisons that lead to the conclusion that "if he can do it, I can do it" are among the most common types of vicarious experiences that affect self-efficacy. However, simply observing another person perform a task will not necessarily affect one's self-efficacy. Bandura's extensive work on observational learning (Bandura, 1969) illustrates that there are many conditions of the models and the environment that determine whether the observer will experience a change in attitude or behavior. For example, the observer must feel a sense of personal identification with the model based on age, values, station in life, and so forth.

The third influence is *verbal persuasion* which can be self-induced or come from other persons. We see examples of this with mentors, cheerleaders, coaches, and others who exhort us to try harder. We can also use self-talk to build our belief that we can accomplish a task. However, verbal persuasion will have little long-term effect if it is not followed by actual success. Verbal persuasion can also be a powerful source of low self-efficacy, especially for people whose self-concept is not strongly positive. Criticism from others who are perceived to be more powerful or superior in one way or another can be devastating to a person who has not yet developed a high level of inner strength in regard to perceived self-efficacy.

Emotional arousal is the fourth source of information that affects self-efficacy. Emotional arousal that is too high can have an adverse effect on self-efficacy due to heightened levels of fear of failure, embarrassment, or other similar reactions to a situation. This level of arousal can interfere with your cognitive processing and your motor skills causing you to be "tight," self-conscious, and not capable of smooth, reflexive responses to stimuli. Emotional arousal that is too low can also interfere with performance, but this condition would probably be characterized more by lack of desire than by feelings of low efficacy as in, "I could do it if I wanted to, but I don't want to."

It is interesting to consider potential interrelationships between self-efficacy, and goal orientation (Chapter 5), especially with regard to the interactions of emotional arousal, self-efficacy, goal orientation, and success. People with low efficacy are, by definition (Bandura, 1977), less able to organize their environments and plan courses of action that they expect will lead toward success. If a person is concerned about his or her likelihood of succeeding, then this person may have heightened emotional arousal to the point that it becomes debilitative. The person's worries about succeeding could lead toward a high level of performance (Dweck, 1986) or ego (Nichols, 1984a) orientation and low levels of mastery or task orientation with regard to accomplishing the goal. On the one hand, moderate

levels of performance/ego orientation can stimulate a person to higher levels of accomplishment if the person is basically confident and competent in the given set of tasks. However, as doubts about succeeding increase, the increased worries could detract from productive task oriented behaviors that would increase the probability of success. Thus, a reasonable approach to reducing negative emotional arousal that interferes with the development of positive self-efficacy could be grounded in coaching activities that focus on increasing task oriented behaviors while desensitizing the person's fears of failure. This coaching could be combined with feedback that encourages the person to reflect on the positive consequences and to attribute success to improvements in their self-efficacy skills.

Even though self-efficacy as a concept has some things in common with other concepts in this category of confidence, there are distinctive differences. The origin–pawn concept has overlap in that it includes expressions of ability and responsibility for achieving one's goals, but self-efficacy differs in its focus on planning, action, and persistence in accomplishing goals. Also, the concept of locus of control is similar in that it deals with personal agency, but it is quite different in its fundamental focus. Locus of control refers to a person's belief that he or she has control over the outcomes of his or her behavior (Figure 6.2.A), but self-efficacy refers to perceived control over behavior; that is, whether or not one expects to succeed at a given task (Figure 6.2.B). It does not include the concept of having control over the outcomes of performance.
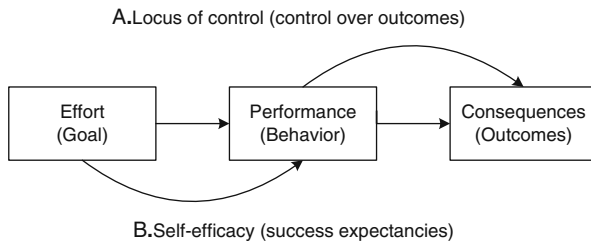
A.Locus of control (control over outcomes)

| Effort (Goal) | → | Performance (Behavior) | → | Consequences (Outcomes) |

B.Self-efficacy (success expectancies)

Figure 6.2. Relationship of Locus of Control & Self-Efficacy to Behavior and Outcomes.

Effects of Self-Efficacy

It has been well established that there tends to be a positive relationship between self-efficacy and academic achievement (Pintrich & De Groot, 1990; Schunk, 1981, 1985). Students who are high in self-efficacy appear to have more flexible learning styles and coping strategies as indicated by their use of metacognitive strategies which incorporate more cognitive skills and

by their greater persistence (Nichols & Miller, 1994). In other words, if they believe in their capability to succeed, they demonstrate more adaptive learning strategies by using metacognitive strategies, complex cognitive skills, and greater amounts of effort as indicated by their persistence at the task (Paris & Oka, 1986; Schunk, 1985).

These relationships were also investigated in a study of motivation and performance among learners working in dyads on a computer-based modeling task (Sins, Joolingen, Savelsbergh, & Hout-Wolters, 2008). According to Sins et al. (2008) the majority of research on self-efficacy, achievement goal orientation, and cognitive processing is based on self-report measures taken from individuals working on individual tasks. In their study, Sims et al. (2008) used self-report measures for achievement goal orientation and self-efficacy, at both the individual and group levels. They assessed cognitive processing behavior by analyzing the chat data from the log file histories of the various teams. Cognitive processing was classified as either deep or surface level based on the protocol analysis scheme of Sins, Savelsbergh, and Joolingen (2005). Surface processing was indicated by evaluating, quantifying, and analyzing activities with no reference to knowledge. Deep processing was indicated by these same activities combined with references to knowledge and by incorporating inductive reasoning and explaining activities. The researchers found that self-efficacy and mastery achievement goal orientation were positively related to deep processing, which implies the use of multiple metacognitive strategies and complex cognitive skills, and to achievement. There was no relationship between surface cognitive processing and achievement.

Attribution Theory

A related area of research that has superseded locus of control is *attribution theory* (Jones et al., 1971). This research builds on the observation that people vary with respect to their attributions of the causes of success and failure. Some people have a tendency to attribute success or failure to their ability. For example, they frequently use the phrase, "I can do that." Others who doubt their ability may say, or think, "No matter how hard I try, I won't be able to do this." As with locus of control, there are situations in every individual's life where both of these statements would be objectively true, but despite the objective probabilities, some people more characteristically use one set of attributions or another, especially when the objective probabilities are not clear to them.

Weiner (1992, 1974), who has extensively developed the concept of attribution theory, lists four primary attributions: ability, effort, task difficulty, and luck (or other external forces). The first two are internal attributions and the other two are external. However, he introduced another observation. Two of the attributions (ability

Table 6.2: Weiner's Attributional Elements in Relation to Stability and Locus of Control (Based on Weiner, 1992; Weiner, 1974).

		Locus of Control Dimension	
		Internal	External
Stability Dimension	Stable	Ability	Task Difficulty
	Unstable	Effort	Luck

and task difficulty) are relatively stable, not easily subject to change (Table 6.2). The other two (effort and luck) are easily changed and unstable. If people have confidence in their ability and do not see the tasks they face as being unnecessarily difficult, then their anxiety levels will be relatively low and they will tend to be persistent in working to achieve their goals. Because these are rather stable conditions, we would not expect there to be sudden changes in the person's behavior, at least not in the contexts where these beliefs are held. On the other hand, if a person's attributions are of low ability and high task difficulty, it can be difficult to change the person's behavior in a positive direction because these are stable attributions. In contrast, it is relatively easy to encourage a person to exert more effort, or to help them learn that luck is not the cause of success, if in fact that is not the case. Efforts to change a student's attributions often begin in the effort and luck categories, and then proceed to helping them develop stronger perceptions of their abilities and of task mastery.

Self-Fulfilling Prophecy

Self-fulfilling prophecy refers to a special type of expectancy belief. In short, it is commonly defined as a belief that although initially false becomes true as a result of believing in it (Merton, 1948). Two of the most commonly used examples of this principle are the bank failures during the Great Depression of the 1930s in the United States, and the transformation of a common flower girl on the streets of London into a fine lady. In the former instance, the banks were solvent but people believed them to be in jeopardy of failing. This belief led to a headlong rush to withdraw money from the banks which they were ill equipped to handle because of the time it would have taken to retrieve assets to provide the refunds. Thus, the belief caused the crash. Similarly, but happier, Henry Higgins in the musical *My Fair Lady* is able to complete the transformation because of his belief that he could instill an elegant dialect of speaking and fine manners in the flower girl. It was because of his belief in his capabilities to do this, and not her belief that she could do it, that led to the transformation. This story is based on the Greek myth of Pygmalion which is why the self-fulfilling prophecy is

often called the Pygmalion effect. Pygmalion was a gifted sculptor in Cyprus who found a flawless piece of marble and decided to craft a beautiful woman from it. Prior to completing his statue he had no interest in women, so the story goes, but after viewing his creation he fell in love with it. He then went to the temple of Aphrodite and asked her to help him find a woman who would be as ideal as his statue. Intrigued, Aphrodite went to the sculptor's studio while he was away and was enchanted by his statue which, to her delight, looked like her! She rewarded the sculptor by bringing his statue to life.

The self-fulfilling prophecy has been studied in both learning and work settings. It was induced experimentally by Rosenthal and Jacobson (1968) in a classic study in which they administered a test of nonverbal intelligence to a group of 1st first through 6th sixth grade elementary school children at the beginning of an academic year. They randomly selected 20% of these children and identified them as intellectual bloomers based on the test results; that is, that they had high potential for a spurt of intellectual growth. These children were identified for "information purposes only," and the teachers were told not to do anything special; just teach their classes in their normal manner. The results demonstrated that these children showed greater intellectual growth and higher reading achievement than the control students. At the end of the study, teachers were interviewed and they could not identify anything they had done differently for the bloomers than for the other students, yet the effect was there. Somehow, they were communicating higher levels of support or applying other techniques that benefited the bloomers. The children were not told that they had been classified as "bloomers" and so the results were attributed to the teachers' self-fulfilling prophecies. The early study of Rosenthal and Jacobson had methodological problems, but the effect has been replicated although not always strongly. For example, Schrank (1968) randomly assigned children to classes and told some of the teachers that their students had high learning potential while telling others that their students had low learning potential. The students in the so-called "high potential" classes learned more than the other students. In a follow-up study, Schrank (1970) told the teachers that the students had been randomly assigned to their classes, but told some of the teachers to teach their classes as if the students had high ability and others as if their students had average ability. No differences in learning were found. Thus, when teachers believed the students had higher ability, as in the first study, they had higher expectations of their abilities to achieve higher results from these students and that is what happened. However, attempting to "pretend" that students can achieve at a higher level was not effective.

An example from a work environment is provided by Livingston (1969) which he attributes originally to Rosenthal & Jacobson (1968). The interesting thing about this story is that it is true, not a fictional musical. As explained by Livingston (1969):

The importance of what a manager believes about his training and motivational ability is illustrated by ''Sweeney's Miracle'', a managerial and educational self fulfilling prophecy:

'James Sweeney taught industrial management and psychiatry at Tulane University, and he also was responsible for the operation of the Biomedical Computer Center there. Sweeney believed that he could teach even a poorly educated man to be a capable computer operator. George Johnson, a black man who was a former hospital porter, became janitor at the computer center; he was chosen by Sweeney to prove his conviction. In the morning, George Johnson, performed his janitorial duties, and in the afternoon Sweeney taught him about computers.

Johnson was learning a great deal about computers when someone at the university concluded that, to be a computer operator, one had to have a certain I.Q. score. Johnson was tested, and his I.Q. indicated that he would not be able to learn to type, much less operate a computer.

But Sweeney was not convinced. He threatened to quit unless Johnson was permitted to learn to program and operate the computer. Sweeney prevailed, and he is still running the computer centre. Johnson is now in charge of the main computer room and is responsible for training new employees to program and operate the computer.'

Sweeney's expectations were based on what he believed about his own teaching ability, not on Johnson's learning credentials. What a manager believes about his ability to train and motivate subordinates clearly is the foundation on which realistically high managerial expectations are built (85–86).

The concept of the self-fulfilling prophecy seems to have been derived from a more generalized conceptualization originally posited by Thomas (Thomas & Thomas, 1928) as pointed out by Merton (1948) and, more recently, Krishna (1971). Thomas's theorem as quoted by Merton (1948) is that, ''If men define situations as real, they are real in their consequences (p. 193).'' This incorporates the self-fulfilling prophecy, but it also explains situations in which peoples' beliefs, even when not necessarily true, govern their own behaviors. For example, if a storekeeper believes that a

certain type of customer is likely to steal something, he will behave as though his belief is true even if it doesn't come true. And, by his projection of negative expectations, he can actually induce the behavior that he suspects.

But, this takes us back to the self-fulfilling prophecy! Parents can also be caught up in this same situation as when their fears that a child will engage in socially unacceptable behavior communicates a set of expectations to the child that results in the undesired behavior. From the child's, or customer in the suspicious shopkeeper's establishment's point of view, they might conclude that, "if they are already convinced I am going to do it, I might as well do it."

Another way in which prophecies can influence the outcomes of social behavior is illustrated by what John Venn (1888) referenced in Merton (1936, p. 904), called the suicidal prophecy. In some ways this is the opposite of the self-fulfilling prophecy. Suicidal prophecies are those in which it may be presumed that the prophecy leads to the *nonoccurrence* of the predicted behavior or outcome. For example, as illustrated in an example used by Merton (1936, p. 904), Marx predicted that in capitalism there would be a progressive concentration of wealth in the upper classes with a corresponding increase in misery in the lower classes. However, the popularity of socialist teaching and propaganda in the 1800s led to an unexpected occurrence. Laborers who could easily be treated unfairly when negotiating individually began to organize into labor unions. As a result, their collective bargaining power led to a slow down, "if not eliminating (Merton, 1936, p. 904)" the developments predicted by Marx. One could add a footnote to Merton's conclusions which is to say that maybe he just didn't wait long enough. During the later part of the 20th century and the first part of the 21st century in the United States an accelerating movement of wealth to the top 1% of Americans has been occurring together with a breakdown in organized labor and steadily lowering standard of living for the wage-earning citizens. Perhaps the economic breakdown will lead to some remediation of this process!

Happily, the self-fulfilling prophecy can work in a positive direction, and it has been shown that students of teachers who have generally positive expectations about how their students will perform do achieve at higher levels. Furthermore, this relationship between high self-efficacy teachers and student performance has been found regardless of differences among their students with respect to initial motivation and past performance (Jussim & Eccles, 1992).

Teacher (Manager) Self-Efficacy

An issue related to the research on self-fulfilling prophecies is how to establish and maintain such expectancies. Simply telling a teacher to assume that a group of people can improve and to teach them accordingly is not sufficient (Schrank, 1970). Even though there is an implication in this research that the leaders (teachers or managers) believe that the other

people can change, the critical attribute of this concept is the leader's perceived locus of causality; that is, it is their belief that they can cause the change that is critical. But, the research on the self-fulfilling prophecy tends not to offer specific guidance for developing these expectancies. The teachers in the Rosenthal and Jacobson (1968) studies did not think they were treating the "bloomers" any different from the other students. However, in studies of teacher self-efficacy, which is a belief that is fundamental in the self-fulfilling prophecy, it has been possible to identify specific teacher behaviors associated with learner success.

Teachers with high self-efficacy spend more time helping students persist in their efforts, design challenging assignments, support students' ideas, have a positive classroom environment, try out new instructional techniques, engage children in more self-directed activities, give students more freedom, give more help to students having difficulties, and involve all students in discussions (Ashton & Webb, 1986; Gibson & Dembo, 1984; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, 1990). In contrast, teachers lower in self-efficacy are more likely to ignore the less able students while focusing on the ones with a higher probability of success and to blame external factors such as insufficient materials, lack of parental support, and lack of control over student assignments (Ashton & Webb, 1986; Gibson & Dembo, 1984) for their lack of success. Efforts to improve teacher self-efficacy include strategies for helping teachers examine their own teaching practices and to shift their focus away from external factors onto their own attitudes and practices (Weinstein, Madison, & Kuklinski, 1995).

Efficacy beliefs are also related to success in other areas of leadership such as management and nursing. Wood and Bandura (1989) found that business school students with higher perceived self-efficacy performed better in a complex simulation activity requiring managerial decision-making and goal-seeking behavior. Success also required social mediation by means of the efforts of a group of employees in the simulated organization. And, in another example, a measure of self-efficacy was obtained from 89 junior-level managers in a large clearing bank in the United Kingdom and measures of their performance were obtained from two supervisors for each manager (Robertson & Sadri, 1993). The results showed that managerial self-efficacy was related to performance ratings.

In a different professional area, Spence Laschinger and Shamian (1994) found that managerial self-efficacy affected staff nurses' and nurse managers' perceptions of job-related self-efficacy. Based on a path analysis of data pertaining to self-efficacy, professional practice behaviors, structural empowerment, and nursing leadership, Manojlovich (2005) found that self-efficacy mediated the relationship between structural empowerment and professional practice. These results, like the preceding one, confirm the utility of self-efficacy in affecting one's own behavior and the behavior of others.

Learned Helplessness

All of the preceding concepts related to expectancies and outcomes assume that people, or infrahuman subjects, do in fact perceive there to be a relationship between what they do and what happens as a consequence. But, what if a person perceived there to be no relationship? That is, what if a child saw no relationship between his efforts to learn to read, play board games requiring strategy application, or play piano and the outcomes of those efforts? Success or failure would be regarded by this child as a random occurrence. This extreme condition is known as *learned helplessness*.

This type of helplessness is called "learned" (Seligman, 1975) because it results from a two-stage process. In the first stage helplessness is real, unavoidable, and inescapable. Nothing the subject in this setting does or tries to do will alleviate the experience of failure. For example, if a young child in kindergarten or primary school is expected to learn computational mathematics but, due to an undiagnosed and undetected developmental lag, is unable to read, the child will experience an unrelenting experience of failure. After a period of time the child will conclude that for him there is absolutely no relationship between his efforts and the experience of success or failure. Consequently, the child will resort to random responses, getting some answers correct due to chance or rote memorization but missing others due to no discernable pattern. Attempts on the part of a teacher or parent to encourage the child by telling him to try harder simply reinforce his feeling of helplessness because he believes that he is trying as hard as he can and he continues to fail. Now, let's assume that after the summer break, the child has matured a bit and could now learn to do the math if he put all his effort into it. In other words, the child now has the ability to succeed. But, due to the deep helplessness conditioning, the child will interpret each mistake as evidence of his inability and will continue to fail.

This is a very difficult condition to overcome, but it can be done with a carefully controlled environment and cognitive restructuring. From an environmental perspective, it is necessary to build a series of tasks that are carefully graduated from the person's entry level of competence to a more advance level. Then, with encouragement to begin, the person is reinforced for each success and also told that his success was due to his own efforts and ability. For this to work, the person does have to experience a small degree of challenge and success in order for the feedback to be believable. This training was called reattribution therapy by Dweck (1975) because the person is learning to perceive rational connections between his behavior and its consequences and to attribute success to ability and effort. Dweck worked primarily with the topic of mathematics but similar results can be obtained with the development of reading ability (Keller, 1983a).

Learned Optimism

On a more positive side is the phenomenon of *learned optimism*. Seligman (1991), during more than 20 years of clinical research on learned helplessness and depression began to note some characteristic differences between people who are more susceptible to depression compared to those who are not. One of the fundamental differences was pessimism versus optimism. Numerous studies demonstrated that pessimists tend to have more illnesses, not be as persistent, give up more easily in the face of challenges, and have more depression. Optimists, on the other hand, are more successful, and are liked more by others, frequently exceed expectations on aptitude tests, are healthier, and are happier. He has developed measures of optimism and depression, which reveal that far more people are pessimistic than even realize that they are. Furthermore, he has demonstrated that people can learn to be more optimistic, not by simple, popular self-help inspirational reading and books, but by a well-researched and validated process of cognitive restructuring. It involves a set of attributional exercises and other activities designed to help you develop new, more productive patterns of thinking and behaving. To integrate some of these tactics into a learning environment is beneficial for children, especially when the teacher is modeling the behavior!

Ability Beliefs

People's beliefs about their abilities will influence their expectancies for success, attributions, and performance. One set of beliefs, called an *entity concept of ability,* is that it is relatively fixed and unchangeable. From this perspective, people believe that you either have an aptitude for a given activity or you do not, or, that you have a specific level of ability and that you can't change it to any meaningful degree. Thus, they believe that some people have high ability to do math, learn to dance, write essays, or be a leader and other people have low ability. In contrast is the *incremental concept of ability* which is the belief that one's ability in any of these areas can be improved with effort, even if it is a slow process. Entity beliefs can keep people ''locked into'' much lower levels of learning and performance than they are actually capable of doing. For example, in mathematics many children, and adults for that matter, believe that they have low ability for math and they try to avoid situations requiring computation or other forms of math, and they give up quickly when they do not understand something. This is not to be confused with learned helplessness, because in this situation people do see a relationship between their behavior and its consequences. The problem is that they perceive it to be a poor relationship; that is, they attribute failure to low ability.

People high in self-efficacy tend to have an incremental belief in ability (Ashton & Webb, 1986; Woolfolk & Hoy, 1990). They are more likely to assume that they can learn strategies and skills that will help them succeed in their own goal pursuits and in helping other people succeed. However, when people have an entity belief that is unrealistic, it can be challenging to help them shift to an incremental perspective. A rather dramatic change in attitude and achievement was obtained by Dweck (2006) in working with middle school children in an inner city school. In her study, children were taught elementary neurology regarding how the brain works. They were shown videos illustrating how the brain grows by developing new neural pathways when it is engaged in learning new things. The children were then told to visualize their brains growing as they learned the math skills that were presented to them. The results were positive with regard to achievement and beliefs that ability can improve with effort and success. The anecdotal comments of some children illustrated their excitement of feeling that their brains were growing as they mastered new skills.

Transition

The following categories of strategies encompass the concepts from the preceding review and are used when conducting the audience motivation analysis. When designing strategies for confidence there is the problem of building confidence in people who lack it and not kill it in those who already have it, as is also true with the other three major categories of ARCS. There is also the problem of creating a "need to know" in people who are overconfident. If people already believe they know something, they will not notice when they are being presented with new material. A complete set of strategies must deal with all these issues!

Strategies for Building Confidence

A conclusion that can be drawn from the research literature is that one of, if not the primary, characteristics of confidence is the perception of control. This refers to the learners' perceptions about their own abilities in relation to the perceived and actual predictability of the outcomes of their actions. A tremendous amount of research with both humans and animals has demonstrated how one's perceptions of control influence both mental health and achievement. When people believe that they have little or no control over what happens to them, they experience anxiety, depression, and other stress-related emotions. In contrast, when they believe that they can predictably influence their environment by exercising their efforts and abilities in pursuit of their goals, then they are both healthier and more motivated to be successful. Following (Table 6.3) are the major subordinate concepts and tactics that help define confidence and how to influence it.

Table 6.3. Subcategories, Process Questions, and Main Supporting Strategies for Confidence.

Concepts and Process Questions	Main Supporting Tactics
C1. Learning Requirements How can I assist in building a positive expectation for success?	Establish trust and positive expectations by explaining the requirements for success and the evaluative criteria.
C2. Success Opportunities How will the learning experience support or enhance the learners' beliefs in their competence?	Increase belief in competence by providing many, varied, and challenging experiences that increase learning success.
C3. Personal Control How will the learners clearly know their success is based upon their efforts and abilities?	Use techniques that offer personal control (whenever possible), and provide feedback that attributes success to personal effort.

C.1. Success Expectations

> On the first day of a three-day course on servicing XYZ-111 copiers, Manuel gave the learners handouts which described the course project and how it would be evaluated.

One of the simplest ways to help students reduce anxiety and develop realistic expectations for success is to help them understand what will be expected and how they will be evaluated. What if you reported for work on a new job, and your boss just told you to go to work without explaining what was expected of you? You would be anxious, perhaps angry, and less than optimally productive. Now, consider how often this happens in a classroom: Students begin a new class or a new topic and are just told to start studying without being given a clear understanding of how to focus their efforts or what they will have to perform. Sometimes teachers will read the lesson objectives, but all too often, the objectives are written in language that the students cannot understand. That is, the objectives tend to incorporate technical language from the material that the students have not yet learned. By explaining requirements in everyday terms the students can understand, and stressing what the students will be doing, not just the outcomes, you can improve their confidence because it enables them to focus their efforts toward success. Also, as indicated in the following two tactics, students' confidence is likely to be even higher if they are allowed to develop at least some of their own goals and objectives.

1. Provide clear statements, in terms of observable behaviors, of what is expected of the learners as evidence of successful learning.
2. Whenever possible, provide a means for learners to write their own learning goals or objectives.

C.2. Success Opportunities

> During a one-day seminar on new accounting proce-
> dures, Lucille had learners practice off-line on small
> parts of a more complex procedure and then do the
> entire procedure on the computer.

Do you truly give your learners opportunities to succeed, to build positive expectations for success? What are the influences on their expectations? The answer is, "everything." Well, maybe not everything, but a great many things. For example, the readability and challenge level of the instructional materials, the body language and words of the teacher, and the frequency with which the students get to actually practice under nonthreatening conditions are just a few of these influences. It is important for students to be challenged from time to time, but the challenge should come from the learning activities themselves, not from obstacles in the characteristics of the materials or the teacher's behaviors.

Anxiety is to students' emotional states in the classroom as the common cold is to health and sickness in wintertime. Anxiety generally results from unknown threats in contrast to fear, which is associated with identified threats. Fear is preferable to anxiety because you know what your target is, you know what you have to do to either avoid or conquer the situation. But, when students have little understanding of what they will be required to produce and do not know how they will be evaluated, they become anxious. They can compensate for this by overstudying or by retreating into indifference or rebellion. By over-studying they hope to be prepared for any possible outcomes. Students who do not have the time, motivation, or ability to overlearn may try to "beat the system" by withdrawing, cheating, or becoming hostile. Instead of studying thoroughly, they assume that success has become a game of chance and they will try to guess what the teacher will put on the tests or what criteria will be used to evaluate their assignments. You can reduce anxiety by making the performance requirements clearer and by having well-designed lessons as described in the tactics listed below.

Challenge Level

1. Organize the content in a clear, easy to follow, sequence.
2. Sequence the tasks from simple to difficult within each segment of the materials.

3. Make the overall challenge level (reading level, examples, and exercises) appropriate for this audience.
4. Ensure that the materials are free of "trick" or excessively difficult questions or exercises.
5. Make the exercises consistent with the objectives, content, and examples.
6. Include methods for self-evaluation, such as answers to exercises.
7. Provide confirmational feedback for acceptable responses and corrective feedback for responses that do not meet criteria.

Restructure for Success

Following (Table 6.4) is an example of how to increase confidence by reducing the perceived challenge level. In this case, the learners perceived the task to be more challenging than it actually was. The *motivational* tactic in this case was to reduce the perceived challenge level by revising the *instructional* strategy. This increased the trainees' expectancies for success and their performance improved.

Table 6.4. A Strategy for Helping Reduce Learner Stress.

CASE: A PROBLEM OF STRESS INDUCED ERRORS

The trainees for a one-day course on a new computerized accounting system consisted of bookkeepers and secretaries responsible for entering travel receipts and other financial items. The instruction was online so that it would have high relevance to the actual performance conditions.

Lucille, the instructor, noticed that many trainees were making mistakes because of their nervousness about learning the new procedures and about working on the computer. Lucille knew that the mistakes were not due to lack of ability because the new procedures were actually simpler than the old ones.

She revised her approach by having the trainees learn and practice small parts of a more complex procedure off-line using pencils and worksheets. Then she had them do the procedure on the computer. Their confidence in their ability to do the accounting process and in using the computer increased more rapidly, and stress-related errors decreased immediately.

C.3. Personal Responsibility

Jason designed a computer-based instruction course that gave learners options of taking unit self-checks which allow learners to measure their own progress before module tests.

When you are successful, your confidence becomes stronger, right? Most people answer "yes" to this question. But, a much better answer is, "not always." It depends on your attributions for success. If the task was challenging and you believe that you were successful because of your abilities and efforts, then your confidence will improve. But if the task was easy, or if you believe your success was because of luck, helpful influences from someone else, or personal favoritism, then your confidence is not likely to improve.

When people have feelings of control over their performance and believe they have the ability to succeed their expectancy for success, which is a key part of confidence, is strong. There are numerous ways you can help students develop these perceptions. One is to organize your lessons in such a way that students do, in fact, have some meaningful areas of personal control. Another is to give them, in technical terms, positive attributional feedback; that is, let them know by your words and actions that you have confidence in their ability to succeed providing they work hard. Never tell them that they succeeded because you did them a favor, or because you "gave" them a grade. Instead tell them they got the grade that they earned. Consider all of the following techniques in your lesson planning and teaching, but use only the ones that are most relevant:

1. Give learners choices in sequencing; that is, explain how they can sequence their study of different parts of the material.
2. Allow learners to go at their own paces.
3. Give learners choices among ways of demonstrating their competency (that is, provide alternative methods of exercising and testing).
4. Give learners opportunities to create their own exercises of methods of demonstrating competency.
5. Give learners choices over work environment; for example, working in a room with other people or away from other people.
6. Give learners opportunities to record comments on how the materials could be improved or made more interesting.

Clearly, confidence is an important dimension of motivation. When the conditions of relevance are not met, learners will be indifferent. They might be stressed if the requirement to successfully complete a course is critical to their plans for the future, and this can cause them to perform less well than they are able. But, often, this level of stress carries over into confidence. The consequences of negative influences on confidence can be devastating to a person's self-esteem and productivity. This is one more example of why we say that all of the components of motivation are important. One component might be more important to a given individual or group at a given point in time, but all are critical in building and sustaining a healthy level of motivation to learn. This leads us to the final component, which focuses on how to reward and sustain one's motivation to learn in a way that leads to feelings of satisfaction.

A Confidence Booster

   This example (Figure 6.3) is a group message that an instructor sent individually to each student as a potential confidence booster. The message reaches the students outside of class at a time when the instructor knows they might be having problems.
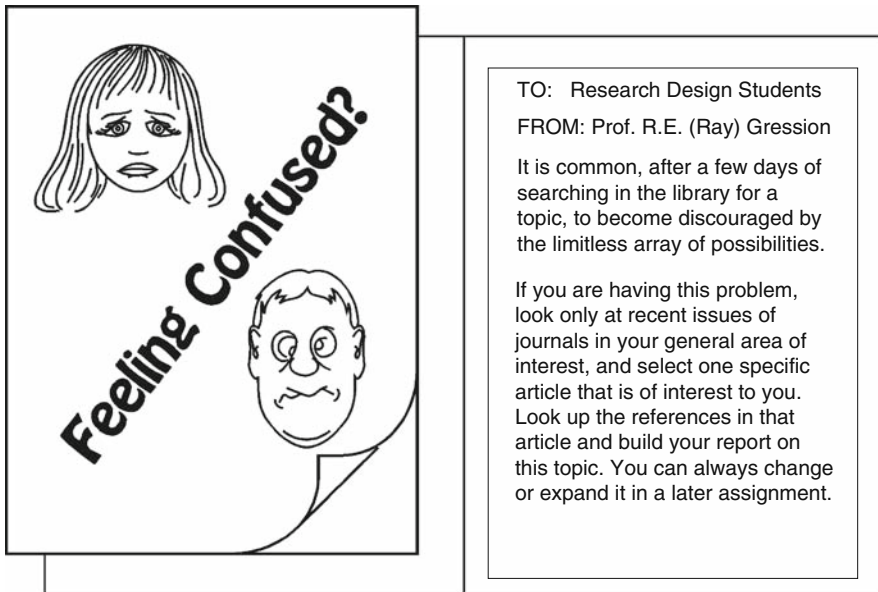

Figure 6.3. Example of a Group Motivational Message to Boost Confidence.

Summary

   Even though each of the concepts included in this section has distinctive characteristics, bodies of related research, and specific areas of behavior for which it provides the best explanation, it is also true that these concepts have shared attributes. The things they have in common center around the concept of perceived control and its influence on a person's confidence. Although there are differences among people as to how much anxiety and lack of perceived control that they can tolerate, it is the loss of perceived control that appears to be at the base of many psychological problems such as fear, depression, and helplessness. Dramatic events such as loss of income or other causes of financial instability, failure on a major exam, being deceived by someone you thought you could trust are all causes of a loss of perceived control, but so are more mundane things such as having excessive disarray in your home or

office, not being able to find bills that are due to be paid, and being embarrassingly far behind in your communications with other people. And, in a learning environment, on the positive side, helping students understand what is expected of them and how to maximize their likelihood of success are ways to improve perceptions of control.