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CHAPTER 6

WHAT WORKS IN DISTANCE LEARNING: MOTIVATION STRATEGIES

Richard Clark

University of Southern California

The following guidelines are presented in this chapter:

Strategies Based on Increasing Student Motivation: Encouraging Active
Engagement and Persistence

Strategies Based on Increasing Student Motivation: Helping Learners Invest
Maximum Mental Effort

Strategies Based on Motivating Active Choice to Engage in Distance Learning

Strategies Based on Motivating Persistence in the Face of Distractions

Strategies Based on Helping Learners Invest Maximum Mental Effort

Strategies Based on Increasing Learners' Self-Efficacy for Specific Learning
Tasks

Strategies Based on Decreasing Learner Procrastination

Strategies Based on Motivating Learners by Increasing the Value of Learning
Goals and Objectives

Strategies Based on the Motivational Impact of Effective Instructional Models

Strategies Based on the Motivational Impact of Effective Performance
Attributions

Strategies Based on Increasing Student Motivation:

Encouraging Active Engagement and Persistence

(Clark, v.8, 3/10/04)

1. Guideline: Designers can help students to become actively engaged in a course or lesson and to persist or stay “on track” when distracted by helping them connect their personal goals and interests to course goals, by clearly communicating the utility of the course goals (and the risk of not achieving them), and by helping students maintain their confidence in achieving the course goals (by pointing out past successes with similar goals).
2. Guideline based on: Research
3. Degree of confidence: Medium
4. Comments: Clark (1999) suggested that there are three “indexes” or types of motivational goals for instruction: (a) active engagement or choice (learners actively start to do something that they formerly “intended” to do but had not started); (b) persistence (learners continue to work towards a learning or performance goal in a focused way, despite distractions); and (c) mental effort. Evidence from a number of studies supports the generalization that active engagement and persistence in distance courses are increased by two factors—value and self-efficacy (Bandura, 1997). When learners personally value what they are learning, they choose to get involved and persist over time. Active choice and persistence are also enhanced by students’ beliefs that they have the ability or efficacy to

learn and apply what is being taught on the job. Values include both their interest in the course objectives and the utility they associate with the benefits of finishing the course (Kanfer & McCombs, 2000).

There are suggestive indicators in existing Web-based case studies about what features students value in courses and which of those features are often missing in Web-based instruction. For example, many prospective distance learning students may be trying to overcome their perceived lack of personal contact with instructors in classroom-based courses. Students at the State University of New York who reported the highest levels of instructor interaction also reported the highest levels of value for the course (Fredericksen, Pickett, Shea, Pelz, & Swan, 2000). Thus, it seems clear that motivating distance instruction must emphasize instructor-student contact, and that this increased interaction may enhance the value of the course and therefore increase student active choice and persistence.

5. References:

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Co. [See chapter 6, "Cognitive Functioning."]
- Clark, R. E. (1999). The CaNE (Commitment and Necessary Effort) model of work motivation: A two-stage process of goal commitment and mental effort. In J. Lowyck (Ed.), *Trends in corporate training*. Leuven, Belgium: University of Leuven Press.

Fredericksen, E., Pickett, A., Shea, P., Pelz, W., & Swan, K. (2000). Student satisfaction and perceived learning with on-line courses: Principles and examples from the SUNY learning network. *Journal of Asynchronous Learner Networks*, 4(2). Retrieved June 30, 2002, from http://www.aln.org/alnweb/journal/Vol4_issue2/le/Fredericksen/LE-fredericksen.htm

Kanfer, R., & McCombs, B. L. (2000). Motivation: Applying current theory to critical issues in training. In S. Tobias & J. D. Fletcher (Eds.), *Training and retraining: A handbook for business, industry, government, and the military* (pp. 85-108). Woodbridge, CT: Macmillan Reference USA.

6. Glossary:

Self-efficacy: Self-judgment of one's ability to master a specific task and receive the support needed to accomplish it. Self-efficacy is different from "confidence." Confidence is often interpreted as a generally optimistic view of one's capabilities. Efficacy is specific to tasks and the belief that not only are we able to accomplish something, but that we will also be "permitted" and/or receive adequate support to perform the task. A person could be generally confident but have low efficacy about any given task or vice versa (Bandura, 1997).

7. User:

Instructional designer

Strategies Based on Increasing Student Motivation:

Helping Learners Invest Maximum Mental Effort

(Clark, v.7, 3/10/04)

1. Guideline: The more that learners are convinced that the important elements of a learning task are novel to them, the more mental effort they will invest to succeed. Conversely, the more that students believe that a learning task is familiar, the more overconfident they become, the less mental effort they invest to learn, and the less they are inclined to accept responsibility for failure to learn.
2. Guideline based on: Research
3. Degree of confidence: Medium
4. Comments: Do not be misled by claims that distance learning is, by itself, motivating to students. The evidence for this claim has not been forthcoming from many studies. Salomon (1984) presented compelling contrary evidence that students who expressed a preference for learning from instruction presented via new media tended to expect that they would have to invest less effort to learn. He argued that this expectation of “easier learning” results in the investment of lower levels of mental effort by students. He provided evidence of lower achievement levels from instructional conditions that are perceived as less demanding. This finding has been replicated a number of times with different media (see, for example, the discussion of related studies in Clark, 1999).

Clark (1999), following earlier work, suggested that there are three “indexes” or types of motivational goals for instruction: (a) active choice or commitment (learners actively start to do something that they formerly “intended” to do but had not started); (b) persistence (learners continue to work towards a learning or performance goal in a focused way, despite distractions); and (c) mental effort. Each of these types of motivational “indicators” may play a different role in, or relate differently to, the learning process in distance education.

Not much is known about the direct impact of online instructional formats on mental effort (aside from Salomon’s 1984 cautions), but the early research is not promising. Recent studies (described by Clark, 1999) indicate that many instructional strategies and complex screen displays risk overloading working memory and causing “automated” cognitive defaults where mental effort is both reduced and directed to nonlearning goals. In general, it seems that mental effort may be influenced in large part by the amount of perceived difficulty in a Web-based course (Bandura, 1997). It is possible that when moderately challenging learning goals and tasks are presented, mental effort increases. When learning tasks are too easy or impossibly difficult, mental effort decreases radically. Students seem to be able to accurately report the amount of mental effort they are investing in easy and moderately difficult tasks. Yet there is disturbing evidence

that they seem unaware that they stop investing mental effort as learning tasks become extremely difficult or impossible. Designers must exercise caution not to overwhelm Web students with extremely complex tasks or screen design features that overload working memory. Meanwhile, researchers should continue to study how specific tasks and design features impact mental effort.

5. References:

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Co. [See chapter 6, “Cognitive Functioning.”]

Clark, R. E. (1999). The CaNE (Commitment and Necessary Effort) model of work motivation: A two-stage process of goal commitment and mental effort. In J. Lowyck (Ed.), *Trends in corporate training*. Leuven, Belgium: University of Leuven Press.

Salomon, G. (1984). Television is “easy” and print is “tough”: The differential investment of mental effort in learning as a function of perceptions and attributions. *Journal of Educational Psychology*, 76, 647-658.

6. Glossary:

None

7. User:

Instructional designer

Strategies Based on Motivating Active Choice to Engage in Distance Learning

(Clark, v.5, 12/28/03)

1. Guideline: Designers can help students to go beyond intention and actively choose to start a course or lesson by clearly communicating the utility of the course goals (and the risk of not achieving them), and by helping students maintain their confidence in achieving the course goals (by pointing out past successes with similar goals).
2. Guidelines based on: Research
3. Degree of confidence: Medium
4. Comments: Clark (1999) has suggested that there are three “indexes” or types of motivational goals for instruction: (a) active choice (learners actively start to do something that they formerly “intended” to do but had not started); (b) persistence (learners continue to work towards a learning or performance goal in a focused way, despite distractions); and (c) mental effort. Evidence from a number of studies supports the generalization that actively choosing to start a distance course is increased by two factors—learners’ value for the content and outcome of a course (and the need to avoid the negative impact of delaying) and their specific self-efficacy for learning in the course. When learners personally value what they expect to learn, they more often decide to set aside other tasks and actively choose to start a new course or lesson. Active choice is also enhanced by students’ belief that they have the ability or efficacy to

learn and apply what is being taught on the job. Values include both students' interest in the course objectives and the utility students associate with the benefits of finishing the course (Kanfer & McCombs, 2000).

There are suggestive indicators in existing Web-based case studies about what features students value in courses and which of those features are often missing in Web-based instruction. For example, many prospective distance learning students may be trying to overcome their perceived lack of personal contact with instructors in classroom-based courses. Students at the State University of New York who reported the highest levels of instructor interaction also reported the highest levels of value for the online course (Fredericksen, Pickett, Shea, Pelz, & Swan, 2000). Thus, it seems clear that motivating distance instruction must emphasize synchronous and asynchronous instructor-student contact, and that the expectation of increased interaction may enhance the value of the course and therefore increase student decisions to actively choose to start the course.

5. References:

- Clark, R. E. (1999). The CaNE (Commitment and Necessary Effort) model of work motivation: A two-stage process of goal commitment and mental effort. In J. Lowyck (Ed.), *Trends in corporate training*. Leuven, Belgium: University of Leuven Press.
- Fredericksen, E., Pickett, A., Shea, P., Pelz, W., & Swan, K. (2000). Student satisfaction and perceived learning with

on-line courses: Principles and examples from the SUNY learning network. *Journal of Asynchronous Learner Networks*, 4(2). Retrieved June 30, 2002, from http://www.aln.org/alnweb/journal/Vol4_issue2/le/Fredericksen/LE-fredericksen.htm

Kanfer, R., & McCombs, B. L. (2000). Motivation: Applying current theory to critical issues in training. In S. Tobias & J. D. Fletcher (Eds.), *Training and retraining: A handbook for business, industry, government, and the military* (pp. 85-108). Woodbridge, CT: Macmillan Reference USA.

6. Glossary:

Student interest and utility value: Includes both students' interest in the course objectives and the utility students associate with the benefits of finishing the course (Kanfer & McCombs, 2000).

7. User:

Instructional designer

Strategies Based on Motivating Persistence in the Face of Distractions

(Clark, v.5, 12/28/03)

1. Guideline: Designers can help students to persist or stay “on track” when distracted by helping them maintain a positive attitude, by connecting their personal goals and interests to course goals, by clearly communicating the utility of the course goals (and the risk of not achieving them), and by helping students maintain their confidence in achieving the course goals (by pointing out past successes with similar goals).

The more that instruction supports a positive attitude and maintains student interest and utility value for course goals and student self-efficacy for the course by convincing students that they are capable of achieving the learning and performance goals of the course, the more students will persist when environmental events distract them.
2. Guidelines based on: Research
3. Degree of confidence: Medium
4. Comments: Clark’s (1999) overview of motivation research and practice indicated that persistence in the face of distractions is one of three critical “indexes” or types of motivational problems. Evidence from a number of studies supports the generalization that persistence in distance courses is increased by three factors: mood (or attitude), value, and self-efficacy. When learners are positive and optimistic, they seem to find it easier to avoid distractions (Clark, 1999). When they personally value what they are learning

(and want to avoid the negative consequence of not learning), they tend to persist in a course over time, regardless of the alternative goals they consider (Kanfer & McCombs, 2000). Persistence is also enhanced by students' beliefs that they have the ability or efficacy to learn and apply what is being taught (Clark, 1999). Values include both students' interest in the course objectives and the utility students associate with the benefits of finishing the course. Clark's (1999) review of studies on persistence suggested that a positive attitude and mood can be maintained if course designers try to incorporate what learners feel are positive features such as attractive (but not distracting) graphics and animation and increased contact with trainers and instructional staff. There are suggestive indicators in existing Web-based case studies that many prospective distance learning students place a very high value on increased synchronous and asynchronous contact with trainers. Participants in a number of distance learning experiments that have the highest levels of instructor interaction also reported the highest levels of value for the course (Fredericksen, Pickett, Shea, Pelz, & Swan, 2000). Thus, it seems clear that motivating distance instruction must emphasize instructor-student contact, and that this increased interaction may enhance the value of the course and therefore increase student persistence. Finally, when students are reminded of past successes, see coping models who benefit from the learning, and receive feedback

stressing the benefits of the effort they invest in learning activities, their self-efficacy for learning from a distance course tends to increase their persistence in learning activities.

5. References:

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.

Clark, R. E. (1999). The CaNE (Commitment and Necessary Effort) model of work motivation: A two-stage process of goal commitment and mental effort. In J. Lowyck (Ed.), *Trends in corporate training*. Leuven, Belgium: University of Leuven Press.

Fredericksen, E., Pickett, A., Shea, P., Pelz, W., & Swan, K. (2000). Student satisfaction and perceived learning with on-line courses: Principles and examples from the SUNY learning network. *Journal of Asynchronous Learner Networks*, 4(2). Retrieved June 30, 2002, from http://www.aln.org/alnweb/journal/Vol4_issue2/le/Fredericksen/LE-fredericksen.htm

Kanfer, R., & McCombs, B. L. (2000). Motivation: Applying current theory to critical issues in training. In S. Tobias & J. D. Fletcher (Eds.), *Training and retraining: A handbook for business, industry, government, and the military* (pp. 85-108). Woodbridge, CT: Macmillan Reference USA.

6. Glossary:

Student interest and utility value: Includes both students' interest in the course objectives and the utility students

associate with the benefits of finishing the course (Kanfer & McCombs, 2000).

Self-efficacy: Self-judgment of one's ability to master a task. One's confidence in being able to accomplish a particular task. Self-efficacy is different from "confidence." Confidence is often interpreted as a generally optimistic view of one's capabilities. Efficacy is specific to tasks. A person could be generally confident but have low efficacy about any given task or vice versa (Bandura, 1977).

7. User:

Instructional designer

Strategies Based on Increasing Learners' Self-Efficacy for Specific Learning Tasks

(Clark, v.5, 12/28/03)

1. Guideline: The more that learners believe they will be able to plan and do what is necessary to succeed on a specific learning task, the more they are motivated to begin and to persist in the face of distractions, the more eager they are to tackle a challenging task, and the more quickly they recover from learning problems, accept corrective feedback, and take responsibility for mistakes.
2. Guidelines based on: Research
3. Degree of confidence: High
4. Comments: Bandura (1997) presented overwhelming evidence for the motivational benefits of increased self-efficacy from field studies and laboratory experiments. Efficacy is a measure of our expectations that we will be able to plan and implement adequate learning strategies and achieve learning goals. People with strong self-efficacy are highly motivated to actively pursue learning goals, to persist when distracted or when they encounter difficulties, and to invest mental effort to develop effective strategies to achieve novel goals.

Clark and Estes (2002) described a number of ways to increase efficacy: (a) Provide coping models who are perceived as both effective and similar to the learner. Have models “think out loud” so that learners are able to model their thought processes as well as their behaviors. (b) Focus learning and performance feedback on people’s successes,

both present and past, rather than on their failures or mistakes. (c) Attribute the cause of success and mistakes to effort, not to experience, aptitude or intelligence. Suggest that people will succeed if “you invest more effort” if they fall short of expectations, and that their success was the result of “your effort.” (d) In all communication with learners, project the clear expectation that they will succeed. This includes avoiding the expression of sympathy when they fail or make mistakes. Sympathy is often interpreted as “Sorry, your best is not good enough.” (e) Assign specific, short-term, and challenging learning goals. Easy goals imply a negative view of a learner’s ability. Long-term, “stretch” (impossible to achieve) goals can also damage motivation.

5. References:

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Co. [See chapter 6, “Cognitive Functioning.”]

Clark, R. E., & Estes, F. (2002). *Turning research into results: A guide to selecting the right performance solution*. Atlanta, GA: The CEP Press. [See chapter 5, “Motivation Gaps: Belief Is (Almost) Everything.”]

6. Glossary:

Self-efficacy: Personal belief in one’s capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997). Self-efficacy is different from “confidence.” Confidence is often interpreted as a generally optimistic view of one’s capabilities. Efficacy is specific to tasks. A person could

be generally confident but have low efficacy about any given task or vice versa.

7. User:

Instructional designer

Strategies Based on Decreasing Learner Procrastination

(Clark, v.5, 12/28/03)

1. Guideline: Learners who delay starting until the last minute and/or are easily distracted and so interrupt the flow of their learning until it is too late to do a good job learn much less, and are less effective at transferring what they have learned to the job after training.
2. Guidelines based on: Research
3. Degree of confidence: Medium
4. Comments: Procrastinators use a variety of devices to delay working on a task. Some of these strategies are very sophisticated and difficult to identify and so procrastinators are sometimes labeled as “slow learners.” Wolters (2003) described the characteristics of learners who may become procrastinators in two studies with college-age populations. The characteristics include (a) learners with low self-efficacy for the specific learning goals; (b) a lack of value for the learning goals (including a lack of utility value for achieving the goals); and (c) the desire to avoid failure by avoiding challenging tasks (work avoidance). In addition, many procrastinators have inadequate study and time management skills and tend to have more test anxiety and to seek help less often. In general, it appears that lower self-efficacy and lower value for learning goals tend to produce or increase emotional distress, which leads to lowered impulse control and subsequent giving in to the

immediate gratification that results from not investing effort on learning tasks.

Clark (2003) and Wolters (2003) described a number of ways to overcome procrastination: (a) Assess learners' self-efficacy and, if it is below average, provide supportive feedback based on their positive accomplishments, increase their efficacy, and avoid negative feedback or focusing on learners' mistakes (see self-efficacy discussion). (b) Determine learners' values and connect their personal values with the learning task (including the utility of completing the task and the risk of doing poorly on it). (c) Help learners maintain a positive mood during learning to dispel their impulsive need to feel good by avoiding learning tasks (see positive attitude strategies). (d) Avoid permitting "learner control" over when students must study and practice what they are learning. Build into each course mandated completion schedules, learning plans, self-assessments, and time management strategies.

5. References:

Clark, R. E. (2003). Fostering the work motivation of individuals and teams. *Performance Improvement*, 42(3), 21-29.

Kanfer, R., & McCombs, B. L. (2000). Motivation: Applying current theory to critical issues in training. In S. Tobias & J. D. Fletcher (Eds.), *Training and retraining: A handbook for business, industry, government, and the military* (pp. 85-108). Woodbridge CT: Macmillan Reference USA.

Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology, 95*, 179-187.

6. Glossary:

Procrastination: Failing to achieve learning goals within a desired or mandated time frame and/or postponing until the last minute activities one ultimately intends to complete to the point where the learner experiences emotional distress and the quality and quantity of learning is significantly decreased (Wolters, 2003, p. 179).

Self-efficacy: Self-judgment of one's ability to master a specific task and receive the support needed to accomplish it. Self-efficacy is different from "confidence." Confidence is often interpreted as a generally optimistic view of one's capabilities. Efficacy is specific to tasks and the belief that not only are we able to accomplish something, but that we will also be "permitted" and/or receive adequate support to perform the task. A person could be generally confident but have low efficacy about any given task or vice versa (Bandura, 1997).

Student utility value: Student utility value includes both students' interest in the course objectives and the utility students associate with the benefits of finishing the course (Kanfer & McCombs, 2000).

7. User:

Instructional designer

Strategies Based on Motivating Learners by Increasing the Value of Learning Goals and Objectives

(Clark, v.5, 12/28/03)

1. Guideline: The more that instruction connects learner interest, utility, and skill values with course goals, the more motivated learners will be to learn during distance learning and to transfer what they have learned back to their jobs after training.
2. Guidelines based on: Research
3. Degree of confidence: Medium
4. Comments: Eccles and Wigfield (2002), Kanfer and McCombs (2000), and Higgins (2000) have argued persuasively that our values exert a major influence on our decisions to engage in activities and persist at them in the face of distractions. Motivation researchers suggest that values combine with expectancies for success (self-efficacy) to determine what we will choose to do. When we value an activity and believe that we can succeed, we are more likely to pursue that activity. Eccles and Wigfield (2002) have described four types of values that are most often used by people when deciding about whether they will persist at learning or avoid it in favor of a more appealing set of tasks. Those four types are (a) attainment value—the perception that a learning task reflects what we believe to be our personal strengths and our view of ourselves; (b) intrinsic value—which characterizes learning experiences that we like and enjoy and/or that interest us; (c) utility value—which is

determined by how much a learning task facilitates important career goals or has attractive qualities apart from what is learned; and (d) cost—which is a measure of both the expected effort and the lost opportunities one experiences when making a commitment to work on a distance course.

Supporting learners' value for a distance learning course requires creative ways to support all four of the types of values. The first suggestion is that designers follow the old principle—"If it's not broken, don't fix it." Designers are advised not to try to add to the value learners have for distance courses if students have already started and are working consistently and effectively. There is evidence that trying to increase the motivation of already adequately motivated people can backfire under some conditions.

However, if learners are avoiding starting a course or if computer-use statistics indicate that they are not logging on and working consistently, try using Eccles and Wigfield's (2002) four types of values as a way to encourage them to start something or persist at learning. In order to establish attainment value, use a "Try it, you are good at this kind of task" message. For intrinsic interest value, use the "This is the kind of class you might like—it will give you another set of skills" approach, and give examples from their past accomplishments. Utility value is reflected in the message "Even if you don't like the idea of working on this course, think of the benefits of finishing it (or related benefits) and

also think of the risks you take if you do not finish it.”

Finally, cost-benefit decisions are captured in the message that “This course will give you much more benefit than the things you are doing to avoid it.”

5. References:

Eccles, J., & Wigfield, A. (2002). Motivational beliefs, values and goals. *Annual Review of Psychology*, 53, 109-132.

Higgins, E. T. (2000). *Making a good decision: Value from fit. American Psychologist*, 55, 1217-1230.

Kanfer, R., & McCombs, B. L. (2000). Motivation: Applying current theory to critical issues in training. In S. Tobias & J. D. Fletcher (Eds.), *Training and retraining: A handbook for business, industry, government, and the military* (pp. 85-108). Woodbridge CT: Macmillan Reference USA.

6. Glossary:

None

7. User:

Instructional designer

Strategies Based on the Motivational Impact of Effective Instructional Models

(Clark, v.5, 12/28/03)

1. Guideline: Designers can increase learner motivation by selecting people to model behavior, or to be “on-screen” teachers or demonstrators, who are perceived by learners as competent, similar (to the learners in that they “cope” with adversity well), credible, and enthusiastic.
2. Guidelines based on: Research
3. Degree of confidence: Medium
4. Comments: When a distance learning course design calls for the use of “on-camera” or “in-person” demonstrations by trainers and/or experts, Bandura (1997) made a strong case for selecting people who have four qualities (as perceived by the learners): (a) competence, (b) similarity (to the learners), (c) credibility, and (d) enthusiasm. In a number of studies described by Bandura, competence was judged to be a more important attribute of a model than age, gender, or culture. Models who are perceived as competent command more attention and exert greater instructional influence. Similarity of the model to the learners is important when the skill being modeled touches on gender, age, or culturally specific tasks. For example, a non-athletic woman successfully modeling a technique for physical conditioning is perceived as more motivating than an athletic man performing the same task. Another feature of credibility in models is whether they exhibit a “coping” style. That is, the behavior of models should not always be

“perfect.” When models represent “novices” who are learning something (such as the non-athletic woman practicing a conditioning task), make some mistakes, and need feedback to correct them, they are more motivating than models who only exhibit “perfection.” Learners are also persuaded more by models they judge to be credible. Bandura (1997) argued that models perceived as credible not only tend to have solid experience in the task being learned, but also are viewed as skilled in knowing how to teach it. Finally, to support a positive attitude and mood, models who are positive and enthusiastic are more motivating than people who are bland or negative (Pintrich, 2003).

Research on the motivational qualities of models has been independently confirmed by Lockwood, Jordan, and Kunda (2002), whose studies support the conclusion that learners tend to value both “promotion” (work to succeed) and “prevention” (work to avoid failure) goals as they learn. Coping models who are perceived as similar to the learners fit the prevention style. Competent, credible, and enthusiastic models support the promotion style.

Lockwood et al. made the point that all of us use both types of goals to succeed, and therefore both types and styles of models are motivating.

5. References:

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman. [See chapter 3, “Sources of Efficacy.”]

Lockwood, P., Jordan, C. H., & Kunda, Z. (2002).

Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83, 854-864.

Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, 95, 667-686.

6. Glossary:

None

7. User:

Instructional designer

Strategies Based on the Motivational Impact of Effective Performance Attributions

(Clark, v.6, 3/10/04)

1. Guideline: When learners experience negative, unexpected, or novel problems during learning, they are more motivated to persist and invest mental effort in correcting the problems if feedback attributes the cause to personally controllable factors such as a defective learning or problem-solving strategy that can be remedied with effort on the part of the learner and support from an instructor or help menu.
2. Guidelines based on: Research
3. Degree of confidence: Medium
4. Comments: Weiner (1991) was the first to present compelling evidence that nearly everyone searches for the causes of negative, unexpected, or novel events. His “attribution [causes] theory” of motivation suggests that our reasons or causes for success and/or failure have a major impact on our present and future learning. His advice to instructional designers and instructors was to attribute success and failure to causes that were within the control of the student (for example, effort or learning strategies). When learners succeed, effort and strategy feedback gives them information supporting their hard work and use of effective strategies. When they fail to achieve goals, attributing the failure to a correctable strategy and urging more effort place the solution under the learner’s control (Försterling, 2001). Bandura and Locke (2003), two giants in motivation research, jointly and recently reinforced this

claim by urging educators at all levels to stress learners' control over all of their accomplishments, including mistakes and failures to achieve their goals. They recommended that information given to learners about their progress point out what they have accomplished in very accurate and positive language and attribute their success to effort. For example, if a learner accomplishes 75% of a learning goal in a distance learning module, emphasize the significant progress toward the goal (the 75%) and not the gap (the 25%). When learners fail to achieve a goal, Bandura and Locke recommended that the most motivational feedback is an analysis of how the learner's strategy could be adjusted to achieve the learning goal. Designers should provide help so that the learner can develop a more effective learning strategy. This design strategy shifts the cause of the failure from something uncontrollable in the student (a lack of ability) to a controllable cause (an improvable learning or problem-solving strategy). Bandura and Locke most specifically argued against telling learners "You have failed to achieve..." or "You made X number of errors/mistakes." Pointing out the fact that a person "committed" a mistake or error focuses attention on a lack of ability and decreases self-efficacy. It makes an issue of the learner and not the learning.

5. References: Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88, 87-99.
- Försterling, F. (2001). *Attribution: An introduction to theories, research and applications*. Philadelphia: Taylor & Francis. [See chapter 1, “The Topics of Attribution Research.”]
- Weiner, B. (1991). Metaphors in motivation and attribution. *American Psychologist*, 46, 921-930.
6. Glossary: None
7. User: Instructional designer