The Three-Part Harmony of
Adult Learning, Critical Thinking, and Decision-Making

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Abstract

Adult learning, critical thinking, and decision-making are fields that receive attention individually, although they are interspersed with elements of each other's theories and philosophies. In addressing adult learning precepts, it is essential to include critical thinking and decision-making. One without the other creates weakness; all must be present if learning is to be effective and rewarding. This composition provides subject matter expert definitions of adult learning, critical thinking, and decision-making and then identifies the related elements. The piece also accentuates how those responsible for teaching adults must facilitate the union of adult learning, critical thinking, and decision-making.

Introduction

Adult learning is a unique process that requires supporting processes to make it successful. Two of the processes that co-exist with adult learning are critical thinking and decision-making. The ultimate goal of adult learning is to make the educational experience as valuable to the learner as possible and to create a desire to expand the learning. In striving to reach this definitive goal, the coalescing of the two independent processes, critical thinking and decision-making, with adult learning principles must occur.

Many times people take for granted the process of critical thinking and the skills necessary to manage this process. We gather information from many directions and, often, do not take the time to evaluate the flood of information properly. Adult learners need such a process to

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assist them in determining if the information they receive in an educational setting (and in life) addresses their identified needs. Recognition of the need for and application of the critical thinking and decision-making processes is vital to meaningful adult learning. The merging of the processes of critical thinking and decision-making with the adult learning process significantly increases the probability of successful learning.

Adult Learning Hypothesis

Adult learning is a complex process which many researchers and experts have a difficult time defining, due to the extraordinary number of variables that affect adult learning. Some of those variables are learning styles, teaching styles, motivation for participating in learning, cultural issues, student's self-esteem, past learning experiences, and personal problems. Most adult learning experts agree that adult learning is based on the concept that adults are motivated to learn by internal and/or external forces. Adults will learn more effectively if the subject matter is meaningful to them and relevant to their goals, they keep their goals and objectives in mind, and possess a deep inner desire to learn. In addition, the numerous life experiences the adult learner has accumulated provide a resource to draw upon when learning.

Malcolm Knowles (as cited in Galbraith, 2004, p. 23) "describes adult learners as being self-directing, as deriving only positive benefits from experience, as possessing great readiness to learn, as voluntarily entering an educational activity with life-centered, task-centered, or problem-centered orientation to learning, and as being internally motivated." Adults learn through independent and interdependent experiences and have a drive to gain new knowledge they consider as being important to them and their lives. Adults seek out knowledge that will enable them to progress mentally, provide workplace advancement, improve social aspects of their life, justify their beliefs or behaviors, or change their beliefs and behaviors. Adult learning is the result of adults seeking answers to life's challenges and to their own personal needs and desires.

Adults possess a preferred learning style and learn more effectively if the instruction delivery style addresses the learner's preferred learning style. Adults learn better in situations where they are comfortable both physically and psychologically. When these conditions are met, adult

learners are more willing and able to question, evaluate, and come to informed conclusions (think critically) about the subject matter and how it affects their lives.

Knowles, Holton III, and Swanson's Depiction of Adult Learning

One term, now well known in adult learning circles, is andragogy. This term, thought to be originated by Alexander Kapp, a 19th century German grammar school teacher, lost and gained recognition through the years and, as of today, is popularized by the adult learning process.

Andragogy, as defined in *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*, is "the art and science of helping adults learn " (Knowles, Holton III, & Swanson, 1998, p. 61). Many adult learning experts agree that there are major differences between how children learn and how adults learn. Utilizing the principles of andragogy is a way to differentiate between how children learn and how adults learn.

Knowles, Holton III, and Swanson provide a list of assumptions that are associated with andragogy and adult learning (pp. 64–68). A summary of these assumptions is as follows:

1. Adults need to know why they need to learn something before undertaking to learn it.
2. Adults have a self-concept of being responsible for their own decisions, for their own lives.
3. Adults come into an educational activity with both a greater volume and different quality of experiences from youths.
4. Adults become ready to learn those things they need to know and be able to do in order to cope effectively with their real-life situations.
5. In contrast to children's and youths' subject-centered orientation to learning (at least in school) adults are life-centered (or task-centered or problem-centered) in their orientation to learning.
6. While adults are responsive to some external motivators (better jobs, promotions, higher salaries, and the like), the most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem, quality of life, and the like).

These assumptions form the basis for many adult learning models that attempt to address the needs adult learners identify and ensure that those teaching adult learners approach the educational process differently

than they would when teaching children and youths. Teachers of adults must take on a role much like a facilitator and work under the conviction that they are there to facilitate the learning process and ensure the adult learners receive the knowledge they need or desire.

Critical Thinking Concepts

Just as for adult learning, there are many definitions for critical thinking. Each definition is somewhat different, but all retain aspects of the principles that compose an overall definition of critical thinking and its properties. Those who study this subject such as Norris, Halpern, and Maiorana, define it using anywhere from a single sentence up to an entire paragraph containing over 100 words. No matter what the definition, there always appears to be a link that makes the definitions similar in meaning. The definitions allow readers to see critical thinking as an uncomplicated course of action or a complex approach to arriving at an educated decision by implementing a strategy for questioning and reasoning that will allow arrival at a final well-informed outcome.

Halpern (as cited in Fowler, 2002) defines critical thinking as "thinking that is purposeful, reasoned, and goal-directed – the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task" (Fowler, 2002). Mariorana (as cited in Fowler, 2002) includes "critical thinking is, therefore to achieve understanding, evaluate view points, and solve problems." These definitions mention "goal-directed" and "achieving understanding" which relate well to each other and are a common bond in the utilization of critical thinking methods.

Subject Experts' Elucidation of Critical Thinking

Brown and Keeley define critical thinking as "reacting with systematic evaluation to what you have heard or read" (2000, p. 2). These authorities state that this reaction and systematic evaluation "requires a set of skills and attitudes" (p. 2). The skills and attitudes are built around a set of critical questions that provide a structure for critical thinking. Also involved in critical thinking is the process of conducting a

"continual, ongoing search to identify better opinions, decisions, or judgments" (p.2).

Brown and Keeley (2002) define two types of thinking that have their specific advantages and disadvantages. These two approaches to thinking are the sponge style and the panning-for-gold style. They describe the sponge style as absorbing information through a non-participatory approach, simply absorbing information about the world in a relatively passive manner. The panning-for-gold style is a more involved style of thinking that requires the thinker to participate actively using a questioning attitude. Both styles have advantages and disadvantages, but Brown and Keeley support the use of the panning-for-gold style because it allows the thinkers to ask "critical questions" (p. 2) that will assist them in identifying issues, clearing up ambiguity, determining the assumptions that are present, ensuring the information is good, and what reasonable conclusions are possible. This allows the thinkers to absorb what they want to, and reject any information and assumptions they find to be specious.

Kirby, Goodpaster, and Levine, (1999) describe creative thinking, organization, logical thinking, scientific thinking, persuasive thinking, and problem solving as all being part of critical thinking. They define creative thinking as "taking the old and mixing it, moving it, breaking it, or building it into newness" (p. 108). Organizing is "find[ing] basic orders that are both in the universe and in our minds, we can use those strong orders in our thinking" (p. 119). The authors explain logical thinking as "identifying reasoning fallacies in one's own and in others' thinking (p. 134). Scientific thinking is necessary as it includes observation, hypothesis formulation, experimentation or data collection, and verification as necessary steps to deal with the tremendous amount of data we have today (p. 194). Persuasive thinking involves influencing others to accept our message. The key to this type of thinking is to ensure biases, emotions, and ethics do not cloud the picture. "We must understand human nature, control our emotions, and think carefully; and we must be aware of the time, the place, our involvement, the message, the receivers, and their values" (p. 226) when we see the need to persuade others. Finally, Kirby, Goodpaster, and Levine state that problem solving is "applying critical thinking to achieve the goals and personal harmony that are important in our personal and professional lives" (p. 251).

Decision-Making: The Product of Critical Thinking

Decision-making, in today's world, is many times a disorganized, impulsive process which results in making conclusions without the necessary information and analysis. Many times this results in negative consequences for the decision maker and those affected by the decision. Skillful decision-making relies on reasoning and allows the decision maker to take into account a significant amount of information and alternatives to arrive at a rational decision.

The concept of decision-making carries many definitions, as does critical thinking. Decisions can affect many people, either adversely or favorably, and all decisions will most likely affect different people in different ways. For this reason, it is imperative to make decisions in a way that addresses the many issues leading to the outcome and its reason for becoming a decision in the first place.

Decision-making is a process on which those who have studied the aspects of decision-making agree. The key steps in the process are defining the problem, researching the problem, generating a list of alternatives, and making a knowledgeable choice or decision out of those alternatives. Some experts on decision making include additional steps, but the basic steps remain the same. The result of adhering to these steps and allowing them to guide the decision maker is a decision supported by facts. This also allows the decision maker to have confidence in the decision.

McCall and Kaplan's Premise of Decision-Making

McCall and Kaplan (1990, p. 4), define rules for quick decision-making actions and convoluted action, both of which are good decision-making processes, depending on the situation. They explain the decision-making process and how the complexity of the problem affects this process or which process should be applied. Most problems coexist with other problems, both related and unrelated to the core problem. McCall and Kaplan support the concept introduced by Burns that problems and decision-making are "a process, a sequence of behavior, that stretches back into a murky past and forward into a murkier future. [It is] a turbulent stream rather than … an assembly line operation… a twisted, unshapely halting flow" (p. xviii). This quote stresses the fact that, many

times, a significant amount of instability goes along with the decision-making process.

Relationship of Critical Thinking and Decision-Making

Critical thinking and decision-making are interrelated in the sense that, to make skilled decisions, the concepts of critical thinking are a necessity. In fact, the relationship between critical thinking and decision-making is so close that there should be very little differentiation made between the two philosophies. Critical thinking involves asking critical questions that will lead to a sound conclusion, thus resulting in a sound decision. Both decision-making and critical thinking include formulating a good problem identification approach, researching and seeking alternate courses of action, considering other points of view, and determining which choice is the best choice to execute.

Another relationship between critical thinking and decision-making is the actuality that accurate critical thinking involves entering into the decision making process repeatedly to arrive at a crystal-clear conclusion. Every question asked brings a new decision to the process and the number of critical questions necessary to reach a decision may increase or decrease, depending on the complexity of the problem.

The Three-Part Harmony of Critical Thinking, Decision-Making, and Adult Learning

In demonstrating a strong connection between adult learning, critical thinking, and decision-making, one only has to browse through some of the numerous books and articles on adult education. Very seldom will one find a book on adult learning that does not mention critical thinking and the ability to make informed decisions. Since there are so many variables in the adult learning process, it only seems natural that critical thinking and decision-making are an integral part of the learning process.

The concepts related to adult learning, such as justifying beliefs or behaviors, changing beliefs or behaviors, as well as the drive to gain new and essential knowledge requires adult learners to be familiar with and apply critical thinking techniques. However, the key to the relationship between adult learning and critical thinking (which includes decision-making) is to convince adult learners that learning critical thinking

processes is important to them and will be of value to them in their learning, their workplace, and their lives.

Knowledge of the many barriers to critical thinking may serve to address the issue of importance and value of the knowledge behind critical thinking. Kirby, Goodpaster, and Levin identify some of these barriers as being, "enculturation, …values and preferences you have now … [which] were instilled in you since birth by your culture" (1999, p.14), "self-concept…the way we view ourselves" (p. 19), "ego defenses, …psychological coping strategies that distort reality in order to protect ourselves from anxiety, guilt, and other bad feelings" (p. 22), "self-serving biases…biases in our thinking and perception that serve to protect or elevate our self-esteem" (p. 24), and "emotional influences" (p. 29), such as anger, passion, and depression.

A barrier to critical thinking, described by Galbraith, is hegemonic assumptions. "Hegemonic assumptions are assumptions that we embrace eagerly because we think they are in our own best interests" (2004, p. 342). The hegemonic assumptions that do not serve our best interests sometimes blind us. Enculturation develops, as these assumptions become part of our society.

The instructor is responsible for harmonizing critical thinking, decision-making, and adult learning in that they must create a learning environment that fosters a desire in adult learners to recognize the need for critical thinking. Instructors of adults must also help learners see the vital connection between adult learning and critical thinking. Methods for accomplishing this are numerous, but learner involvement, utilization of real-life experiences, and an instructor with subject matter expertise are essential for learning success.

Conclusion

Adult learning, critical thinking, and decision-making are complex processes that challenge adults constantly. The fact that adult learning styles vary makes the challenge even more difficult. Two preeminent benefits of thinking critically are providing the thinker/learner with a systematic approach to evaluating the subject matter and providing this same systematic approach to evaluating discussions and problems.

The use of learning tools such as research assignments that include application of critical thinking and decision-making skills to form conclusions are an effective approach to strengthening the relationship

between adult learning, critical thinking, and decision-making. Enhance this type of assignment by centering it on controversial issues that encourage the use of processes such as Brown and Keeley's "panning for gold" approach to critical thinking and decision-making.

Frequent use of open-ended questions during classroom discussions, allowing learners time to ponder the questions and group interaction all encourage the development of critical thinking skills. This systematic approach to critical thinking presents a more organized method of managing a situation or learning experience that requires implementation of critical thinking skills. The thinker/learner can employ a system of skills and attitudes that allow the thinker to arrive at a sound conclusion.

Those responsible for teaching adults must take on the responsibility of creating a learning environment that facilitates critical thinking and ensures learners see the vital connection between adult learning, critical thinking, and decision-making. Have learners develop a philosophy on learning that includes aspects of critical thinking and decision-making. Have them review their philosophy periodically throughout the course.

A constructive learning environment, development of critical thinking skills, and constant application of those skills makes the relationship between adult learning, critical thinking, and sound decision making a harmonious association.

References

Brown, M. N. & Keeley, S. M., (2000). *Critical thinking: Asking the right questions.* Upper Saddle River, NJ: Pearson Custom Publishing.

Fowler, B. (1996). Critical thinking definitions. *Critical Thinking Across the Curriculum Project.* Retrieved February 13, 2005, from http://www.kcmetro.cc.mo.us/longview/ctac/definitions.htm

Galbraith, M. W. (Ed.). (2004). *Adult learning methods: A guide for effective instruction* (3rd ed.). Malabar, FL: Krieger Publishing Company.

Kirby, G. R., Goodpaster, J. R., & Levine, M. (1999). *Critical thinking.* Boston: Pearson Custom Publishing.

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (1998). *The adult learner: The definitive classic in adult education and human resource development* (5th ed.). Houston: Gulf Publishing Company.

McCall, M. W. & Kaplan, R. E. (1990). *Whatever it takes: The realities of managerial decision making.* Upper Saddle River, NJ: Prentice-Hall, Inc.

Ruggiero, V. R. (1998). *Beyond feelings: A guide to critical thinking* (5th ed.). Mountain View, CA: Mayfield Publishing Company.