

WHY NOT EFFECTIVE ADULT LEARNING?

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Originally, our intention for this article was to produce an up-to-date monograph regarding adult learning styles and how they are assessed. We encountered numerous professional informants and an impressive array of published material, all uniformly agreeing that learning styles do exist; that it is important to try to understand them; and that when we do, learning will be greatly facilitated. As we pursued the research, however, we began moving away from the tendency to cover old ground and began to question the completeness of the learning-style concept from the perspective of adult learning effectiveness. For adult learning effectiveness was, for us, the central issue to be considered. To be an effective adult learner means achieving a desired learning outcome, whether this is understanding a book, mastering new job information, or understanding class content. Understanding learning style from the perspective of either the learner or the educator is only a step, albeit an important one, in achieving learning effectiveness.

Learning In A Time Of Change

In an age when there are over one thousand new books published daily, a person can no longer keep up with his own professional sub-area, let

alone all there is to know in other fields. When we may have to master new job information five or six times over the course of a career, rather than just once, we must be able to learn and integrate more in less time. We can no longer wait to be taught, or simply learn haphazardly. We must begin to look at how learning can be made an active, results-oriented process.

In their report to the Club of Rome (an international group of scientists, educators and government leaders), Botkin, Elmandjra, and Malitza¹ see learning as a more important key to a viable future than even material resources. Technological advancement, they say, is a double-edged sword. On the one hand it has brought us more knowledge and power than we ever dreamed possible, but along with that knowledge have come numerous and complex problems—in the areas of energy, population, food and pollution. We would also add that the impact of these problems is filtering down to the individual, as evidenced by the breakdown of the family, higher incidences of stress-related diseases and so on. These authors make the interesting point that, "humanity as a whole is moving rapidly toward a momentous cross-roads where there will be no room for mistakes."² They believe that we must close the gap between increasing technological complexity

and lagging understanding in order to affect the future in a positive way. They suggest that making a basic shift in our approach to learning is necessary to handle this—to move from unconscious, haphazard learning, "learning by shock", in response to crisis, to learning that is "an approach both to knowledge and to life, that emphasizes human initiative. It encompasses the acquisition and practice of new methodologies, new skills, new attitudes and new values necessary to live in a world of change."³ "Technological and social change is outracing the educational system, and . . . social reality is transforming itself more rapidly than our educational images of that reality."⁴

From Passive To Active Learning

We can no longer afford to approach the acquisition of knowledge passively. The individual must become more active and in control of his own learning destiny. It is no longer adequate to depend on teachers or institutions to teach us what we need to know. The question needs to become not, "How do *they* teach us," but "How do *we* learn?"

An active learner makes the conscious and deliberate decision to master the material, to acquire a certain level of knowledge. It may be easy, or it may be difficult; the

subject may be fascinating or it may be boring. The issue, however, is, "How do I get what I need, how do I get what I am here for?" When the active learner encounters a difficult learning situation, a book he can't understand, a new concept, or a confusing class, he will be inclined to assess the situation in order to develop a scheme for insuring learning effectiveness. This could mean asking an appropriate question, requesting additional instructional assistance, or it may mean going back to square one in that particular subject and coming up with a completely new method of mastering the material. In other words, for an active learner a difficult learning situation is not abandoned; it is reframed as a problem to be solved. With a self-initiated solution, the active learner does what is necessary to learn what he needs.

The passive learner, on the other hand, places the learning responsibility in the lap of the teacher, the institution, the company trainer or any other convenient external authority. If adequate learning doesn't occur he blames external forces—the book was too hard, the teacher wasn't interesting—and simply stops there. Using the Transactional Analysis model, we have a classic parent-child relationship, with the learner as child and the teacher or the system as the parent.

Let's change this model to one of adult-to-adult, with the learner and the instructor sharing equal responsibility for learning. Certainly, we as educators have an important responsibility for maximizing learning effectiveness. However, we are suggesting that the learner has an equal, if not greater responsibility, and possibly one of our roles as adult educators is making the learner cognizant of and ready to assume this responsibility. Perhaps a prerequisite to higher education should be a class on a philosophy of learning which transfers active responsibility for

learning effectiveness to the student, along with the skills necessary to enhance active learning. In this age of television crash courses and instant enlightenment, we often expect immediate knowledge to be effortlessly transferred into our brains (remember sleep learning?). This expectation has to change if we are going to "learn how to learn" in an accelerated world.

Adult Learning Styles

If learning effectiveness is the issue here, as we believe it is, then in addition to making this attitudinal shift, we need to become aware of how information is acquired in measurable, consistent ways. We are not talking about simple data storage, but the overall approach a learner uses to deal with a given learning project or episode. By learning to describe and analyze the variety of learning styles, we will be better able, both as educators and as learners, to predict and effect learning efficiency.

Learning style is an individual's preferred and consistent approach to various learning situations. Individuals seem to have dominant, preferred and often unconscious ways of organizing experience and of processing information, and if learners and educators can become aware of style differences, then presumably more consistent learning effectiveness will result. Educators have for years talked about the visual, the auditory, and the kinesthetic learner, saying that learning occurs through one or a combination of sensory modes; i.e., the visual person may prefer reading to lecture, the auditory individual may prefer lecture or tape over film or book. The average student possesses all of these sensory input modes, but generally prefers one over the other two and will tend to learn better when learning through that preferred sensory mode.

In addition to sensory input preferences, other learning style considerations have come out of the research of Roger Sperry and his associates at the California Institute of Technology. In their study of brain structure and neural organization, they worked with epileptics who have had the hemispheres of their brains surgically severed. They demonstrated that each hemisphere of the brain processes information in different and unique ways, that the left processes language and is the center for logical, analytical thinking, and the right is nonverbal and global, the source of creativity, intuition, spatial recognition and synthesis. Each of us, it seems, has two major modes of consciousness available, one linear and rational, specialized for analysis, and the other which is arational and intuitive, specialized for synthesis.

It appears that although we have two distinct but connected hemispheres of the brain and two modes of consciousness, rather than using both equally, most of us tend to rely on one way of thinking more than the other. We tend to be a predominantly left-hemisphere thinker or predominantly right, and this preference has implications for the way we learn. (Many people are saying that our educational system is training the left hemisphere to the exclusion of the right, and that we need to achieve more of a balance by emphasizing creativity and intuition as strongly as analysis and logic.)⁵ "The differences in preference of the two hemispheres for information processing have been referred to as styles of learning and thinking,"⁶ according to Reynolds and Torrance. That is to say that the dominant hemisphere in an individual corresponds to the preferred style of learning for that individual. A left-hemisphere-dominant person, then, is more comfortable with a step-by-step, logical or analytical approach to learning, whereas the right-hemisphere-dominant person is more spatial and global in his learning.

Teaching The Whole Person

The result of understanding that children have different learning styles and do not all learn the same way has been that sensitive teachers attempt to present information using as much sensory variety as possible, having the children see, hear, say and do. However, what happens to this awareness on the part of adult educators? Adults also have learning styles. All adult learners are not the same and will not learn in the same way, and yet few adult educators vary their teaching style, and most tend to rely on lecture and reading as the primary modes of instruction. (One notable exception to this is the Lozanov approach to language instruction for adults. By teaching to the "whole person," visually, auditorally, and kinesthetically, teachers using this method have dramatically accelerated foreign language acquisition.)⁷ How many adult educators are even aware of learning style differences and the importance of varying teaching style to address those learning differences? Often their energy goes into content mastery, with little or no attention paid to alternate ways of getting the material across to students. Perhaps it is time to reassess our approach to teaching adults, in much the same way that early childhood educators have done, and begin to ask ourselves how we can vary our instructional methods to facilitate maximum learning. We can be reasonably certain that there will be a full complement of learning styles present in any class, and our approach to the instructional situation must be sensitive and varied in order to produce effective outcomes. The adult educator must be sensitive to the fact that all adult learners are not the same and will not learn in the same way. We need to teach not only to those who learn easily from us, but also to those who possess learning styles which may not necessarily gel with our teaching styles and therefore for whom



learning from us may be more difficult. By presenting information in as many ways as possible, using a sort of shotgun approach, we may increase the chances of reaching a greater number of students effectively.

The learner who is aware of his dominant or preferred style, of course, is at a tremendous advantage. He can first of all attempt to choose learning situations that are consistent with his style, where learning can occur most easily for him. But when that isn't possible, which it often isn't, he can either alter the situation to fit his style or develop an alternate mode of learning in this situation.

Style Flexibility

Just how flexible can we be with our approach to learning? Where do these styles come from? Are they innate? Are they learned? Is it a combination of the two? It sounds like the old familiar argument: is behavior genetic or environmental? Obviously, if style is innate, our

ability to be flexible is limited. If, however, style is learned, it can be changed. Paul Torrance of the University of Georgia found that by testing graduate students for hemisphere dominance and then retesting them at the end of a course on creativity and thinking, there was a marked trend for these students to shift to a right hemisphere or integrated style of learning and thinking.⁸ The implication is that at least in the short term, hemisphere use can be altered. To our knowledge, no similar work has been performed regarding the auditory, visual and kinesthetic learners. However, could we not assume that these learning styles might also respond to training? A reasonable supposition might be that a certain percentage of adults who have unfortunately become blind in adult life may have had a primarily visual

learning style. Might we also assume that these persons have adjusted to an alternative mode out of necessity and not simply ceased to learn? Have they shifted modes or have they simply altered the input method, with information processing remaining visual? Obviously, there is a good deal we don't know.

Learning Effectiveness Is The Issue

The individual's predisposition to one style or another of sensory input and hemisphere dominance should be taken into account when exploring how to enhance learning effectiveness. Paul Elliot, using participants receiving computer-based instruction on the metric system, found empirical support for the hypothetical construct that adults do indeed have learning styles and that there is a stability of learning styles across learning tasks.⁹ However, given what we know about the complexity of the human brain and the complexity of thought, to limit the description of learning style to such neat frames and to expect that by understanding these frames we will have any comprehensive answer to the problem of increasing learning effectiveness seems somewhat oversimplified. Understanding differences in learning styles is important, but is it far from the complete answer. It doesn't tell us how effective learning really occurs. It would seem that an adequate approach to adult learning effectiveness must also include an analysis of how truly effective learners approach learning situations, and if there are differences in the learning strategies used by the truly-effective learner and the less-effective learner.

Effectiveness, defined as meeting the output requirements of any situation, occurs when certain things happen. The individual aware of his own skills, aptitudes and style

preferences has a clear notion of what an effective result will be; assesses the behavioral requirements of the situation, compares this with what he knows about himself, and can be flexible and sensitive enough to change in order to bring about the desired result. This model applies to both effective teaching and effective learning. The effective instructor is aware that effective learning, not just good teaching, is the goal. With that goal in mind, the instructor assesses the needs of individual students, the mesh between those students and his own preferred or dominant instructional style, and all other situational elements and adjusts what he can to reach the desired goal. The effective, active learner follows the same model by being situationally sensitive and flexible and by having a clear sense of his objective and how to know when he has reached it.

The issue of learning effectiveness as a shared responsibility between learner and teacher is uniquely suited to adults who bring with them the necessary life experience and maturity to be partners in their own learning. As we change our approach from passive to active, and the locus of control from teacher-centered to one of joint responsibility, we can bring about a shift that will result in the kind of learning effectiveness required to live in a world of change.

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Footnotes

- ¹Botkin, J.M., M. Elmandjra and M. Malitz. *No Limits to Learning: Bridging the Human Gap, A Report to the Club of Rome*, Pergamon Press.
- ²*Ibid.*
- ³*Ibid.*
- ⁴Toffler, A., editor. *Learning for Tomorrow*, Vintage Books, 1974.
- ⁵Ornstein, R.E. *The Psychology of Consciousness*, Harcourt, Brace, Jovanovich, Inc., 1977.
- ⁶Torrance, E.P. and C. Reynolds. "Your Style of Learning and Thinking," in *Gifted Child Quarterly*, 21, 4, pp. 563-573, 1977.
- ⁷Lazonov, G. *Suggestology & Suggestopedia—Theory and Practice*, United Nations Educational, Scientific and Cultural Organization, 1978.
- ⁸Torrance, *op. cit.*
- ⁹Elliott, P. *An Exploratory Study of Adult Learning Styles*, a research report, 1977.

References

- Patricia Kirby. "Cognitive Style, Learning Style and Transfer Skill Acquisition," a dissertation, National Center Publications, 1979.
- Donald Brundage and Dorothy Mackeracher. "Adult Learning Principles and Their Application to Program Planning," a research report, Ontario Department of Education, Toronto, Canada, 1980.
- Lawrence Pflieger and Charles Pulvino. "How Do Students Prefer to Learn," a research report, 1977.
- Urban Oen. "Investigating the Interaction of Learning Styles and Types of Learning Experiences in Vocational-Technical Education," an interim report, Fox Valley Technical Institute, Appleton, Wisconsin, 1973.
- Anthony Manzo. "Personality Characteristics and Learning Style Preferences of Adult Basic Education Students," a research monograph, Missouri University, Center for Resource Development in Adult Education, 1975.
- William Reddin. *Managerial Effectiveness*, McGraw-Hill, New York, 1970.
- D.V. McGregor. *The Human Side of Enterprise*, McGraw-Hill, New York, 1960.