

Teaching to Different Learning Styles¹

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Students learn differently. As such, there is no one teaching strategy, method, or technique that is successful for all students, in every situation. This concept is not new to those who have spent time in a classroom – as either a student or as an instructor.

Instructors often believe the way they learn is the right or easiest way for their students to learn. Often they base their choice of methods of instruction upon that belief. While many educators believe that teachers teach the way they were taught, some refute that claim, offering instead that teachers teach the way they learn (Dunn & Dunn, 1979; Gregorc, 1979).

For over a century educators have wondered what to do about individual differences among learners. As early as 1924, Stormzand theorized that some teaching methods are better suited to a particular style of learning than are others. Today we know that, for learning to be successful, the teaching style must complement the students' learning style.

Learning style is not only an important factor in how teachers teach, but also in the way students learn, their academic achievement, and in student-teacher interaction (Witkin, 1973). Learning style is also influential in determining which teaching methods are most appropriate in the classroom.

Since students' learning styles cannot be changed over the long run (Gregorc, 1982), instructors must master several different teaching methods if they are to cause students to reach their learning potential.

Following Dewey's philosophy of classroom democracy (Dewey, 1938), Dunn and Dunn (1979) argued that since the student controls whether or not learning will take place, it is the student's learning style which must be accommodated if learning is to take place. This means the responsibility for causing learning to occur rests with teachers. They must vary the way they teach in order to reach every student. Likewise, Phipps, Osborne, Dyer, and Ball (2008) declared that teachers should use a variety of teaching methods.

Learning Styles Defined

In the origins of what we now call formal education, the process of teaching was viewed as a transfer of information from the minds of teachers to their students. If students did not learn, the fault was theirs – it was their responsibility to adapt to the type of instruction being provided. Today, however, we know that not all students learn the same way. Educators realize that students may possess a learning

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style which either aids or interferes with the understanding, retention, and application of subject matter. Gregorc (1982) defined those learning styles as the way each person perceives, sorts, absorbs, processes, and retains information. The central concept of this definition is that learners perceive and process information differently.

Types of Learning Styles

The Gregorc Style Delineator (1982) identifies two types of cognitive abilities: perception and ordering. Perceptual abilities are those through which individuals obtain information. That is, this is how individuals obtain information. These abilities emerge on a continuum consisting of abstractness at one end of the spectrum and concreteness at the opposite end. For example, some individuals perceive things to be right or wrong, black or white, good or bad. These learners exhibit characteristics of concreteness. Learners at the abstract end of the continuum see varying degrees of right or wrong, good or bad, and only in shades of gray.

The second component of learning styles is the way in which a learner orders, arranges, systematizes, and references information. That is, what individuals do with information after they have acquired it. These ordering abilities also form a continuum with the poles of sequence and randomness at either end. For example, some individuals either file materials neatly by alphabet or color, for example, or stack materials in neat piles (sequential learners). Other individuals put materials wherever there is an open space with no apparent specific ordering process (random learners). By locating the position of an individual on each of these continuums (see Figure 1), a person's learning style can be identified as Concrete Sequential (CS), Abstract Sequential (AS), Abstract Random (AR), or Concrete Random (AS).

Learners with a preferred CS learning style approach experiences in an ordered and sequential manner. They are naturally structured and task-oriented. CS learners are readily able to separate information into categories and subcategories. They then focus their attention on understanding or solving the issues or problems of each subcategory before moving on to the next. Abstract Sequential (AS)

learners rely on intellect and logic in their thinking processes. They prefer an environment that is ordered and mentally stimulating. Abstract Random (AR) learners have thinking processes anchored in feelings and are concerned with emotions. Important to the learning process for these learners is the interpersonal aspect of learning. AR learners view routine and order as boring, and prefer a colorful and varied environment. Concrete Random (CR) learners rely on intuition and instinct in their thinking process. They tend to be inventive, competitive, risk-taker personality types who can quickly reach a conclusion.

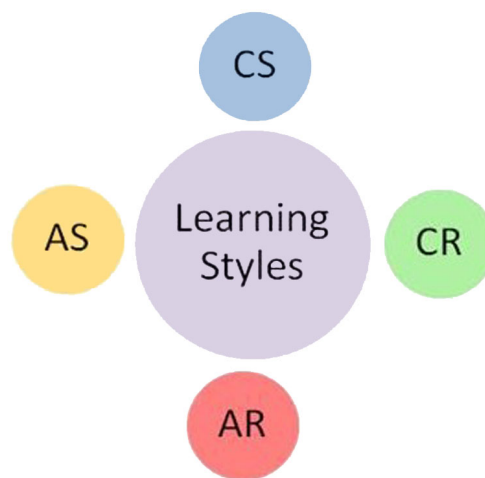


Figure 1. Style guide. Adapted from Gregorc's *An Adult's Guide to Style* (1982).

Whereas each of these learning styles consists of a specific set of characteristics, no one style is better or worse than the others (Gregorc, 1982). Every learner has the capacity to learn within each of the four styles. However, individuals *do* have a *preferred* learning style. Gregorc noted that very few learners possess the flexibility to meet the demands of learning situations that digress very far from their preferred style. If true, this has major implications in education. Dyer (1995) noted that each preferred learning style has a matching preferred method of instruction. By utilizing appropriate teaching techniques matched with student learning styles, Dyer and Osborne (1996) noted that student learning could improve, for some students as much as a full letter grade.

Preferred Teaching Methods and Techniques

Learners possess many style characteristics and, while researchers tend to group learners into categories to facilitate instruction, learners are able to utilize several teaching methods and techniques. Likewise, some methods and techniques are not effective across styles. The teaching methods and techniques listed in Table 1 have proven effective when matched with the appropriate learning style.

Table 1.

Learning Style	Teaching Method
Concrete Sequential	Lecture, handouts, workbooks/manuals, problem solving, hands-on activities, demonstrations, field trips, drill, work study, resource people, supervised study, experiments, independent study, information sheets, job/skill sheets, hands-on instruction/laboratory instruction
Abstract Sequential	Substantive lecture, syllabus, textbooks, supplemental readings, lecture, audio/video tapes, library assignments, resource people, independent study, analytic/think sessions, individual instruction, reading assignments
Abstract Random	Short lectures with questions and answers, group discussion, films, imagery, background music, games, TV, movies, reflective time
Concrete Random	Technology, computer instruction, open-ended problem solving, simulations, mini-lectures and exploration, optional reading assignments, independent study, experiments, demonstrations, field trips, resource people, independent study, reading assignments

References

Dewey, J. (1938). *Experience & education*. New York: Macmillan.

Dunn, R. (1984). Learning style: State of the science. *Theory into Practice*, 23(1), 10-19.

Dunn, R.S., & Dunn, K.J. (1979). Learning styles/teaching styles: Should they...can they...be matched? *Educational Leadership*, 36, 238-244.

Dyer, J.E. (1995). *Effects of teaching approach on achievement, retention, and problem solving ability of Illinois agricultural education students with varying learning styles*. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

Dyer, J.E., & Osborne, E.W. (1996). Effects of teaching approach on achievement of agricultural education students with varying learning styles. *Journal of Agricultural Education*, 37(3), 43-51.

Phipps, L.J., Osborne, E.W., Dyer, J.E., & Ball, A.L. (2008). *Handbook on agricultural education in public schools*. Clifton Park, NY: Thomson Learning, Inc.