

LEARNING STYLES AND LEARNING DISPOSITIONS IN PUBLIC SCHOOLS: SOME IMPLICATIONS OF PREFERENCE

ALICE P. WAKEFIELD

*College of Education
Department of Child Study and Special Education
Old Dominion University
Norfolk, Virginia 23529*

This article reports an investigation of the learning style preference of two groups: teachers in public schools (K-12) and education majors who have not yet taught. The potential for teacher-to-student modeling of the various learning dispositions described by Katz (1989) which correspond with the four learning styles identified by Gregorc (1988) is addressed. Some implications of teacher style preference and the subsequent potential (or lack of potential) for the modeling of certain dispositions in public school settings are made.

There have been several major thrusts to research in the area of teaching and learning style in the past 20 years. The initial emphasis was to document that there are style differences among learners and to develop instruments that accurately assess those differences in both adults (Gregorc, 1985) and children (Dunn, Dunn, & Price, 1979). The second wave of research has been to use this diagnostic capability to match instruction to the style of individual students. Studies described in recent theme issues of *Theory into Practice* (Galloway, 1984) and *Educational Leadership* (Brandt, 1990) enumerate dramatic instructional successes associated with matching certain teaching approaches to the students' particular learning style preferences. Although these studies show that a relationship exists between style "match" and learner success, there has been no investigation of the learning style of teachers and the potential of a "match" with their success in public school teaching. This study investigates the learning style of public school teachers and students who are studying to become teachers. The latter group represents the pool from which the former group are drawn.

A Definition of Learning Style

Anthony Gregorc (1988) defines learning style as the manner in which the learner mentally orders the concrete and abstract percep-

tions of his or her environment. Based on his 20 years of research, Gregorc asserts that learners connect with and interpret their environment with either sequential or random ordering patterns. Consequently, when concrete and abstract perceptions are combined with the sequential and random ordering preferences, four distinct learning styles emerge: Concrete Sequential (CS), Abstract Random (AR), Abstract Sequential (AS), and Concrete Random (CR). According to Gregorc, each of these four styles is associated with specific learning dispositions. (See Box 1.) However, since we all interpret both concrete and abstract perceptions, and, since the nature of that undertaking often requires that we use either a sequential or random approach, most people opt for whichever style of thinking is required by the situation. For instance, when filling out an application for a bank loan, we are required to operate "Concrete Sequentially" by using our precise, step-by-step, goal-oriented abilities. However, at the party celebrating our loan approval, we initiate conversation, joke and respond to the talk and body language of our guests using our more people-oriented, imaginative and playful "Abstract Random" skills.

Some Educational Implications of Style Preference

Research and experience have borne out the fact there are educational implications to

the concept of learning styles. Gregorc (1985a) found that up to 95% of the population have a preference regarding learning style. Some people have such a strong preference that they are unable to adapt their style to requirements of a particular situation. The potential for both style "match" and "clash" between teacher and learner as well as principal and teacher should be considered. The most obvious implication is that when students have a strong preference for the manner in which new material is presented, it may be difficult or impossible to learn when educators fail to present material in their preferred way. For example, does a sequential learner and a random learner have equal access to knowledge when their history teacher introduces the lesson in a chronological order rather than thematically? What can happen if a teacher fails to teach in the preferred style of the principal who evaluates him/her? What happens if a principal does not administer to the school in a style perceived by the teachers and parents to be appropriate? Is the judgment of that principal based on the knowledge of what qualities are needed to administrate a school or is it based on personal belief systems influenced by what special styles and dispositions the teachers and parents themselves value and possess?

Learning Dispositions and Learning Style

Some recent work by Lilian Katz (1989) provides insight into dispositions toward learning. Katz identifies four categories of learning on which educators need to focus their attention. They are knowledge, skills, feelings and learning dispositions. Although there is widespread debate over the best practices for teaching knowledge and skills, most authorities agree that they constitute the core of the traditional school curriculum. Further, most educators agree that the student's feelings of trust, competence, confidence and belonging are highly correlated to his or her successful academic experience. However, the fourth category of learning described by Katz, that of learning dispositions, is one that is often overlooked by educators. Katz describes learning dispositions as "habits of the mind, tendencies to respond to situations in a certain way" (p. 30). Curiosity is a disposition that some students evidence more than others. Friendliness and initiative are also characterized as dispositions. So are unfriendliness and lack of initiative. According to Katz, other dispositions pertain to being creative and resourceful, to being cooperative, helpful and hard working, responsible, caring and compassionate. Many of the dispositions named by Katz are associated with the four differ-

Box I
Talents and Dispositions Associated with Four Different
Learning Styles Identified by Gregorc (1985b)

Concrete Sequential	Abstract Random	Abstract Sequential	Concrete Random
Practical	Feeling	Intellectual	Intuitive
Step-by-step	Multi-faceted	Logical	Independent
Methodical	Perceptive	Analytical	Original
Deliberate	Imaginative	Rational	Futuristic
Stable	Colorful	Verbal	Risk-taker
Persistent	Empathetic	Referential	Creative
Realistic	Spontaneous	Judgmental	Experimental
Organized	People-person	Synthesizer	Curious

ent learning styles identified by Gregorc. See Box 1.

In acknowledging the importance of these attributes, what can educators do to encourage the positive aspects of these dispositions, as well as to discourage the negative aspects? Katz says there is no workbook to teach curiosity and interest. The only way that learning dispositions are developed is by observing people who themselves model these dispositions. In addition to the effect of modeling, the disposition becomes strengthened when the learner has an opportunity to use and is supported for using the disposition. In teaching, the implications for classroom application are evident. Students need teachers who are curious, imaginative, empathetic, innovative, interested, friendly, and hard working. In addition, students must be provided an environment in which these dispositions can be practiced, acknowledged, and appreciated.

Assuming the previous discussion is sound, to what extent do teachers model these learning dispositions to their students? Although teachers who collectively model all of these qualities can probably be found in most schools, there is evidence that certain of these dispositions are more prevalent in teachers than are others. For example, dispositions such as teacher inventiveness and

curiosity may be relatively rare. Further, there is some indication that the proportion of teachers who have dispositions for imagination and empathy may be decreasing in public school settings while the proportion of teachers with dispositions for precision and step-by-step ordering may be increasing.

Style Preference Comparison

This investigation surveyed and compared the learning styles of 196 undergraduate and graduate students majoring in education but who had not taught with the learning styles of 104 teachers who were presently teaching. The Gregorc Style Delineator (1985b) was administered to determine the learning style of preference for individuals in these two groups. Table 1 illustrates the frequency of response for each of the four learning styles (i.e., Concrete Sequential (CS), Abstract Random (AR), Abstract Sequential (AS), and Concrete Random (CR). When the scores for the two groups were examined, it was found that almost three fourths of both the groups preferred the same two of the four styles. However, the style of preference for the graduate students was Abstract Random (AR) and the style of preference for the teachers was Concrete Sequential (CS), a polar opposite to the AR style of the graduate students. To test

Table 1
The Observed and (Expected) Frequencies of Responses of 300 Education Majors and Public School Teachers as to Learning Style Preferences

Group	Learning Style				
	CS	AR	AS	CR	
Students Majoring in Education	71 (76.77)	79 (67.95)	17.5 (19.29)	28.5 (32.01)	196
Public School Teachers	46.5 (40.73)	25 (36.05)	12 (10.23)	20.5 (16.99)	104
CHI SQ = 8.02 p < .05	117.5	104	29.5	49	300

the hypothesis that these two groups had distinctly different learning styles, the chi-square test of significance was used. When the observed and expected frequencies of the four style preferences of the groups of graduate students and public school teachers were compared, the chi-square value of 8.02 was significant at the .05 level. See Table 1.

Some Implications of this Study

Assuming the findings are reasonable representative, the implications of this study are intriguing. What is happening between the time a college student is preparing to become a classroom teacher and when that person is actually teaching in the public schools? Why is the proportion of teachers who possess the dispositions associated with a Concrete Sequential learning style so different from that of students preparing to teach? Are Abstract Random education majors who become teachers finding that teaching is not the right field for them after all and dropping out of the teaching pool? Could it be that the dispositions associated with the Abstract Random (AR) learning style are not as useful for public school

teaching? Why would empathy, imagination and compassion not be useful for teaching? Are these not some of the very qualities that attract people into teaching in the first place? Certainly these are qualities we want our teachers to model to their students.

Could it be that administrators who evaluate teachers are inadvertently playing a role in the changing proportions of teachers' learning styles and disposition? How easy is it for the principal to evaluate (and then defend that evaluation) teacher dispositions of interest, imagination and compassion? Does any teacher evaluation form address such hard to quantify qualities as teacher inventiveness and curiosity? In the era of the behavioral objective, anything difficult to quantify is apt to be avoided. Consequently, are principals simply getting more of whichever dispositions are easiest to quantify from their teachers and likewise the teachers from their students? For instance, principals are certainly able to quantify the qualities associated with Concrete Sequential (CS) teachers. Precision, task completion and order are readily measured and noted on most teacher evaluation forms. (See Box 2.)

Box 2

Sample Teacher Evaluation Criteria.

- Does the teacher get to work on time?
 - Is the teacher prompt in evaluation and return of student work?
 - Is the teacher organized in conducting classroom activities?
 - Does the teacher maintain accurate student records?
 - Are grades and other reports submitted on time?
 - Does the teacher develop written lesson plans to achieve curriculum goals?
 - Does the teacher manage instructional time effectively?
 - Does the teacher maintain a high level of student time-on task?
 - Does the teacher maintain clear, firm, and reasonable work expectations and due dates?
 - Does the teacher participate in professional development programs?
-

Surely, evaluation criteria such as these plus all excluded valuative criteria send a clear message to teachers of what the school system values as good teaching attributes.

Lilian Katz (1988) noted that positive learning dispositions are probably best taught through the modeling of these dispositions. Although somewhat speculative, it could be that expectations of particular dispositions may also play a role in encouraging those dispositions. Teacher evaluation criteria certainly presents teachers with clear expectations for teacher behavior. Katz has posed that we need opportunities to practice and strengthen positive dispositions. And, finally, we need to be appreciated when using these dispositions. There is no doubt that teachers can model dispositions of curiosity, initiative, creativity, imagination, caring and compassion to their students. They can also offer their students opportunities to practice and strengthen these dispositions and be appreciated for them. But first, teacher evaluators need to examine what dispositions are presently expected from the teachers and what opportunities are being made for them to practice and strengthen these dispositions. In what ways are teachers being made to feel appreciated for these dispositions? When teachers are expected to be curious, creative, imaginative, caring,

inventive, and innovative and when they are encouraged to practice and strengthen these qualities in the school setting and are appreciated for them, then teachers will value and confidently model these learning dispositions to the students in their classrooms.

References

- Brandt, R.S. (Ed.). (1990). Theme issue: Learning styles and the brain. *Educational Leadership*, 48 (2).
- Dunn, R., Dunn, K., & Price, G. E. (1979). *Learning style inventory* (LSI). Lawrence, KS: Price Systems.
- Galloway, C.M. (Ed.). (1984). Theme issue: Matching teaching and learning styles. *Theory into Practice*, 23 (1).
- Gregorc, A.F. (1988). Self revealed learning abilities. *Wellspring*, 2(1), 23-27.
- Gregorc, A.F. (1985a). *Inside styles, beyond the basics*. Columbia, CT: Gregorc Associates.
- Gregorc, A.F. (1985b). *Style delineator: A self-assessment instrument for adults*. Columbia, CT: Gregorc Associates.
- Katz, L.G. (1988). What should young children be doing? *American Educator*, 12(2), 28-33.
- Katz, L.G., & Chard, S.C. (1989). *Engaging children's minds: The project approach*. Norwood, NJ: Ablex Publishing Corporation.

NOTE: The author wishes to express gratitude to Robert Gable whose editorial comments were extremely helpful.

"The locomotive and the steamboat, like enormous shuttles, shoot every day across the thousand various threads of national descent and employment and bind them fast in one web."

Ralph Waldo Emerson
The Young American (1844)