Improving Advising Through the Use of Cognitive Style

GERALD L. MURRAY, ***Academic Advisor, Whitinger College of Business, Ball State University***

In recent years there has been an increased interest in cognitive style as a way in which learning might be more individualized. Cognitive style, which has its roots in the work of Tolman, MacFarlane, Witkin and other cognitive psychologists, also relies heavily upon some of the concepts of the Gestaltists like Lewin and typologists like Jung. The genesis of cognitive style cannot be adequately presented in this brief paper, it can be said however, cognitive style refers to the different ways in which individuals collect and organize information into useful knowledge.

Cognitive style has a great potential in individualizing instruction:

> Different elements of educational technology and methodology can be used to insure success for certain students: none is superior for all students. One aim. . . is to diagnose the style of the utilizing media, methods, and materials which will capitalize on his strengths to augment his weaknesses and ensure success. . . The task is then one of matching the cognitive style of the student to the mode of presentation of information.[1]

The opportunities that this approach to learning presents to academic advisors, educators, and student personnel specialists are unlimited. With an integrated and coordinated effort the common goals of personalization of instruction, development of the individual, maximum use of students' potential, and recognition of the uniqueness and worth of each individual student can be more fully realized.[2]

COGNITIVE STYLE

Briefly stated, cognitive style is the way a student derives meaning from his environment and personal experiences. A student's cognitive style is determined by his perceptions of his environment and how he gains meaningfulness from it — how he learns. Not only do individuals differ in traits, aptitudes, and interests which they bring to a particular situation, they differ also in the method of attending to or perceiving information, past experiences through which they filter or interpret new learning, and the manner in which they process incoming information.

[1] *Barbara A. Bowman, et al. Personalized Educational Programs. Oakland, Michigan: Oakland Community College Press, 1973.*

[2] *Clarence Marsh. The Student Personnel Point of View: A Report of a Conference on the Philosophy and Development of Student Personnel Work in College and University, Washington, D.C.: Ace Publications, 1949.*

JUNG'S THEORY OF TYPES

Although there have been many efforts to classify personality types, few have aroused as much interest, research, and controversy as that proposed by Carl Jung.] While Jung's complete theory of personality type is not simple, many writers have done him a disservice by simplifying his theory to include only the two general attitude types of "extravert" and introvert."

While it is true that Jung is responsible for the extraversion-introversion dichotomy, his theory also assumes that to function well, an individual must have a well developed system for perception (either sensing or intuition) and a well developed system for making decisions or judgments (either thinking or feeling)? Jung, a strong proponent of definite types, considered all persons to belong definitely to one or another class and further assumed these differences to be inborn. In other words, persons have desired or preferred ways of perception and judgment.'

THE MYERS-BRIGGS TYPE INDICATOR

In 1%2 Educational Testing Service published an instrument, the Myers-Briggs Type Indicator, which was developed specifically to make possible the implementation of Jung's theory of type. "The gist of the theory is that much apparently random variation in human behavior is actually quite orderly and consistent, being due to certain basic differences in the way people prefer to use perception and judgment."[6]

Isabel Briggs Myers and her mother, Katharine C. Briggs, developed the instrument over a twenty year period. While not as rigid in the attribution of personality type as Jung, they too theorized that persons have preferred ways of using their minds and, given a choice, would predictably react in their preferred manner.

Using Jung's type theory they constructed a self report inventory which "typed" individuals through the use of the following four dichotomous categories:

> ***Extraversion*** (E) or ***Introversion*** (I): A direction of interest and attention to the outer world of objects, people, and action (extraversion) or to the inner world of ideas and contemplation (introversion).
>
> ***Sensing (S) or Intuition*** (N): A preference for looking at the immediate, the real, the tangible, the solid facts of experience (sensing) or for seeing the possibilities, meaning and relationships of experience, often with only a passing interest in the facts themselves (intuition).
>
> ***Thinking*** (T) or ***Feeling*** (F): A preference for making decisions objectively, impersonally, analyzing the facts and ordering them in terms of antecedents

[3] Carl G. Jung. *Psychological Types.* London: Routledge & Kegan Paul. 1923.

[4] Mary H. McCaulley, "The Myers-Briggs Type Indicator and the Teaching-Learning Process." Paper presented at the Annual Meeting of the American Educational Research Association. Chicago, Illinois, April 18, 1974.

[5] Laurance F. Shaffer and Edward J. Shoben, Jr. *The Psychology of Adjustment.* Boston: Houghton Mifflin Company, 1956. p. 135.

[6] Isabele Briggs Myers, *The Myers-Briggs Type Indicator: Manual* Princeton N.J.: Educational Testing Service, 1962).

and consequences (thinking or by a valuing process, weighing the importance of alternatives to oneself or others (feeling). Thinking types tend to prefer working with materials which follow logical principles; feeling types are more interested in working with or studying people.

Judging (J) or ***Perception*** (P): A preference for living in a planned, decided, orderly way, aiming to regulate life and control it (judging) or to live in a flexible, spontaneous way, aiming to understand life and adapt to it.[7]

These four interacting preferences are used to generate each of sixteen types. A type is designated by four letters such as ESFJ or INTP. All sixteen combinations or types have their own strengths and weaknesses. The theory assumes that one pole of each preference has a greater appeal, and that a person, unless hindered, will use the preferred way whenever he can, developing and strengthening it through use.

AN INVESTIGATION OF TWO TYPES: ESFJ AND INTP

Two of the sixteen types differ on every preference with other combinations falling somewhere between these poles. The Myers-Briggs was designed to show the direction of preference more so than strength of preference so no assumptions are made that scores are normally distributed or continuous. Persons do not necessarily vary on a continuum from ESFJ to INTP. The sixteen types are not to be interpreted as good or bad compared with each other. They are just different.

ESJF describes an extraverted feeling type with sensing. Myers describes an ESFJ type in high school:

> Warm-hearted, talkative, popular, conscientious, interested in everyone, a born cooperator and active committee member. Has little capacity for analysis or abstract thinking and has trouble with technical subjects, but works hard to master the facts in a lesson and win approval. Works best with plenty of praise and encouragement. Always doing something nice for someone in a practical way."[8]

INTP, the opposite pole, describes an introverted thinking type with intuition. Myers describes an INTP type in high school:

> Quiet, reserved, brilliant in exams, especially in theoretical or scientific subjects. Logical to the point of hair-splitting. Has no capacity for small talk and is uncomfortable at parties. Primarily interested in his studies and wouldn't care to be president of his class. Liked by his teaches for his scholarship and by the few fellow students who get to know him for himself?[9]

The Myers-Briggs Type-Indicator supplementary materials include descriptions for each of the other fourteen types though the differences are not as clearly disparite as the ESFJ and INTP.

[7] McCaulley, 1974, 2-3

[8] Myers, 1962.

[9] Myers, 1962.

FIELD DEPENDENCY AND FIELD INDEPENDENCY

Considerable research has been conducted on the topic of field dependency and field independency, The literature has shown that there are many ways of determining whether a person is primarily a field dependent or a field independent. It must be remembered, however, that one is generally not simply a field dependent or a field independent learner any more than he is a pure extravert or a pure introvert. There are degrees of preference for one or the other of these poles.

Composite descriptions of individuals who are field dependent indicate that they are other-directed; they take their cues from the environment. In social situations, they tend to be conforming and sensitive to what others think of them. Their tendency is to try to blend in with the crowd rather than to stand out. The field dependent is gregarious, affectionate and considerate.[10]

Field independents, on the other hand, have a highly developed sense of their own self-identity; tend to be socially more independent than their field dependent counterparts; are capable of functioning with little environmental support; tend to be task and achievement oriented; and in general, to demonstrate an internal versus external locus of control."

Even a cursory comparison between the description of the Myers-Briggs type ESFJ and the composite field dependent above would indicate great similarity. Likewise the Myers-Briggs INTP provides a description congruent with that of a field independent. In practice the Myers-Briggs has been used to discriminate between field independence and field dependence.

Many other procedures are currently being used to type persons according to cognitive style. Joseph Hill, for example, has implemented a cognitive style mapping program at Oakland Community College in Michigan." Students at Oakland Community College may take a three hour test battery designed to reveal an individual cognitive style map, or profile of eighty-four traits to describe their learning styles. This computer generated profile then provides a basis for building a "personalized educational prescription" (PEP). This procedure produces up to two thousand three hundred combinations of learning patterns and nineteen ways of teaching the same course.

Samuel Messick[13] discussed nine dimensions of cognitive style which included, among others, tolerance for incongruous or unrealistic experiences, leveling versus sharpening, and field dependence versus field independence.

The dimension of field dependence versus field independence seems to be a common thread woven throughout the fabric of cognitive style. It is by no means the only component of cognitive style but serves well as an illustration of how cognitive style interacts with learning.

[10] K. Patricia Cross, *Accent on Learning* (San Francisco: Jossey-Bass, 1977), p. 120.

[11] Cross, 1977, 122-124.

[12] William Hampton, "Students Find Their Way to Learning with Cognitive Style Mapping," *College and University Business,* February, 1972), 13-17.

[13] Samuel Messick, "The Criterion Problem in the Evaluation of Instruction: Assessing Possible, not Just Probable, Intended Outcomes." In M.C. Wittrock and D.E. Wiley (Eds.) *The Evaluation of Instruction: Issues and Problems* ((N.Y.: Holt, 1970).

ADVISING THE FIELD DEPENDENT STUDENT

K. Patricia Cross theorized that many of the "new students" of the 1980's will tend to be more field dependent than field independent. She defines these new students as those who rank in the lowest third of high school graduates on traditional tests of academic achievement, or those who for a variety of reasons have difficulty with schoolwork.[14] This description subsumes many of the other categories such as race and socioeconomic background and acknowledges that many of the demographically traditional students may also be poor learners. If this is true, then discriminating between field dependent and field independent students would give academic advisors valuable information for advising their students. Knowing that field dependent students respond more to external evaluation (grades, praise, criticism) than field independents, advisors should question the current practices of placing marginal students in courses which are non-evaluative in nature, and in many cases taught pass/fail. The field dependent students could be ill-served by taking pass/fail courses."

Students in general will be happier and more productive if they are studying with a method compatible to their cognitive styles. Field dependents need more structure and organization in classroom learning, or in computer assisted self-paced learning situations than field independent students.

Research also indicates that field dependent students could profit from clear, highly structured learning tasks that can be pursued jointly by several students or groups of students. Students who tend to be field dependent could, where possible, be placed in participatory classes which involve group work. Large lecture classes may not best serve the needs of the field dependent student.

It must be cautioned, however, that no one method should be regarded as a panacea for all students. Some subject areas do not lend themselves to small group work. Some classes have to be taken in forms which do not fall into a student's preferred learning style. It would be unfair to a student to teach him only as a field dependent person and then graduate him into a world that calls for skills in both field dependence and field independence. There should be flexibility and the advisor must design programs and suggest classes and instructors which capitalize on the strengths of the student.

Cognitive style has a great potential for educational and vocational guidance. Witkin and Cox found that field independents are more likely to show interest in practical fields such as farming, architecture and engineering than field dependents.[16] Field dependents seem to choose careers with active involvement with people, like education, nursing, and physical education.[17] The considerations of cognitive style give advisors one more tool to aid students in career planning.

Cognitive style may also effect the way advisors work with students. The literature seems to suggest that field dependent students might benefit from group advising sessions

[14] Cross, 1977, 122-123.

[15] Cross. 1977. p. 128.

[16] H.A. Witkin and P.W. Cox, "Cognitive Styles and Career Guidance," *Findings* (A quarterly newsletter of Educational Testing Service, 1975), 1-4.

[17] McCaulley, 1974, p.4.

where they may interact with other students and jointly find solutions or answers to their concerns. Field dependents are also likely to rely on the advisor's professional judgement and follow his or her advice explicitly, but a field independent may not see an advisor, preferring instead to find his or her own way through a major and other requirements. Field independents seem to be more flexible in learning approaches; and are generally successful in both large and small classes; and, also, in independent study and group work. Advising and assisting the field dependent student often results in more tangible and immediate results than the manipulating and learning environment for a field independent student.

Finally, cognitive style has the potential danger of any of the other methods for typing people. There is no magic formula which can bring about effective learning for a student. The knowledge of cognitive style will still have to be tempered with an instructor's or an advisor's good judgement and sensitivity to students' needs.

CONCLUSION

In this one dimension of cognitive style (field dependence or field independence) it has been shown that students differ in how and what they learn. Although this field is relatively new, a great deal of information is available on cognitive style and how it might be assessed. The Myers-Briggs Type Indicator is a good exmple, but certainly not the only instrument available for assessing cognitive style. The use of cognitive style offers one more opportunity or tool for academic advisors to help students achieve their educational goals and maximize their potentials for intellectual and developmental growth.