

This article has been printed in order to give the reader an understanding of the theory underlying the other articles published. It is a summary of LEARNING STYLE INVENTORY TECHNICAL MANUAL by D. A. Kolb. All references will be found in this work.

# Experiential Learning Theory and Individual Learning Styles

J. MEYER

## SUMMARY

This article describes how experience forms the basis of the learning process. The learning process takes place in a cycle with four different stages.

As a result of people's hereditary characteristics and demands of the immediate environment, they give preference to certain abilities when they have to make a decision or act in a certain situation. This results in each person developing a characteristic learning style.

A short description of the characteristic abilities of each learning style is given.

Experiential learning theory provides a model of a learning process that is consistent with the structure of human cognition and the stages of human growth and development. It conceptualizes the learning process in such a way that differences in individual learning styles and corresponding learning environments can be identified. The learning model is a dialectic one, founded on the Jungian (Jung 1923) concept of styles or types, which states that fulfilment in adult development is accomplished by higher level integration and expression of nondominant modes of dealing with the world.

The theory is called **experiential learning** for two reasons. The first is historical, linking it to its intellectual origins in the social psychology of Kurt Lewin in the 1940's and the sensitivity training and laboratory education work of the 1950's and 1960's. The second reason is to emphasize the important role that experience plays in the learning process, an emphasis that differentiates this approach from other cognitive theories of the learning process. The core of the model is a simple description of the learning cycle of how experience is

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## OPSOMMING

In hierdie artikel word beskryf hoe ervaring die basis van die leerproses vorm. Die leerproses word beskryf as 'n siklus met vier duidelik onderskeibare stadia.

Op grond van oorerflike en omgewingsfaktore ontwikkel elke persoon voorkeur aan spesifieke eienskappe soos beskryf in die ervaringsleer-siklus wanneer hulle in 'n sekere situasie besluite moet neem. Die toepassing van hierdie kenmerkende eienskappe lei daartoe dat elke persoon 'n dominante leerstyl ontwikkel.

'n Kort beskrywing van die kenmerke van elke leerstyl word ook gegee.

translated into concepts which in turn are used as guides in the choice of new experiences.

Learning is conceived as a four stage cycle. Immediate concrete experience is the basis for observation and reflection. These observations are assimilated into a *theory* from which new implications for action can be deduced. These implications or hypotheses then serve as guides in acting to create new experiences.

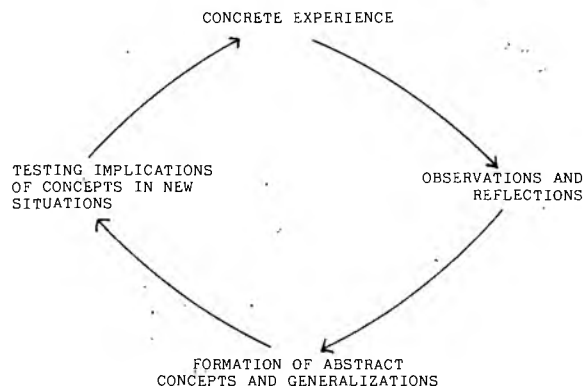


Fig. 1. The experiential learning model.

The learner, if he is to be effective, needs four different kinds of abilities:

1. Concrete Experience abilities (CE),
2. Reflective Observation abilities (RO),
3. Abstract Conceptualization abilities (AC),
4. Active Experimentation abilities (AE).

This means that he must be able to involve himself, openly, and without bias in new experiences from many perspectives (RO); he must be able to create concepts that integrate his observations into logically sound theories (AC); and use these theories to make decisions and solve problems (AE). This ideal is very difficult to achieve. Can one become highly skilled in all of these abilities or are they necessarily in conflict? How can one be concrete and immediate and still be theoretical?

A closer examination of the four-stage learning model would suggest that learning requires abilities that are polar opposites and that the learner, as a result, must continually choose which set of learning abilities he will bring to bear in any specific learning situation. More specifically, there are two primary dimensions to the learning process. The first dimension represents the concrete experiencing of events at one end and abstract conceptualization at the other. The other dimension has active experimentation at one extreme and reflective observation at the other. Thus, in the process of learning, one moves in varying degrees from actor to observer, from specific involvement to general analytic detachment.

Many cognitive psychologists (e.g., Flavell, 1963; Bruner, 1960, 1966; Harvey, Hunt & Schroeder, 1961) have identified the concrete/abstract dimension as a primary dimension on which cognitive growth and learning occurs. Goldstein and Scheerer suggest that greater abstractness results in the development of the following abilities:

1. To detach our ego from the outer world or from inner experience.
2. To assume a mental set.
3. To account for acts to oneself; to verbalize the account.
4. To shift reflectively from one aspect of the situation to another.
5. To hold in mind simultaneously various aspects.
6. To grasp the essential of a given whole: to break up a given into parts to isolate and to synthesize them.
7. To abstract common properties reflectively; to form hierarchic concepts.
8. To plan ahead ideationally, to assume an attitude toward the more possible and to think or perform symbolically (1941, p. 4).

On the other hand, according to these theorists, concreteness represents the absence of these abilities, the immersion in and domination by one's immediate experience. Yet the circular, dialectic model of the learning process would imply that abstractness is not exclusively good and concreteness exclusively bad. To be creative requires that one be able to experience anew freed somewhat from the constraints of previous abstract

concept. In psychoanalytic theory this need for a concrete childlike perspective in the creative process is referred to as regression in service of the ego (Kris, 1952). Bruner (1966) in his essay on the conditions for creativity, further emphasizes the dialectic tension between abstract and concrete involvement. For him the creative act is a product of detachment and commitment, of passion and decorum, and of a freedom to be dominated by the object of one's inquiry.

The active/reflective dimension is the other major dimension of cognitive growth and learning. As growth occurs, thought becomes more reflective and internalized based more on the manipulation of symbols and images than on actions. The modes of active experimentation and reflection, like abstractness/concreteness, stand in opposition to one another. Reflection tends to inhibit action and vice versa. For example, Singer (1968) found that children who have active internal fantasy lives, are more capable of inhibiting action for long periods of time than are children with little internal fantasy life. Kagan *et al.* (1964) found on the other hand, that very active orientations toward learning situations inhibit reflection and thereby preclude the development of analytic concepts. Herein lies the second major dialectic in the learning process — the tension between actively testing the implications of one's hypotheses and reflectively interpreting data already collected.

## INDIVIDUAL LEARNING STYLES AND THE LEARNING STYLE INVENTORY

With time, accentuation forces operate on individuals in such a way that the dialectic tensions between these dimensions are consistently resolved in a characteristic fashion. As a result of our hereditary equipment, our particular past experience, and the demands of our present environment, most people develop a learning style that emphasizes some learning abilities over others. Through socialization experiences in family, school and work, we come to resolve the conflicts between being immediate and analytical, in characteristic ways. Some people develop minds that excel at assimilating disparate facts into coherent theories, yet these same people are incapable of, or not interested in, deducing hypotheses from the theory. Others are logical geniuses but find it impossible to involve and surrender themselves to an experience. And so on. A mathematician may come to place great emphasis on abstract concepts while a poet may value concrete experience more highly. A manager may be primarily concerned with the active application of ideas while a naturalist may develop his observational skills highly. Each of us in a unique way develops a learning style that has some weak and some strong points. The learning Style Inventory (LSI) is a simple self-description inventory, designed to measure an individual's strengths and weaknesses as a learner. While the individuals tested on the LSI show many different patterns of scores, we have identified four statistically prevalent types of learning styles. We call these four

styles a) the Converger, b) the Diverger, c) the Assimilator, and 4) the Accommodator. The following is a summary of the characteristics of these types based both on our research and clinical observation of these patterns of LSI scores.

a) The **Converger's** dominant learning abilities are Abstract Conceptualization (AC) and Active Experimentation (AE). His greatest strength lies in the practical application of ideas. We call individuals who have this learning style "Convergers" because a person with this style seems to do best in situations such as conventional intelligence tests, where there is a single correct answer or solution to a question or problem (Torrealba, 1972). His knowledge is organized in such a way that through hypothetical-deductive reasoning, he can focus on specific problems. Liam Hudson's (1966) research in this style of learning (using measures other than the LSI) shows that Convergers are relatively unemotional, preferring to deal with things rather than people. They tend to have narrow interests, and choose to specialize in the physical sciences. Research shows that this learning style is characteristic of many engineers (Kolb 1976).

b) The **Diverger** has learning strengths opposite to those of the Converger. He is best at Concrete Experience (CE) and Reflective Observation (RO). His greatest strength lies in the imaginative ability. He excels in the ability to view concrete situations from many perspectives and to organize many relationships into a meaningful *gestalt*. We call a person who has this style a Diverger because he performs better in situations (such as a *brainstorming* idea session) that call for generation of ideas. Divergers are interested in people and tend to be imaginative and emotional. They have broad cultural interests and tend to specialize in the arts. Research shows that this style is characteristic of persons with humanities and liberal arts backgrounds. Counsellors, organization development consultants and personnel managers often have this learning style.

c) The **Assimilator's** dominant learning abilities are Abstract Conceptualization (AC) and Reflective Observation (RO). His greatest strength lies in his ability to create theoretical models. He excels in inductive reasoning — in assimilating disparate observations into an integrated explanation (Grochow, 1973). He, like the Coverger, is less interested in people and more concerned with abstract concepts, but he is less concerned with the practical use of theories. For him it is more important that the theory be logically sound and precise. As a result, this learning style is more characteristic of the basic sciences and mathematics rather than the applied sciences. In organizations this learning style is found most often in the research and planning departments.

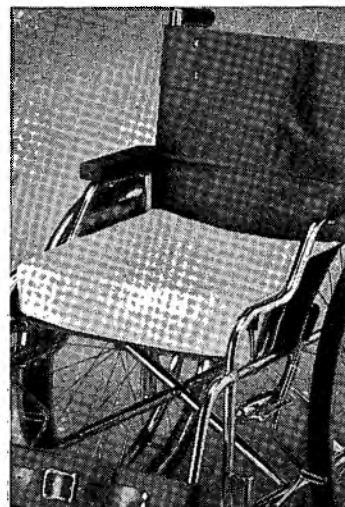
d) The **Accommodator** has the strengths opposite to those of the Assimilator. He is best at Concrete Experience (CE) and Active Experimentation (AE). His greatest strength lies in doing things, in carrying out

plans and experiments and involving himself in new experiences. He tends to be more of a risk-taker than people with the other three learning styles. We call someone having this style an Accommodator because he tends to excel in those situations where he must adapt himself to specific immediate circumstances. In situations where the theory or plans do not fit the facts he will most likely discard the plan or theory. (His opposite type, the Assimilator, would be more likely to disregard or reexamine the facts.) He tends to solve problems in an intuitive trial and error manner (Grochow, 1973), relying heavily on other people for information rather than on his own analytic ability (Stabell, 1973). The Accommodator is at ease with people but is sometime seen as impatient and "pushy". His educational background is often in technical or practical fields such as business. In organizations, people with this learning style are found in "action-oriented" jobs, often in marketing or sales.

From: Kolb DA. *Learning Style Inventory Technical Manual*. Boston, Massachusetts, 1976.

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