

Law School Teaching Innovations/Tips

Thurgood Marshall School of Law
Texas Southern University

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Using the Kolb Learning Style Inventory (LSI) to Assess the Learning Styles of Law Students

Introduction

Teaching Innovations/Tips No. 16 discusses how the learning styles of our incoming law students were measured and assessed by using the Kolb Learning Style Inventory (LSI). This Tip is divided into five parts. Part I provides background information about research on cognitive learning styles. Part II discusses the development of the Kolb Learning Style Inventory (LSI) and the characteristics of its learning styles. Part III discusses the administration of the LSI and its results. Part IV provides references and on-line resources. Part V is an appendix that contains (1) a representation of Kolb's Experiential Learning Circle and (2) a chart that summarizes Kolb's learning styles.

Part I – Background

A number of cognitive learning styles have been identified over the years in studies that have examined the connection between a student's cognitive style and learning. Research has ranged from examining "field independence versus field dependence" to "serialist versus holist" to "leveling versus sharpening" to "reflection versus impulsivity" and other measures.

For example, "field independence versus field dependence" refers to a learning style that has a tendency to approach the environment in an analytical, as opposed to a global, fashion. At the perceptual level, "field-independent" individuals are able to distinguish events as discrete from their backgrounds compared to "field-dependent" individuals who experience events in an undifferentiated way. In addition, field-dependent individuals have a greater social orientation relative to field-independent individuals. According to Messick (1978), field-independent individuals are likely to learn more effectively under conditions of intrinsic motivation (e.g., self-study) and are influenced less by social reinforcement.

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Similarly, “serialist versus holist” refers to another learning style that has been studied. According to Pask (1988), “serialists” prefer to learn in a sequential fashion, whereas “holists” prefer to learn in a hierarchical manner (i.e., top-down).

Other cognitive learning styles that have been studied have focused on:

1. **Scanning** - differences in the extent and intensity of attention resulting in variations in the vividness of experience and the span of awareness,
2. **Leveling versus Sharpening** - individual variations in remembering that pertain to the distinctiveness of memories and the tendency to merge similar events,
3. **Reflection versus Impulsivity** - individual consistencies in the speed and adequacy with which alternative hypotheses are formed and responses made, and
4. **Conceptual Differentiation** - differences in the tendency to categorize perceived similarities among stimuli in terms of separate concepts or dimensions.

In these studies, “cognitive styles” refers to the preferred way that an individual processes information. As a result, cognitive style is usually described as a personality dimension which influences attitudes, values, and social interaction. Unlike individual differences in abilities which describe peak performances (see studies by Gardner in on-line resources below), differences in cognitive styles describe a person's typical mode of thinking, remembering, or problem solving. Furthermore, according to Sternberg (1997), cognitive styles are usually considered to be “bipolar” dimensions whereas abilities are “unipolar” dimensions that range from zero to a maximum value. So, while having more ability is usually considered beneficial, having a particular cognitive style simply denotes a tendency to behave in a certain manner.

Theoretically, cognitive learning styles could be used to predict what kind of instructional strategies or methods would be most effective for a given individual and learning task. For example, the learning model based on the work of Bernice McCarthy which suggests four learning modes (Analytic, Imaginative, Common Sense, and Dynamic) has been widely applied in education (see <http://www.aboutlearning.com/>). And the learning styles framework developed by Dunn & Dunn (1999) seems to be useful in terms of creating teacher awareness of individual differences in learning (see <http://www.learningstyles.net/>).

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Part II - The Kolb Learning Style Inventory

The Kolb Learning Style Inventory (LSI) was first developed in 1976 by Professor David Kolb from Case Western Reserve University to provide a means to identify how persons prefer to grasp and process information in learning situations. Over the years, the LSI has been revised and improved, with the LSI IIA validated by other researchers in 1993 and the LSI Version 3.1 validated by other researchers in 2005.

Based on an experiential learning theory that uses an information-processing model of a learning circle of how adults learn (see Appendix I for a representation of Kolb's Experiential Learning Circle), the LSI identifies a person's generally "preferred" learning style and the intensity of that preference.

The Kolb Model presents two dimensions of learning – (1) the intake (or perceiving) of information and (2) the processing of information.

Learners show a preference for intake (perceiving) information through either concrete experience (CE) or abstract conceptualization (AC). Learners also show that they prefer to process (transform) information through active experimentation (AE) or reflective observation (RO). The combination of the dimensions creates the "learning styles" that identify how a person prefers to intake and to process information.

Kolb's Learning Styles

Because learning styles specifically deal with characteristic styles of learning, Kolb (1984) proposed a theory of experiential learning that involves four principal dimensions:

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

Because the CE/AC and AE/RO dimensions are polar opposites insofar as learning styles are concerned, Kolb's model postulates four types of learners - (1) Accommodators, (2) Divergers, (3) Convergents, and (4) Assimilators - depending upon their position on these two dimensions.

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1. Accommodators, who are **Dynamic Learners**, prefer to learn by trial and error, and self-discovery. Combining the learning stages of Active Experimentation (AE) and Concrete Experience (CE), Accommodators prefer to learn primarily from “hands-on” experience. They like to engage in action and to carry out plans. Having a tendency in solving problems to act on “gut” feelings rather than logical analysis, Accommodators may rely more heavily on people for information than their own technical analysis. They are guided by the question: What can this become? Teaching and learning strategies that fit their intake and processing preferences include: peer interaction, working with others to get assignments done, goal-oriented discussions, simulations/games, feedback/coaching, homework/projects, and application problems.

2. Divergers, who are **Innovative Learners**, prefer to learn by listening and sharing ideas. Combining the learning stages of Concrete Experience (CE) and Reflective Observation (RO), Divergers prefer to learn by observing rather than taking action. They like to engage in innovative and imaginative activities. They like to gather information from many different points of view; they enjoy situations that call for generating a wide range of ideas. They are guided by the question: Why or why not? Teaching and learning strategies that fit their intake and processing preferences include: readings/examples, discussion groups, role playing/simulations, peer feedback, brainstorming, and journaling.

3. Convergors, who are **Common Sense Learners**, prefer to learn by testing theories in sensible ways. Combining the learning stages of Abstract Conceptualization (AC) and Active Experimentation (AE), Convergors prefer to find the practical uses for ideas and theories. They like to engage in the practical applications of ideas. Convergors would rather deal with technical tasks and problems rather than with social and interpersonal issues. They are guided by the question: How does this work? Teaching and learning strategies that fit their intake and processing preferences include: lectures with examples, “what if” scenarios, interactive discussions, case studies/problems, applied projects, concept application, and problem papers.

4. Assimilators, who are **Analytic Learners**, prefer to learn by thinking through ideas. Combining the learning stages of Reflective Observation (RO) and Abstract Conceptualization (AC), Assimilators prefer to learn by having the time to think things through from a wide range of information that is put in a concise, logical form. They like to create concepts and models, and they find it more important that a theory has logical soundness than practical value. They are guided by the question: What does this mean? Teaching and learning strategies that fit their intake and processing preferences include: lectures with analogies, structure/authority, reading texts, rhetorical questions, analysis via flowcharts and models, and independent study/papers.

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In the four learning styles that have been identified by Kolb's model (see Appendix 2 for a chart that summarizes Kolb's learning styles), each individual learning style has qualities and characteristics that are determined from extensive research and norming procedures (Kolb, D. 1976, 1978, 1985 and Kolb, A. 2005). No one style is best, nor is any one style bad.

Part III – The Administration and Results of the LSI

The LSI was administered to 128 students. Based on the responses that were submitted, the learning styles of seven students were balanced and the other students were found to have the following preferred learning style:

Accommodaters/Dynamic Learners – 22 students

Divergers/Innovative Learners - 28 students

Convergers/Common Sense Learners – 21 students

Assimilators/Analytic Learners – 50 students

The LSI and the meaning of its results were discussed with the first-year students during the Writing Module of their Lawyering Process course. Information about the LSI and the students' results were posted on-line through the Writing Module's homepage on TWEN. In addition, students were encouraged to make an appointment to meet with Professor Palasota to discuss their results.

No one learning style is best, nor is any one style bad. Because one way to begin a legal education program that emphasizes "reasoning and analysis" or "critical thinking" is to become aware of one's learning style, the LSI is being used to help students become aware of their learning style so that through reflection and discussion they can begin to use and to develop their critical thinking skills and strategies. The LSI was administered as part of a diagnostic battery together with the LASSI (see *Teaching Innovations Tips No. 15*), the Watson Glaser Critical Thinking Appraisal (see *Teaching Innovations Tips No. 14*), and the Writing Diagnostic (see *Teaching Innovations Tips No. 17*) to assess the educational abilities and needs of our incoming students in order to design appropriate academic interventions.

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Conclusion

An abundance of research from the cognitive sciences shows that an understanding of a student's cognitive learning style(s) can be used to enhance the dynamics of learning. The LSI was given as part of the law school's orientation to maximize the experiences of teaching and learning. Students are encouraged to use the results of the LSI as they approach a learning task to develop their thinking skills and strategies. When teachers design instruction, they should be able to use the LSI results as they introduce students to the skills of correct reasoning and critical thinking, the techniques of definition and language analysis, the methods of rule construction from the synthesis of cases, and the strategies of argument evaluation.

Part IV – References and Resources

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On-Line Resources

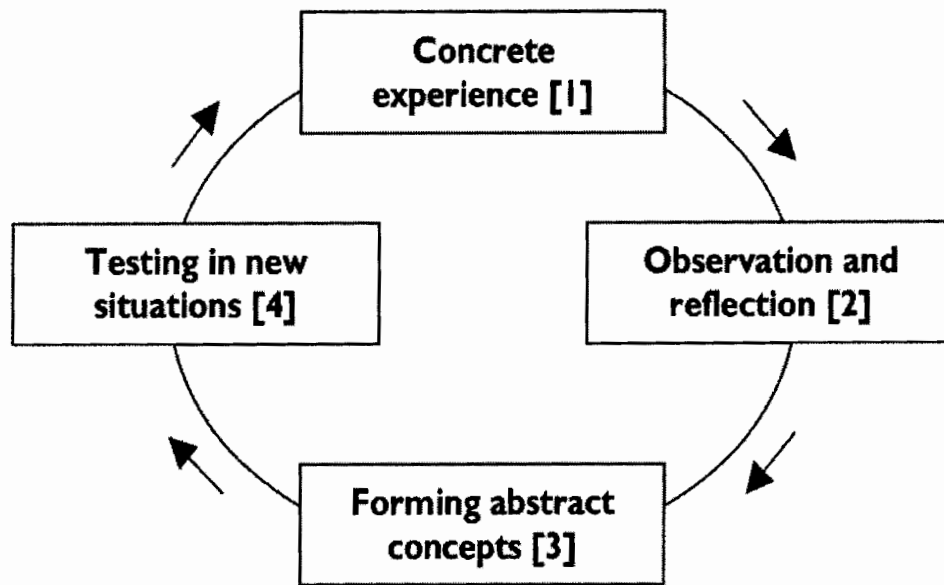
For more about Learning Styles, see <http://snow.utoronto.ca/Learn2/mod3/index.html> or <http://www.oswego.edu/~shindler/lstyle.htm>.

Application of learning styles to engineering is discussed at http://www2.ncsu.edu/unity/lockers/users/f/felder/public/Learning_Styles.html .

Discussion about the relationship between learning styles and the Multiple Intelligences theory of Gardner can be found at <http://www.ldpride.net/learningstyles.MI.htm> and <http://falcon.jmu.edu/~ramseyil/learningstyles.htm>.

Appendix 1

Kolb's Experiential Learning Circle



Appendix 2

Kolb's Learning Styles

Learning style	Learning characteristic	Description
Converger	Abstract conceptualization + active experimentation	<ul style="list-style-type: none"> · strong in practical application of ideas · can focus on hypo-deductive reasoning on specific problems · unemotional · has narrow interests
Diverger	Concrete experience + reflective observation	<ul style="list-style-type: none"> · strong in imaginative ability · good at generating ideas and seeing things from different perspectives · interested in people · broad cultural interests
Assimilator	Abstract conceptualization + reflective observation	<ul style="list-style-type: none"> · strong ability to create theoretical models · excels in inductive reasoning · concerned with abstract concepts rather than people
Accommodator	Concrete experience + active experimentation	<ul style="list-style-type: none"> · greatest strength is doing things · more of a risk taker · performs well when required to react to immediate circumstances · solves problems intuitively