

Intentional Learning: A Process for Learning to Learn in the Accounting Curriculum

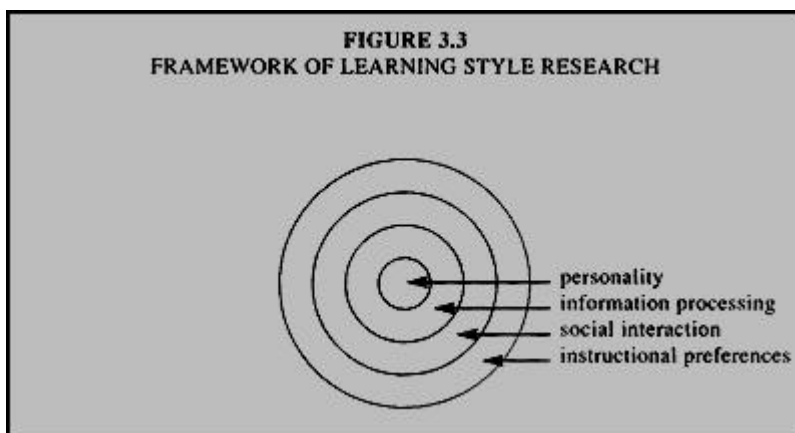
3.3 Learning Styles

Most people are aware that they have some preferred ways to approach a learning task, that others approach learning in other ways, and that no one way is best for every task and every person. Familiarity with some of the research on learning styles may help students identify their preferences and their strengths and weaknesses as learners. This awareness is an essential element in the process of learning to learn.

In spite of much research on the subject, there is no single, clearly agreed upon definition of learning style. Nor is there agreement on the relationship between learning style and intellectual development. For our purpose, we consider learning style to be how a student prefers to approach a learning task. We will review some research on learning style and suggest some ways this material may be useful to accounting educators.

Research suggests that students learn best when the teaching style is congruent with their learning style. Yet both students and faculty are almost certain to encounter courses where their styles are not congruent. Awareness on the part of both faculty and students could improve communication between them. Students can learn to adjust their approaches to learning when necessary; faculty can plan a variety of assignments to accommodate some of the learning style differences in a class. Both can attend to the process of learning as well as to the content.

A useful introduction to the subject of learning styles is Claxton and Murrell's *Learning Styles: Implications for Improving Educational Practice* (1987). They use the image of an onion to describe four "layers" of research on learning styles. We have modified their image to show in Figure 3.3 a series of concentric circles depicting a framework of learning style research. The center circle contains a number of models that describe personality types; next come a series of models of how people process information; then a layer of social-interaction models; and finally, the outer layer contains instructional-preference models. The center or core, personality traits, is generally quite stable; the other layers are more amenable to change. That is, students are more likely to change or adjust their preference for style of instruction than they are to change their preferred mode of processing information or their basic personality characteristics. We will describe one example from each circle to suggest what kinds of insight might be gained from learning styles research.



The center circle of the framework contains research that describes personality types or character traits. One of the most widely known and used analyses of personality is the Myers-Briggs Type Indicator (MBTI), based on Jungian psychology. It examines how the individual perceives the world and makes decisions, using scores on four scales:

Extraversion/Introversion (E-I)
Sensing/Intuition (S-N)
Thinking/Feeling (T-F)
Judging/Perception (J-P)

An MBTI score will include four scales and is characterized by four letters indicating the preferences on each score, for example, ESFJ. Extraversion means a person relates most easily to the active world of the people and things; introversion means the person prefers the reflective, inner world of ideas. Sensing suggests a preference for facts and concrete experience while intuition means the person looks for abstract possibilities and theories. Thinking means a person makes decisions based on analysis and logic while feeling means the person relies more on personal values. Judging reveals a preference for an orderly, planned way of life while perceptive suggests a more flexible, spontaneous approach to life. No one combination can be considered to be better than any other, though each type has its strengths and weaknesses.

In "New Students—New Learning Styles," Schroeder (1993) summarized some current studies of students and faculty using MBTI typology. He combined some MBTI scales to describe four patterns of learning:

ES — Extraversion/Sensing = concrete active
IS — Introversion/Sensing = concrete reflective
EN — Extraversion/Intuitive = abstract active
IN — Introversion/Intuitive = abstract reflective

Schroeder reported that about 50% of high school senior exhibit the ES pattern, about 10% are IN, and the rest are about evenly divided between IS and EN. In the first year or two of college, these students are not equally successful. The IN students get the best test scores and the best grades as freshmen; the ES students get the lowest freshman grades and test scores. By junior year the two groups are doing equally well in their courses. Schroeder suggested that the practical-minded, concrete active ES students are more comfortable as juniors enrolled in their major and in courses they consider relevant and practical.

Based on Myers-Briggs data collected on faculty at many institutions over many years, Schroeder described faculty as very different from their students. In general, the majority of faculty prefer the IN (abstract reflective) learning style; less than 10% prefer the ES pattern that predominates among students. The result can be a mismatch in the classroom. "Concrete active (ES) learners come to class seeking direct, concrete experience, moderate-to-high degrees of structure, and a linear approach. They value the practical and the immediate, and the focus of their perception is primarily on the physical world. Their IN instructors, on the other hand, prefer the global to the particular, are stimulated by the realm of concepts, ideas, and abstractions, and assume that students, like themselves, need a high degree of autonomy in their work"(p. 25).

Accounting faculty and students could use Myers-Briggs results as a basis for discussion of teaching and learning styles and needs. The instruments could be offered to a class and the results discussed either by the accounting professor or by student services personnel. A student who knows she prefers a concrete active approach to learning may consciously seek to use new learning strategies when called upon to deal with abstractions. A faculty member whose classroom is full of concrete active learners may find it necessary to develop multiple examples for an abstract concept in order to help students understand. Both faculty and students can benefit from open discussion of such different approaches to learning and teaching.

Some research has used the MBTI to study personality profiles of accountants. The accounting firm of Ernst & Young reportedly has used Myers-Briggs for many years to develop profiles of their professional staff. A summary provided at a recent conference for accounting program administrators showed these results (courtesy of Thomas J. Frecka):

17% ISTJ (Introversion, Sensing, Thinking, Judging)
17% ESTJ (Extraversion, Sensing, Thinking, Judging)
12% ENTJ (Extraversion, Intuitive, Thinking, Judging)
9% INTJ (Introversion, Intuitive, Thinking, Judging)

Jacoby (1981) studied a sample of 333 accountants employed by public accounting firms in Washington, D.C. Jacoby found the following MBTI types in this sample:

- 19.8% ISTJ (Introversion, Sensing, Thinking, Judging)
- 13.8% ESTJ (Extraversion, Sensing, Thinking, Judging)
- 12.3% INTJ (Introversion, Intuitive, Thinking, Judging)

A follow-up study evaluating the perceptions of accountants by other professionals confirmed Jacoby's findings. According to these studies, it would appear that most accountants are perceived to be, as well as report themselves to be, likely to base judgments on impersonal analysis and logic (thinking), prefer a planned and orderly life (judging), are most comfortable dealing with known facts (sensing), and are usually more at ease when working with ideas than with people (introversion).

ASK A STUDENT

One way to explore different learning styles is to ask students how they learn. Try interviewing several different kinds of students (age, year in school, gender, race/ethnicity, etc.) to find out what helps them, what gets in their way, what excites them, etc. Some questions might be:

Tell me about a class where you really learned a lot. (Eliminate your own classes from their consideration.) Why do you think you learned so much? What part did other students play in your learning? What part did the instructor play? What about your own personal background? Did it contribute to your learning?

What kind of learning environment is best for you? (You may need to add other questions to draw the student out, but the open-endedness of the question is meant to allow the student to include non-classroom experiences as well as the more traditional classroom environments.)

Were there particular classroom experiences that are or were helpful in your choice of a major or career? Why?

What is the purpose of college for you? Why do you think most students are here?

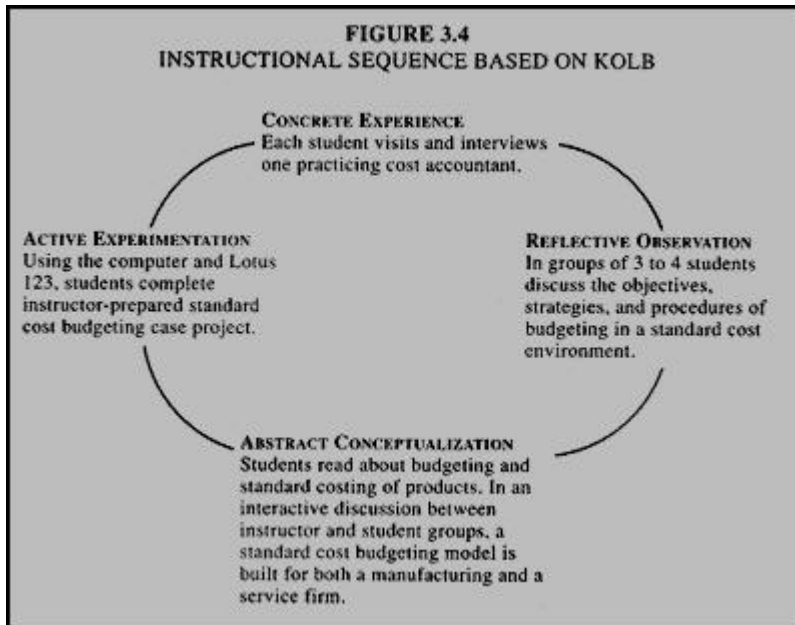
Adapted with permission from an assignment for the 1993 Great Lakes Colleges Association Design and Teaching Workshop by Jeannine Elliott.

Next to the core of personality research, the second circle of the learning style framework contains research on information-processing styles, that is, on how students absorb and use new information. One of the most prominent studies of this type is David Kolb's experiential learning models and the learning styles inventory (LSI) he developed to identify different ways of learning (Kolb, 1981). The experiential learning model essentially describes a circular pattern of learning experiences. Kolb maintains that for effective learning the learner must experience the entire cycle. However, most people prefer one part of the cycle over other parts; their preference is their learning style, as identified by the LSI. Although some questions have been raised about the validity of the LSI instrument, the basic assumptions of the experiential learning model and Kolb's description of four approaches to learning have been useful to education researchers, including accounting educators.

Kolb's experiential learning model describes a four-step process. Learners most often begin with a concrete experience, which involves them in the topic or material in question. They then engage in reflective observations, considering the subject from several perspectives. This process leads to abstract conceptualization in which learners develop theories or generalizations about the topic. Finally, they use active experimentation to apply their theory to other, related material. Svinicki and Dixon (1987) applied Kolb's model to classroom activities. They suggested, for example, that concrete experience could include such activities as laboratories, observations, simulations, and field work; reflective observation could involve logs or journals, discussion, or brainstorming; abstract conceptualization could utilize lecture, papers, projects, and analogies; active experience could call for case studies, laboratories, simulations, and projects. Note that activities may be used in more

than one way, depending on how the assignment is shaped. The goal is for students to experience all four parts of the learning cycle.

Svinicki and Dixon used the Kolb model to suggest sample instructional sequences for a number of disciplines. Building on their example, we suggest in Figure 3.4 a sample instructional sequence for an accounting topic. The sequence includes all four steps in Kolb's experiential learning cycle. Although an instructor could choose to start the sequence at any point, the entire cycle should be included to assure a complete learning experience.



Kolb's inventory of learning styles identifies four types or groups of learners based on their approach to knowledge. These different styles seem to draw individuals to specific careers or fields of study. The "divergers" prefer to approach learning through concrete experience and to process it through reflective observation; they are often humanities and liberal arts majors. The "accommodators" also prefer to take in knowledge through concrete experience, but they like to process it through active experimentation; many business majors are in this group. The "assimilators" prefer to approach knowledge through abstract conceptualization and to process it through reflective observation; many of these students major in mathematics or sciences. The "convergers" also approach knowledge abstractly but they prefer to process it through active experimentation; they are likely to major in nursing or engineering.

While most accounting classes will include all four types of students, research using different versions of the learning styles inventory suggests that many (but not a majority of) accounting majors are likely to be convergers or assimilators (Stout and Ruble, 1991). Strengths of the converger style include defining and solving problems, using deductive reasoning, and using practical application and conceptualization in making decisions. Strengths of the assimilator style include the ability to develop plans to solve problems. Assimilators are less interested in practical applications. Note that both these styles use an abstract rather than concrete approach to learning.

Accounting faculty may use an understanding of learning styles to plan assignments, courses, and programs to include the entire cycle of learning experiences. In this way, every student will have an opportunity to use her preferred style of learning and also to practice and develop other styles. To be fully effective, a student's education should include the full cycle of learning experiences and the ability to use a variety of learning styles.

The third circle of the learning styles framework is research on social interaction, that is, on how students behave in the classroom, categorizing them, for example, as compliant, discouraged, independent, etc. Eison described students as learning-oriented (see courses as hurdles to be overcome, a test to be endured). Students who are low in learning orientation and high in grade orientation will most likely be conscientious "grade grinds." Students who are high in learning

orientation and low in grade orientation are most likely to be or to become self-motivated learners. (See Claxton and Murrell, pp. 37-46, for brief descriptions and full references.)

The social interaction model developed by Fuhrmann and Jacobs sorts students into three types, echoing Baxter Magolda's first three developmental stages and the three columns in our intentional learning process diagram (Figure 2.2). The Fuhrmann and Jacobs model categorizes learners as dependent, collaborative, and independent. Fuhrmann and Jacobs point out that no one style of interaction is better than any other; each has role in the learning process. A student may be dependent when just beginning to learn a subject or skill, collaborative as she develops understanding, and independent when she attains confidence in her knowledge. Figure 3.5 diagrams Fuhrmann and Jacobs' three types and suggests the kinds of social interaction between student and teacher preferred by each type.

FIGURE 3.5
FUHRMANN-JACOBS MODEL OF LEARNERS AND TEACHERS

	<u>Dependent</u>	<u>Collaborative</u>	<u>Independent</u>
LEARNER'S STYLE	has little or no prior knowledge of subject	has some knowledge and ideas about subject	has skill or knowledge and confidence in ability
LEARNER NEEDS	structure direction encouragement reinforcement	interaction practice observation peer challenge esteem	time support opportunity to experiment resources
TEACHER ACTIONS	lecture demonstrate check reinforce encourage test and grade	question participate model coordinate lead grade	consult listen negotiate facilitate evaluate

Based on Fuhrmann-Jacobs chart in Claxton and Mureel, p. 44.

Research shows that students can and do change their classroom behaviors as they learn and mature and as the classroom context changes. Students who enter college grade-oriented and dependent can be challenged to change their style of interaction. Many accounting courses and programs already move from highly structured, lecture-oriented dependent learning in early assignments and courses to more collaborative, discussion-oriented learning in later assignments and courses. Accounting faculty may consider information such as that depicted in Figure 3.5 as they plan activities to build upon student learning styles and generate classroom dynamics that will lead to independent learning.

The outermost circle of the learning styles framework is research on instructional preferences, that is, on teaching methods and the learning environment. This research confirms the intuition of many students that some courses or instructors are a better "fit" for them than some others. The Canfield Learning Style Inventory is one well-known instrument for assessing student instructional preference. This instrument results in measures on four dimensions; (1) conditions of learning which include affiliation with peers and instructor, structure, achievement of goals and independence, and attitude toward competition and authority; (2), content of learning which includes numerics, qualitative

material, inanimate things or tasks, and people; (3) mode of learning which may be listening, reading, or direct experience; and (4) expectations of results in the form of a grade. There is also a Canfield Instructional Style Inventory that assesses the instructor's preferences on many of the same dimensions.

Research suggests that students are most comfortable and succeed best in courses that are compatible with their instructional preferences. Faculty have used the Canfield inventories to ascertain the learning preferences of their students and to initiate class discussion of learning styles and courses assignments. In some cases, these discussions have led faculty to adjust teaching methods and coursework to include a variety of modes and conditions and have led students to understand and modify their own instructional preferences (Claxton and Murrell, 1987; Canfield, 1986).

Accounting faculty and students who might be uncomfortable talking specifically about learning to learn in an accounting class may find identification and discussion of learning and teaching styles a more fruitful approach to the same issues. After reviewing the learning style scores students in a particular class, the instructor will know both students' preferences and their readiness for the materials and methods being used in the course. The instructor might then discuss these findings with the class and perhaps make adjustments or point out how certain assignments relate to specific student preferences or needs. The students in the class would gain insight into their own learning preferences in the context of a specific course. Motivated by their desire to succeed in the course, they might then consciously begin to learn to learn as they are learning accounting.

The studies of intellectual characteristics described in this section comprised only a sample of resources available in this field. Much of it can be useful to faculty who want to add learning to learn to the accounting curriculum. Claxton and Murrell emphasize this aspect in the conclusion of their chapter on learning styles and college teaching: "...the issue of learning how to learn is underscored by the indication that students who learn about their own style achieve higher grades and have more positive attitudes about their studies, greater self-confidence, and more skill in applying their knowledge in college courses generally....And because teachers themselves find it helpful to know more about how their students learn and how to make needed changes in instruction, it may be that the long-term impact of learning style is the increase in achievement and self-confidence that student learns, how the teacher teaches, how each can adapt to the other in the service of more effective learning" (p.54). In other words, both students and faculty learn about learning by reflecting on their mutual experiences.