

Learning Styles, Active Learning, and the One-Shot Information Literacy Class

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Learning styles and theories are not strangers to information literacy. Over the past few decades, numerous articles have been written on the subject. Most librarians have a solid understanding of how learning styles affect classroom instruction and information literacy. Or do they? Examining learning styles is like revisiting the subject of first aid—regardless of the number of times you hear the information, it is always beneficial to get a refresher.

Learning Models

Learning models outline how people interact with, take in, and process information. By studying how people interact in learning environments, librarians can adjust their teaching styles and delivery methods to accommodate a range of learning styles in their classes. Most research on information literacy has focused on two different learning style theories: the Dunn and Dunn Learning Style Model and the Kolb Experiential Learning Model.

Dunn and Dunn's model comprises five dimensions with twenty one subcategories that examine the instructional and environmental preferences of students. Here is a quick guide to the five dimensions (Dunn, 1978):

1. Emotional: motivation, persistence, responsibility, and structure
2. Environmental: lighting, sound, temperature and design
3. Physiological: perceptual (auditory, visual, tactile, and kinesthetic), energy levels, intake and mobility
4. Psychological: hemispheric (left and right brain processing modes), impulsive versus reflective style, and global versus analytic.

Sociological: how individuals learn in association with other people (alone, in pairs, with peers, as a team)

The Experiential Learning Model, developed by David Kolb, explores the cyclical pattern of all learning from experience through reflection and conceptualizing to action and on to further experience. This model focuses on how information is processed. There are four basic learning styles

(Kolb, 1984):

1. **Convergers:** These learners rely on abstract thinking and experimentation. They are good problem solvers and want to find out how things work
2. **Divergers:** These learners depend on concrete experience and reflective observation. They need to know why they need to learn something
3. **Assimilators:** Assimilative learners enjoy inductive reasoning and theoretical models. They need to know what pieces of the puzzle they need to assimilate in order to learn something and are more interested in ideas rather than people.

Accommodators: These “hands-on” learners tend to rely on intuition rather than logic and enjoy applying what they learn to real-life situations.

Learning models have gained acceptance in the library field but are slow to be integrated in the information literacy classroom. As an educator, it is a librarian's job to help students acquire and assimilate new information. Learning is an active process that is grounded in experience. What can library instructors do to help give students time to absorb and reflect on new information?

Sensory Preference

Dunn and Dunn are often cited for addressing the concept of sensory preference in the perceptual subcategory within the physiological strand. Within this dimension, learning takes place through visual, auditory, tactile, and kinesthetic experiences. According to Jensen (1997), 98% of all new learning enters the brain through the senses. There are different types of learning styles, but it is imperative to keep in mind what students' sensory preferences are for processing information.

Auditory/Verbal

Auditory learners remember information that they hear and discuss. These learners benefit from listening to talks and lectures. While auditory learners prefer to learn by hearing, Sousa's research (1995) indicates that people start to pay less attention to lectures after 15 or 20 minutes.

Visual

Everyone has heard the phrase, “A picture is

worth a thousand words.” Visual learners need a picture, graph or model that they can see. With pictorial aids such as maps, flow charts, or images, students are able to visualize the information and are more likely to understand and remember abstract concepts. This process assists student thinking and learning and enables them to store information. Instructors should be encouraged to use visual organizers to help students “see” the information.

Kinesthetic/Tactile

Kinesthetic learners learn best through movement and touching. They thrive with hands-on activities. They are more likely to process information in a lecture that is broken up into sections to provide time to move around. These students tend to “learn by doing.”

Learning Styles and Teaching Styles

Librarians must determine, as instructors, whether they are aware of their own individual learning preferences. Most people tend to use the learning style they are familiar with and make it their predominant teaching style. McGregor (1999) addresses the importance of examining the instructor’s individual learning style preference:

Being aware of styles, both the students’ and their own, makes it possible for educators to teach consciously to a variety of learning styles and to allow all students to have an opportunity to work in their optimum environment at some point, while also gaining practice in using other styles at times. A teaching goal should be to help students strengthen their ability to learn in multiple ways. (p. 39)

Challenges of a One-Shot Session

Teaching information literacy classes in an academic setting can be challenging. Professors may be unwilling to relinquish much of their classroom time for another instructor. They have significant amount of material that they want to cover throughout the semester and consequently, the librarian may only be allotted 30 minutes for instruction. Librarians have a lot to teach in a short amount of time, even if they are given the full hour. It is easy to fall into a lecture method of instruction in order to convey all of the information students will need to conduct research. In addition, the students are typically not “tested” on the material from the information literacy session, so there is not a lot of incentive for students to listen to the lecture.

Tell me and I will forget; show me and I may remember; involve me and I will understand.

-Chinese Proverb

How to Incorporate Student Participation

Active learning is any teaching method that gets students involved in and thinking about what they are learning. This method encourages students to use higher-order thinking skills. Kolb’s experimental learning theory focused on a cyclical pattern of all learning. Thus, learning is an active process that necessitates student interaction with the subject at hand. Drueke (1999) listed nine strategies to encourage active learning in information literacy classes:

1. Talk informally with students as they arrive for class.
2. Expect that students participate and act accordingly.
3. Arrange the classroom to encourage participation including putting chairs in a cluster or circle.
4. Use small group discussion, questioning, and writing to allow for non-threatening methods of students participation.
5. Give students time to give responses, do not rush them.
6. Reward students for participating by praising them or paraphrasing what they say.
7. Reduce anonymity by introducing your self and asking the students for their names. Ask the class to relate previous library experiences as you do this.
8. Draw the students into discussion by showing the relevance of the library to their studies.

Allow students time to ask questions throughout the class.

Other methods you may consider using:

Think-Pair-Share

This is an active learning strategy that engages students with material on an individual level, in pairs, and finally, as a large group. There are three steps: First, the librarian asks a prepared question and invites the students to think (or write) about it quietly. The student then shares his/her response with and individual(s) sitting nearby. Finally, the librarian chooses a few pairs to briefly

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summarize their thoughts for the entire class. This method can be used at natural transition points in a lecture and gives students an opportunity to think about the material that has been presented. Think-pair-share can be used with any size group and can be completed in a few minutes.

Brainstorming

With brainstorming, instructors activate students' prior knowledge by asking them what they already know about a subject. Students are then asked to generate related terms and ideas. This method begins with prior knowledge and works toward formulating relationships they may not have previously considered. This strategy can be used at any time during a lecture, with any class size.

One-Minute Paper

The one minute paper can be used at the beginning or end of a class to generate communication between the instructor and the students. This strategy is easily administered in large and small classes. Possible questions you may ask the students:

- What was the most important point you learned in today's class?

What question(s) do you still have?

The one-minute paper encourages students to put information in their own words, which helps them internalize the information. This is also a way to quickly assess student understanding of and reactions to a topic.

Cooperative Learning

Cooperative learning provides opportunities for students to learn from one another in groups and apply newly acquired information on the spot. The librarian may create short exercises that allow students to apply the concepts that were just introduced. A hands-on small group experience will prepare students for using library resources on their own.

Some Final Thoughts

One-shot library instruction classes are challenging. However, with careful planning, it is rela-

tively easy to incorporate student participation within the traditional lecture method of teaching. By varying instruction methods within the one-shot information literacy class, librarians can engage all learning styles and help students apply newly acquired information that is grounded in practical experience.

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