



Today's Collegian



Mr. Breitsprecher's Edition

July 7, 2005

FREE!

Self-Knowledge



David Kearns, former CEO of Xerox Corporation defines the term “*uneducated*” as “*not knowing how to keep learning.*”

We live in a world of rapid change – in some fields, important information and concepts are being redefined every few years. In a “high-tech” society, information we learned a few years ago, or even a few months ago, can become outdated.

This means that today’s collegians need to understand their learning styles – in many ways, this self-understanding will be the key to success in school and after graduation.

By “self-understanding,” we mean recognizing possible strengths and possible tendencies or habits that might lead to difficulty in school or other situations.

It is wrong to assume that “learning styles” reflect how a student will perform in different types of classes or careers. It is misleading to label people this way. Likewise, learning style preference does not provide an excuse for bad grade or test performance.

The idea is to have enough of a self-understanding that we can study efficiently and seek help when appropriate so that we can get the most out of school and life-long learning.

Let’s look at some learning styles and what they mean to college

students. Keep in mind that our purpose is not to “label” people nor tell them what they can or cannot do.

The types of learners presented here are not absolute – no one is exclusively one type of learner, to the same degree, all the time, in every situation.

Everybody has a variety of learning styles that change over time, from situation to situation, and to varying degrees.

Active and Reflective Learners

Active learners tend to learn best when they are actually engaged in doing something, for example, discussing, applying, or explaining to others.

Reflective learners tend to quietly think about things first. An active learner might say, “Let’s try it out and see how it works;” while a reflective learners might say, “Let’s think it through first.”

Active learners may prefer to work in groups. Reflective learners may prefer to work along. College “lectures,” where a student is expected to sit and take notes for the entire class period might be challenging for both active and reflective learners – especially the active learners.

Like all learning styles, this is

not an “all or nothing” affair. We can have aspects of both active and reflective learning. In fact, a balance between the two is probably the most useful.

Strategies for Active Learners

- If a class does not allow for activities, make up for this when studying.
- Group study sessions are helpful, especially if everyone gets a chance to do some of the explaining.
- Working with others, prepare for tests by talking about what will be asked and how those questions will be answered.
- Find ways to apply course material to homework, other classes, work, or other areas of interest.

Strategies for Reflective Learners

- If a class does not allow for reflective activities, make up for this when studying.
- When reading or reviewing, take time to think and reflect on the material.
- Think of possible questions and applications of the material.
- Write short summaries of readings or notes, using your own thoughts and words.

Check It Out!



What Are YOUR Learning Preferences?

This edition of *Today's Collegian* is adapted from the Index of Learning Styles (ILS) by Richard M. Felder and Linda K. Silverman. They have an online Index of Learning Styles Questionnaire at:

<http://www.engr.ncsu.edu/learningstyles/ilsweb.html>

Sensing and Intuitive Learners

Sensing learners are comfortable with learning facts and figures. Intuitive learners may prefer thinking about possibilities and relationships between information rather than the facts and figures themselves.

Sensors tend to solve problems by applying established methods and may get frustrated from complications and surprises; intuitors prefer to be creative, like innovation, and may get frustrated with repetition. Sensors are more likely than intuitors to resent being tested on material that has not been explicitly covered in class.

Sensors are often detail-oriented, and excel in memorizing facts and doing things "hands-on." Intuitors excel at picking-up new concepts and are often comfortable with mathematical formulas and other abstractions. Sensors tend to be careful and practical. Intuitors tend to work fast and innovate.

Sensors like to see course content as it relates to the "real-world." Intuitors are less comfortable with "drill and practice" work, routine procedures, and memorization. These are not exclusive learning styles – our preferences can

vary. Neither approach is "better." Striking the best balance we can between the two can be advantageous.

Strategies for Sensing Learners

- Look for ways course material applies to the "real-world."
- If possible, ask appropriate questions in class about different ways abstract materials can be applied to different situations.
- If you cannot ask questions in class or if professors cannot give answers that help, look in textbooks and other reference sources for practical applications.
- Talk to friends or a "study-group" and brainstorm ways that the material can be put to practice in useful, meaningful situation.

Strategies for Intuitive Learners

- If possible, ask appropriate questions in class about how facts are related or connected.
- If a course contains a great deal

of "detail-work," look for the "bigger picture."

- If you cannot ask questions in class or if a professor cannot give answers that help, look in textbooks and other reference sources for ways that facts are related or connected.
- Carefully read homework problems and test questions in their entirety BEFORE starting, paying close attention to the details.
- Check all work whenever possible, especially on tests.

Visual and Verbal Learners

Visual learners remember what they see or can imagine, such as pictures, diagrams, flow charts, time lines, films, and demonstrations. Verbal learners work best with words, written and spoken explanations. We all learn best when information is presented both visually and verbally.

Some classes use little visual information except for what is presented in texts, written on chalkboards, or given in handouts. While it is understandable that we all have preferences, strengths, and weaknesses; working on visual and verbal learning skills is important for success in school and in many careers.

Strategies for Visual Learners

- Look for diagrams, sketches, schematics, photographs, flow charts, or any other visual presentations of course material that is predominantly verbal.
- Ask your professor for ideas to find visual representations, check reference books, search online, or ask a reference librarian for help.
- Create concept maps using different shapes to organize ideas and indicate relationships between concepts with arrows.
- Color code notes (or even the textbook) with highlighters, so that everything that is related to the same topic is all the same color.

Work Smarter – Not Harder!

If we could tell you how to get twice as much done with half the effort, would you take us up on that? It's a pretty good deal – each issue of *Today's Collegian* tries to share ways of achieving just that – success in college by working for effectively and efficiently. These same skills will apply to a variety of other situations in life.

In this issue, we focused on the *Index of Learning Styles (ILS)*, by Feldman and Silverman, because we feel it is a useful tool that acknowledges strengths and weaknesses that we all have. It emphasizes that there is no "one best" style for everybody in all situations. The well-rounded collegian will want to build on their strengths and weaknesses. There are different models and theories about learning styles – some other popular methods of examining learning styles include:

- VAK (Visual, Auditory, and Kinesthetic)
- Kolb's Learning Style Inventory
- Carl Jung and Myers Briggs Type Indicator (MBTI)
- Howard Gardner's Multiple Intelligences

Looking at different learning styles can help students study more efficiently, get more done, and earn higher grades. As we develop an understanding of the situations we are faced with and self-understanding about our learning needs, we can work towards improving how we:

- Perceive information
- Process information
- Organize and present information

Sequential and Global Learners

Sequential learners may develop better understandings by using linear steps; each step leads to the next step in a logical sequence. Global learners may prefer to jump around ideas, developing an understanding of different ideas without the "connections," and then suddenly "getting it."

While sequential learners may follow logical, stepwise paths when learning or problem solving; global learners may solve complex problems quickly or put things together in unique ways once they understand the "big picture."

Sequential learners are likely to be able to explain the steps they used when solving a problem, global learners may have difficulty explaining the process they used to solve a problem.

We all know what it is like to have that "flash of inspiration" where we see an answer or solution. All learners experience this. The difference between sequential and global learners is not whether or not we suddenly "get-it." The difference is based on how we understand the concepts.

Sequential learners, if they understand the steps or process, may be able to answer questions or solve problems without fully understanding them – they are able to apply and practice the process.

Global learners may have difficulties until they understand the "big picture," even if they are given the sequence or steps of a process.

Here is an excellent example of why we need to work on strengths and weaknesses. Few are exclusively sequential or global learners – being able to apply a process without understanding what it is doing can be a problem.

Being able to work towards a broad understanding without being able to solve problems in a rational, logical manner can also be a problem.

To more fully ensure success, we want to develop BOTH of these learning skills to the best of our ability.

Strategies for Sequential Learners

- Most college courses are structured to be sequential – if a professor skips around a lot, try asking him/her to help you fill in the "gaps" and create a sequential presentation for you.
- If this is not possible, consult a textbook, online resources, or talk to a reference librarian to locate a presentation of the material that is structured sequentially.
- When studying, create outlines of material in logical order.
- Work from the details and move towards the "big picture." This process will help develop BOTH sequential and global skills.

Strategies for Global Learners

- Be patient with yourself! Global learners are not slow, they just absorb material

differently.

- Before reading a section of a chapter in a text, skim through the entire chapter to get an idea as to where the material is heading.
- Instead of studying in short sessions, try using longer blocks of time for each subject. This may result in developing a better overview of a topic, which will help learning of details and procedures.
- Relate new learning to things you already know by talking to the professor or consulting other reference sources.
- Try to appreciate the differences in learning styles and work on strengths and weaknesses.
- Remember that what seems like a disadvantage now can be an advantage later. For example, global learners can often apply information in a manner that pure sequential learners might not even think about.

Learning Process A Four-Step Model

1. **Senses (attention).** We perceive the world from our senses (sound, sight, touch, smell, and taste). Specific areas of the brain interpret each of these types of information. Nothing can happen, however, until we pay attention to a stimulus. Attention deficit problems are when a person has difficulty paying attention to incoming information.
2. **Processing (auditory, visual, kinesthetic, tactile, speed).** After we have sensed a stimulus and the brain has paid attention to it, the information is processed. Specific parts of the brain are responsible for as visual, auditory, tactile, and kinesthetic processing. Processing involves interpreting, making sense, and organizing it for the next step, memory. We process information at different speeds and this impacts learning. If processed too quickly or slowly, information might get "lost" and never make it to the next state
3. **Memory (short-term or working memory and long-term memory).** Memory is a complex subject. In general, we have two types: short-term and long-term memory storage capacity. Short-term is thought of as "working memory" that allows us to hold and work through information at the moment – answering a question or calculating a solution. Long-term memory stores information over long periods of time. Information is stored in "chunks" and linked to things we already know.
4. **Expression (writing, speaking, doing).** The final state, expressing information, involves doing something such as writing, speaking or drawing. Difficulties in expressing information in speech could be related to an expressive language weakness such as word retrieval, or to memory weakness.

Adapted from Eaton Coull Learning Group, Ltd, 1998