

***Learning is not attained by choice, it must be sought for with ardor and attended to with diligence.***

-Abigail Adams

Education (systemized learning) is an ever evolving discipline. For centuries “education” was acquired via an apprenticeship model that allowed for one-on-one interaction between master and student. Apprenticeship education also allowed for trial and error, risk-taking, problem solving, practical application and time. With the advent of the Industrial Revolution a great need developed for qualified personnel who can operate machinery, develop processes, and problem solve. While industry was in a constant search for productivity and efficiency, the public education system was watching closely and adopting similar manufacturing processes. The system of education had evolved and brought with it time constraints, centrally controlled curriculum, increased student to teacher ratios, and quality control. In order for a student to be successful, it is the system of education and learning that is equally important for students to decipher as content itself. To break the code, it is essential for students to not only to know the information being offered but how the information is delivered. There are many scenarios in traditional education when an individual’s internal matrix of data processing doesn’t correlate with the external matrix of data delivery leaving the student in a single loop learning (memory) environment and not life-long learning and problem solving skills.

Each individual uses their five senses to collect data that the brain electro-chemically sorts, stores, and processes. Once organized it is the individual mind that creates symbolic representation. Along with the five ubiquitous physical senses, multi-disciplinary research suggests that individuals possess a sixth sense. If we define “sense” as a data collections source that affects the function of the brain than our sixth sense would be the mind’s operation. Just as the five senses provide data that alter the synaptic responses within varying sections of the interactive brain, the mind (thoughts, feelings, action) creates synaptic responses throughout the brain creating a constant bio-chemical loop or interface between the brain and mind.

When a person understands the way that their mind translates data collected by their brain (learning patterns) they can identify and decode the challenges that confront them, then balance and apply their learning patterns to overcome that challenge. In order to be successful in any endeavor we need to understand our individual learning, the system we are working in, the learning patterns of the

people we work with and the task at hand. Use this understanding of yourself to understand the learning patterns of your instructors and to decode their assignments.

When evaluating critical features of education (or any other venue) there is a need to address what actions and behaviors are rewarded and punished. K-12 education is a highly structured and information based environment that rewards organization skills (Sequence) and information exchange (Precise). Simultaneously, hands on problem solving (Technical) and risk taking (Confluence) are often punished as they can be deemed as disruptive to the design of the curriculum and classroom experience. In working with hundreds of K-12 teachers we have discovered that with consistency the leading learning pattern of teachers is Sequence followed by Precise as classes become content specific at the secondary level of education. Analysis of learning patterns of students within special education and/or referred for discipline issues reveals that by mean, students who Avoid Sequence or Precise and at the same time Use First Technical or Confluence are more likely to be found in those populations. In understanding that K-12 education is a Sequence/Precise experience, students who avoid those patterns will need support and strategies to achieve in that environment.

Within higher education, an evaluation of over 10,000 students revealed that the learning pattern most associated with success or failure was the level of Sequence. Students who avoided Sequence had a greater occurrence of dropping out, academic probation, dismissal, and not completing their degree on time. While K-12 education has the sequential environment pre-determined, higher education requires the individual student to organize their schedules, priorities, and environment. Similar correlation research revealed that the faculty at the same university used their Precise and Confluent learning patterns at the "Use First" level while Sequence and Technical Reasoning were used at the "As Needed" level as determined by mean and median. This scenario of Precision and Confluence becomes self evident, in order to obtain the position of Professor the individual must be successful in an information based occupation and be recognized for performing unique research or instructional practices. With an understanding of learning patterns the student can recognize the situations that confront them and make necessary adaptations in order to meet the needs of the instructor and course requirements. In the case of higher education, it would be to focus energy on the Sequential and Precise learning patterns.

***Learning never exhausts the mind.***

-Leonardo da Vinci

## **Personal Use First Pattern Strategies**

### **When you lead Sequence**

Make sure that directions are clearly stated step-by-step  
Ask for a model or sample  
Take time to develop a plan  
Allow adequate time to check over/edit your work  
When possible create an outline of the material being covered

### **When you lead Precise**

Ask for additional references or URLs for independent information gathering  
Look for words that ask for important facts or details  
Focus on content and not note taking  
Anticipate requests for less detailed information about assignments  
Expect to balance a compulsion to gather information against the requirements of assignment deadlines

### **When you lead Technical**

Make sure you understand the relevance of the assignment  
Demonstrate the practical application of the material  
Expect to take minimal notes and will need coaching to meet your expectation for writing  
Request to be assessed through hands-on activities and/or problem solving  
When you think you are done writing, write more!

### **When you lead Confluence**

Negotiate alternative ways for completing an assignment  
Don't get discouraged if your idea is not used  
Ask for opportunities to be assessed for risk-taking  
Anticipate that you will have difficulty completing repetitive tasks  
Stick to the task, don't let my mind wander

## **Personal Avoid Pattern Strategies**

### **When you avoid Sequence**

Read directions carefully  
Make a list of your priorities  
Check-off completed tasks  
Don't start a new task until the first task is complete  
Double check your work to make sure it is finished

### **When you avoid Precise**

Don't trust your memory, write things down  
Answer questions using three full sentences  
If you have any doubts, ask questions for clarification  
Use dates, quotes, and website addresses to reinforce your work  
Remember what you have to say or write has value

### **When you avoid Technical**

Try communicating with fewer words and more action  
Practice using tools to see what they can do  
Try building or constructing something instead of writing about it  
Attempt to complete an assignment with no assistance  
Just do it!

### **When you avoid Confluence**

Ask others for ideas in order to get started  
Be willing to "let-go" and learn from a unique perspective  
Try taking small risks with new ideas  
Accept that you will make and profit from mistakes  
Ignore non-constructive criticism

# Recommendations for Connecting to Learning Patterns

## Sequence

Be prepared to:

- Make sure that all directions are clearly stated step-by-step.
- Provide a model or sample.
- Expect to repeat the directions more than once.
- Allow adequate time to check over/edit work.
- Do not change directions midstream.
- When possible, provide an outline of the material being covered.
- Bullets and numbered sequences can be helpful.
- Be sure when you use numbered sequences that you are actually listing items in a sequential manner.

## Precise

Be prepared to:

- Make sure that directions contain detailed information.
- Provide additional references or URLs for independent information gathering.
- Anticipate requests for detailed information about assignments and tests.
- Anticipate requests for detailed explanations of concepts, procedures, narratives, etc.
- Expect some of the group to feel compelled to write down everything said.
- Expect to help balance a compulsion to gather information against the requirements of assignment deadlines.

## Technical

Be prepared to:

- Make sure that the group understands the relevance of the assignment.
- When possible, demonstrate the practical application of the material to be learned.
- Provide opportunities to learn and to be assessed through hands-on activities and/or problem solving.
- Expect requests to demonstrate their knowledge in one-on-one situations.
- Anticipate that some would prefer to work alone.
- Anticipate that some will take minimal notes and will need coaching to meet your expectation for writing.

## Confluence

Be prepared to:

- Anticipate that some will avoid reading or following directions; help them to understand when it is optional or imperative for them to do so.
- Make sure that there are opportunities to be assessed for risk-taking.
- Understand that some will profit from making mistakes.
- Negotiate alternative ways for completing an assignment.
- Anticipate that some will have difficulty completing repetitive tasks.
- Expect that some will generate ideas and grasp the larger picture, but may be perceived as not pulling his/her own weight with the tedious parts of a group project.