

C.I.T.E. LEARNING STYLES INSTRUMENT

The *C.I.T.E.* Instrument (Babich, Burdine, Albright, and Randol, 1976) was formulated at the Murdoch Teachers Center in Wichita, Kansas to help teachers determine the learning styles preferred by their students. It is divided into three main areas:

- **Information gathering** includes auditory language, visual language, auditory numerical, visual numerical, and auditory-visual language, auditory numerical, visual numerical, and auditory-visual-kinesthetic combination.
- **Work conditions** focus on whether a student works better alone or in a group.
- **Expressiveness** considers if a student is better at oral or written communication.

Scores on the Learning Styles Inventory fall into one of three categories: major, minor, and negligible. These categories may be defined as follows:

- Major: The student prefers this mode of learning, feels comfortable with it, and uses it for important (to the student) learning. A student does not necessarily have one and only one preferred style.
- Minor: The student uses this mode but usually as a second choice or in conjunction with other learning styles.
- Negligible: The student prefers not to use this if other choices are available. The student does not feel comfortable with this style.

Frank B. Mann, III, Wyoming County, West Virginia, programmed a computer application system for the *C.I.T.E. Learning Styles Inventory* so that students may respond to the questions using the computer and the computer tallies the scores automatically. Teachers may obtain copies by contacting Louise Miller at 1-800-766-7372 e-mail: lbmiller@access.k12.wv.us

Definitions and Teaching Techniques for Major Learning Styles

The following are descriptions of learning styles found in every learner to a major, minor, or negligible extent and teaching suggestions related to each learning style.

Learning Style	Teaching Techniques
<p>Visual-Language: This is the student who learns well from seeing words in books, on the chalkboard, charts or workbooks. He/she may write words down that are given orally in order to learn by seeing them on paper. He or she remembers and uses information better if it has been read.</p>	<p>This student will benefit from a variety of books, pamphlets and written materials on several levels of difficulty. Given some time alone with a book, he or she may learn more than in class. Make sure important information has been given on paper, or that he or she takes notes if you want this student to remember specific information.</p>

Learning Style	Teaching Techniques
<p>Visual-Numerical: This student has to see numbers on the board, in a book, or on paper in order to work with them. He or she is more likely to remember and understand math facts if he or she has seen them. He or she does not seem to need as much oral explanation.</p>	<p>This student will benefit from worksheets, workbooks, and texts. Give a variety of written materials and allow time to study it. In playing games and being involved in activities with numbers and number problems, make sure they are visible, printed numbers, not oral games and activities. Important data should be given on paper.</p>
<p>Auditory-Language: This is the student who learns from hearing words spoken. You may hear him or her vocalizing or see the lips or throat move as he or she reads, particularly when striving to understand new material. He or she will be more capable of understanding and remembering words or facts that have been learned by hearing.</p>	<p>This student will benefit from hearing audio tapes, rote oral practice, lecture or a class discussion. He or she may benefit from using a tape recorder to make tapes to listen to later, by teaching another student, or conversing with the teacher. Groups of two or more, games or interaction activities provide the sounds of words being spoken that is so important to this student.</p>
<p>Auditory-Numerical: This student learns from hearing numbers and oral explanations. He or she may remember phone and locker numbers with ease, and be successful with oral numbers, games and puzzles. He or she may do just about as well without a math book, for written materials are not as important. He or she can probably work problems in his or her head. You may hear this student saying the numbers aloud or see the lips move as a problem is read.</p>	<p>This student will benefit from math sound tapes or from working with other people, talking about a problem. Even reading written explanations aloud will help. Games or activities in which the number problems are spoken will help. This student will benefit from tutoring another or delivering an explanation to his or her study group or to the teacher. Make sure important facts are spoken.</p>
<p>Auditory-Visual-Kinesthetic: The A/V/K student learns best by experience and self-involvement. He or she definitely needs a combination of stimuli. The manipulation of material along with the accompanying sights and sounds (words and numbers seen and spoken) will make a big difference to him or her. This student may not seem able to understand, or keep his or her mind on work unless he or she is totally involved. He or she seeks to handle, touch and work with what is being learned. Sometimes just writing or a symbolic wiggling of the fingers is a symptom of the A/V/K learner.</p>	<p>This student must be given more than just a reading or math assignment. Involve him or her with at least one other student and give him or her an activity to relate to the assignment. Accompany an audio-tape with pictures, objects and an activity such as drawing or writing or following directions with physical involvement.</p>

Learning Style	Teaching Techniques
<p>Social-Individual: This student gets more work done alone. He or she thinks best, and remembers more when he or she has learned by alone. He or she cares more for his or her own opinions than for the ideas of others. You will not have much trouble keeping this student from over-socializing during class.</p>	<p>This student needs to be allowed to do important learning alone. If you feel he or she needs socialization, save it for a non-learning situation. Let him or her go to the library or back in a corner of the room to be alone. Do not force group work on him or her when it will make the student irritable to be held back or distracted by others. Some great thinkers are loners.</p>
<p>Social-Group: This student strives to study with at least one other student and he or she will not get as much done alone. He or she values others' ideas and preferences. Group interaction increases his or her learning and later recognition of facts. Socializing is important to this student.</p>	<p>This student needs to do important learning with someone else. The stimulation of the group may be more important at certain times in the learning process than at others and you may be able to facilitate the timing for this student.</p>
<p>Expressive Oral: This student prefers to tell what he or she knows. He or she talks fluently, comfortably, and clearly. The teacher may find that this learner knows more than written tests show. He or she is probably less shy than others about giving reports or talking to the teacher or classmates. The muscular coordination involved in writing may be difficult for this learner. Organizing and putting thoughts on paper may be too slow and tedious a task for this student.</p>	<p>Allow this student to make oral reports instead of written ones. Whether in conference, small group or large, evaluate him or her more by what is said than by what is written. Reports can be on tape, to save class time. Demand a minimum of written work, but a good quality so he or she will not be ignorant of the basics of composition and legibility. Grammar can be corrected orally but is best done at another time.</p>
<p>Expressiveness-Written: his student can write fluent essays and good answers on tests to show what he or she knows. He or she feels less comfortable, perhaps even stupid when oral answers are required. His or her thoughts are better organized on paper than when they are given orally.</p>	<p>This student needs to be allowed to write reports, keep notebooks and journals for credit and take written tests for evaluation. Oral transactions should be under non-pressured conditions, perhaps even in a one-to-one conference.</p>

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Name: _____ Date: _____

Instructions: Read each statement carefully and decide which of the four responses agrees with how you feel about the statement. Put an X on the number of your response.

Questions	Most Like Me		Least Like Me	
	4	3	2	1
1. When I make things for my studies, I remember what I have learned better.	4	3	2	1
2. Written assignments are easy for me.	4	3	2	1
3. I learn better if someone reads a book to me than if I read silently to myself.	4	3	2	1
4. I learn best when I study alone.	4	3	2	1
5. Having assignment directions written on the board makes them easier to understand.	4	3	2	1
6. It's harder for me to do a written assignment than an oral one.	4	3	2	1
7. When I do math problems in my head, I say the numbers to myself.	4	3	2	1
8. If I need help in the subject, I will ask a classmate for help.	4	3	2	1
9. I understand a math problem that is written down better than one I hear.	4	3	2	1
10. I don't mind doing written assignments.	4	3	2	1
11. I remember things I hear better than I read.	4	3	2	1
12. I remember more of what I learn if I learn it when I am alone.	4	3	2	1
13. I would rather read a story than listen to it read.	4	3	2	1
14. I feel like I talk smarter than I write.	4	3	2	1
15. If someone tells me three numbers to add I can usually get the right answer without writing them down.	4	3	2	1
16. I like to work in a group because I learn from the others in the group.	4	3	2	1
17. Written math problems are easier for me to do than oral ones.	4	3	2	1
18. Writing a spelling word several times helps me remember it better.	4	3	2	1
19. I find it easier to remember what I have heard than what I have read.	4	3	2	1
20. It is more fun to learn with classmates at first, but it is hard to study with them.	4	3	2	1
21. I like written directions better than spoken ones.	4	3	2	1
22. If homework were oral, I would do it all.	4	3	2	1

23. When I hear a phone number, I can remember it without writing it down.	4	3	2	1
24. I get more work done when I work with someone.	4	3	2	1
25. Seeing a number makes more sense to me than hearing a number.	4	3	2	1
26. I like to do things like simple repairs or crafts with my hands.	4	3	2	1
27. The things I write on paper sound better than when I say them.	4	3	2	1
28. I study best when no one is around to talk or listen to.	4	3	2	1
29. I would rather read things in a book than have the teacher tell me about them.	4	3	2	1
30. Speaking is a better way than writing if you want someone to understand it better.	4	3	2	1
31. When I have a written math problem to do, I say it to myself to understand it better.	4	3	2	1
32. I can learn more about a subject if I am with a small group of students.	4	3	2	1
33. Seeing the price of something written down is easier for me to understand than having someone tell me the price.	4	3	2	1
34. I like to make things with my hands.	4	3	2	1
35. I like tests that call for sentence completion or written answers.	4	3	2	1
36. I understand more from a class discussion than from reading about a subject.	4	3	2	1
37. I remember the spelling of a word better if I see it written down than if someone spells it out loud.	4	3	2	1
38. Spelling and grammar rules make it hard for me to say what I want to in writing.	4	3	2	1
39. It makes it easier when I say the numbers of a problem to myself as I work it out.	4	3	2	1
40. I like to study with other people.	4	3	2	1
41. When the teachers say a number, I really don't understand it until I see it written down.	4	3	2	1
42. I understand what I have learned better when I am involved in making something for the subject.	4	3	2	1
43. Sometimes I say dumb things, but writing gives me time to correct myself.	4	3	2	1
44. I do well on tests if they are about things I hear in class.	4	3	2	1
45. I can't think as well when I work with someone else as when I work alone.	4	3	2	1

C.I.T.E. LEARNING STYLES INSTRUMENT WORKSHEET

Name: _____ Date: _____

Directions: Look at each statement number on the worksheet below. Find the statement number on the Learning Styles Inventory and get the "most like/least like" number of the response you selected for each statement. Write the number (1-4) in the blank provided. Total the numbers under each heading. Multiply the total by two. Look at the scores to decide if this is major, minor or negligible.

Visual Language

5 _____
 13 _____
 21 _____
 29 _____
 37 _____
 Total _____ X 2 = _____ (Score)

Social-Individual

4 _____
 12 _____
 20 _____
 28 _____
 45 _____
 Total _____ X 2 = _____ (Score)

Visual-Numerical

9 _____
 17 _____
 25 _____
 33 _____
 41 _____
 Total _____ X 2 = _____ (Score)

Social-Group

8 _____
 16 _____
 24 _____
 32 _____
 40 _____
 Total _____ X 2 = _____ (Score)

Auditory-Language

3 _____
 11 _____
 19 _____
 36 _____
 44 _____
 Total _____ X 2 = _____ (Score)

Expressiveness-Oral

6 _____
 14 _____
 22 _____
 30 _____
 38 _____
 Total _____ X 2 = _____ (Score)

Auditory-Numerical

7 _____
 15 _____
 23 _____
 31 _____
 39 _____
 Total _____ X 2 = _____ (Score)

Expressiveness-Written

2 _____
 10 _____
 27 _____
 35 _____
 43 _____
 Total _____ X 2 = _____ (Score)

Auditory-Visual-Kinesthetic

1 _____
 18 _____
 26 _____
 34 _____
 42 _____
 Total _____ X 2 = _____ (Score)

Score: 34-40 = Major Learning Style

20-32 = Minor Learning Style

10-18 = Negligible Use