

*Selection* **3**  
**PSYCHOLOGY**



*Stage 1*

*Preview*

*The author's main purpose is to teach techniques that will help you think creatively.*

*agree*       *disagree*

*After reading this selection, I will need to know the difference between creative thinking and a critical attitude.*

*agree*       *disagree*

*Activate Schema*

*Why are people afraid to express new ideas?*

*Learning Strategy*

*Be able to describe the factors involved in both creative and critical thinking and explain how the two interact.*

*Word Knowledge*

*Review the ten vocabulary items that follow the selection. Seek an understanding of unfamiliar words.*

### Stage 2: Integrate Knowledge While Reading

1. Predict
2. Picture
3. Relate
4. Monitor
5. Fix Up

## ■ Skill Development: Annotating

Annotate the following selection as if you were organizing the material to study for a quiz. Remember, do not annotate as you read, but wait until you finish a section and then mark the important points.

### CREATIVE THINKING AND CRITICAL THINKING

Gardner Lindzey, Calvin Hall, and Richard F. Thompson, from *Psychology*

*Creative thinking* is thinking that results in the discovery of a new or improved solution to a problem. *Critical thinking* is the examination and testing of suggested solutions to see whether they will work. Creative thinking leads to the birth of new ideas, while critical thinking tests ideas for flaws and defects. Both are necessary for effective problem-solving, yet they are incompatible—creative thinking interferes with critical thinking, and vice versa. To think creatively we must let our thoughts run free. The more spontaneous the process, the more ideas will be born and the greater the probability that an effective solution will be found. A steady stream of ideas furnishes the raw material. Then critical judgment selects and refines the best ideas, picking the most effective solution out of the available possibilities. Though we must engage in the two types of thinking separately, we need both for efficient problem-solving.

#### Inhibitions of Creative Thinking

*Conformity*—the desire to be like everyone else—is the foremost barrier to creative thinking. A person is afraid to express new ideas because he thinks he will make a fool of himself and be ridiculed. This feeling may date back to his childhood, when his spontaneous and imaginative ideas may have been laughed at by parents or older people. During adolescence, conformity is reinforced because young people are afraid to be different from their peers. Then, too, history teaches us that innovators often are laughed at and even persecuted.

*Censorship*—especially self-imposed censorship—is a second significant

From *Psychology* by Gardner Lindzey, Calvin Hall, and Richard F. Thompson, pp. 291-295. Copyright © 1975 by Worth Publishers, Inc. Reprinted by permission.

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barrier to creativity. External censorship of ideas, the thought-control of modern dictatorships, is dramatic and newsworthy; but internal censorship is more effective and dependable. External censorship merely prevents public distribution of proscribed thoughts; the thoughts may still be expressed privately. But people who are frightened by their thoughts tend to react passively, rather than think of creative solutions to their problems. Sometimes they even repress those thoughts, so that they are not aware they exist. Freud called this internalized censor the *superego*.

A third barrier to creative thinking is the rigid *education* still commonly imposed upon children. Regimentation, memorization, and drill may help instill the accepted knowledge of the day, but these classroom methods cannot teach students how to solve new problems or how to improve upon conventional solutions. On the other hand, the progressive movement in education often has been criticized on the ground that its emphasis on creative thinking also encourages intellectual nonconformity and radicalism. Such critics fear that new ideas may threaten the established order. Others simply believe that creative thinking must be balanced by critical thinking if it is to be useful.

A fourth barrier to creative thinking is the great *desire to find an answer quickly*. Such a strong motivation often narrows one's consciousness and encourages the acceptance of early, inadequate solutions. People tend to do their best creative thinking when they are released from the demands and responsibilities of everyday living. Inventors, scientists, artists, writers, and executives often do their most creative thinking when they are not distracted by routine work. The value of a vacation is not that it enables a person to work better on his return but rather that it permits new ideas to be born during the vacation.

The daydreamer often is criticized for wasting his time. Yet without daydreams, society's progress would be considerably slower, since daydreaming often leads to the discovery of original ideas. This is not to suggest that all daydreaming or leisurely contemplation results in valid and workable ideas—far from it. But somewhere, among the thousands of ideas conceived, one useful idea will appear. Finding this one idea without having to produce a thousand poor ones would achieve a vast saving in creative thinking. But such a saving seems unlikely, especially since creative thinking is generally enjoyable whether its results are useful or not.

### **Critical Thinking**

Creative thinking must be followed by critical thinking if we want to sort out and refine those ideas that are potentially useful. Critical thinking is essentially an idea-testing operation. Will it work? What is wrong with it? How can it be improved? These are questions to be answered by a critical examination of newly hatched ideas. You may be highly creative, but if you cannot determine which ideas are practical and reasonable, your creativity will not lead to many fruitful consequences. In order to make such

distinctions, you must maintain some distance and detachment, so that you can appraise your own ideas objectively.

70 Critical thinking requires some criteria by which to judge the practicality of the ideas. For example, if a community wants to do something about crime, it must decide what limitations are to be imposed upon the measures that are suggested. One limitation is the amount of money available; many proposals for curbing crime cost more than the community is willing or able to pay. Critical thinking must always take such realities into account.

75 What barriers stand in the path of critical thinking? One is the *fear of being aggressive and destructive*. We learn as children not to be critical, not to differ with what someone says, especially an older person. To criticize is to be discourteous.

80 A closely related barrier is the *fear of retaliation*. If I criticize your ideas, you may turn about and criticize mine. This often involves yet another barrier, the *overevaluation* of one's own ideas. We like what we have created, and often we are reluctant to let others take apart our creation. By and large, those who are least secure hang on most tenaciously to their original ideas.

85 Finally, we should note again that if too much emphasis is placed upon being creative, the critical faculty may remain underdeveloped. In their zeal to stimulate creativity in their pupils, teachers often are reluctant to think critically. This is unfortunate, since for most people life requires a balance between creative and critical thinking.

90 **Critical Attitudes.** There is an important distinction between critical thinking and a *critical attitude*. Critical thinking tries to arrive at a valid and practical solution to a problem. However much it may reject and discard, its final goal is constructive. A critical attitude, on the other hand, is destructive in intent. A person with a critical attitude tends to criticize solely for the sake of criticizing. Such an attitude is emotional rather than cognitive.

**The Creative Person**

100 In recent years, psychologists have studied creativity intensively. The first challenge they faced was how to define and recognize creativity. One common solution to this problem is to ask knowledgeable people to name the most creative individuals in their own field. Architects are asked to identify the most creative members of their profession or authors are asked to name the most creative writers. These highly creative people then are studied by means of interviews, questionnaires, tests, and other devices to see how they differ from less creative members of the same profession. These studies show that exceptionally creative people are characteristically:

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| 1. flexible   | 4. original  |
| 2. intuitive  | 5. ingenious |
| 3. perceptive | 6. dedicated |

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| 7. hardworking     | 13. moody          |
| 8. persistent      | 14. self-centered  |
| 9. independent     | 15. self-assertive |
| 10. unconventional | 16. dominant       |
| 11. courageous     | 17. eccentric      |
| 12. uninhibited    |                    |

105 Creative people often have vivid and sometimes even flamboyant personalities. They prefer complexity to simplicity. And those who are males accept the feminine side of their nature without being effeminate (Barron, 1959).

110 Isolating such characteristics of highly creative people may be useful. If these traits are related to creativity, child training and educational procedures may be tailored to produce more creative people. Still, we are only assuming that these traits have anything to do with being creative. They may merely be associated with creativity, rather than being determinants of it. Or, they may be necessary but not sufficient conditions  
 115 for being creative. Flexibility, originality, and hard work, for example, may be requirements for creativity but they certainly are not sufficient to insure it. The creative genius displayed by Shakespeare, Leonardo da Vinci, Einstein, and Beethoven remains a mystery that has so far eluded scientific analysis.

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**Stage 3: Recall for Self-Testing**

*Stop and recall what you have read. Review your use of the thinking strategies. Did you use all five?*

**■ Skill Development: Outlining and Summarizing**

*Outline* the key ideas in the selection as if you were planning to use your notes to study for a quiz. Use a piece of notebook paper to record your outline. *Write a summary* of the selection noting the main points for later reference. Be brief, but include the essential elements. Use a sheet of notebook paper to record your answer.

Compare the three methods of organizing textbook material (annotating, outlining, and summarizing). Which do you think would work better for you for this selection? Why? Use a sheet of notebook paper to record your answer.

**■ Comprehension Questions**

1. The main point the author is trying to get across in this selection is \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

After reading the selection, answer the following questions with *a, b, c, or d.*

- \_\_\_\_\_ 2. According to the author, creative thinking includes all of the following except
- improved solutions to old problems
  - the birth of new ideas
  - a spontaneous flow of free thoughts
  - an evaluation of effective alternatives
- \_\_\_\_\_ 3. The author implies that critical thinking could be characterized as all of the following except
- selective
  - judgmental
  - spontaneous
  - organized
- \_\_\_\_\_ 4. Of the following barriers to creative thinking, the single individual would probably have the most control over
- conformity
  - external censorship
  - education
  - the desire for a quick answer
- \_\_\_\_\_ 5. Of the following statements, the author would agree that
- in general, today's educational system encourages creativity
  - creative people must dare to be different
  - dictatorships cannot stop creative ideas
  - daily duties do not interfere with creativity
- \_\_\_\_\_ 6. The author believes that daydreaming
- is a waste of time
  - slows society's progress
  - fosters creative thinking
  - saves time in problem solving
- \_\_\_\_\_ 7. The author would agree with all of the following statements except
- creative thinking comes before critical thinking
  - critical thinking requires guidelines for evaluating ideas
  - critical thinking must be realistic
  - creative thinking should be done by one person and critical thinking by another
- \_\_\_\_\_ 8. All of the following are barriers to critical thinking except
- the threat of returned criticism
  - the chance of offending someone
  - an aggressive desire for improvement
  - the possible destruction of cherished ideas
- \_\_\_\_\_ 9. The author feels that a critical attitude is
- desirable
  - cognitive
  - unintentional
  - destructive
- \_\_\_\_\_ 10. The author believes that highly creative people
- cannot isolate the determinants of creativity
  - tend to be effeminate
  - make simple solutions complicated
  - do not need to work hard

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Answer the following with *T* (true) or *F* (false)

- \_\_\_\_\_ 11. The author believes that rest is the most important result of a vacation.  
 \_\_\_\_\_ 12. The author feels that memorization cannot teach students to solve new problems.  
 \_\_\_\_\_ 13. The author implies that a teacher's constructive criticism helps students develop critical thinking.  
 \_\_\_\_\_ 14. The author views critical thinking as an idea-testing process.  
 \_\_\_\_\_ 15. The author feels that creative thinking is fun.

### ■ Vocabulary

According to the way the italicized word was used in the selection, indicate *a*, *b*, *c*, or *d* for the word or phrase that gives the best definition.

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|--|---|
| _____ 1. "yet they are <i>incompatible</i> " (06)<br>a. untouched<br>b. not understood<br>c. similar in nature<br>d. unsuitable together             | _____ 2. "The more <i>spontaneous</i> the process" (08)<br>a. demanding<br>b. momentarily impulsive<br>c. reliable<br>d. advantageous     |
| _____ 3. " <i>Inhibitions</i> of Creative Thinking" (14)<br>a. variations<br>b. objections<br>c. motivators<br>d. restraints                         | _____ 4. " <i>Innovators</i> often are laughed at" (20)<br>a. clowns<br>b. introducers of the new<br>c. people who fail<br>d. adventurers |
| _____ 5. "nonconformity and <i>radicalism</i> " (37)<br>a. conservatism<br>b. extremism<br>c. isolationism<br>d. romanticism                         | _____ 6. " <i>leisurely contemplation</i> " (53)<br>a. relaxation<br>b. conversation<br>c. meditation<br>d. manipulation                  |
| _____ 7. "maintain some distance and <i>detachment</i> " (66)<br>a. outside advice<br>b. separation<br>c. sophistication<br>d. emotional involvement | _____ 8. "hang on most <i>tenaciously</i> " (83)<br>a. strongly<br>b. loosely<br>c. quickly<br>d. quietly                                 |
| _____ 9. "in their <i>zeal</i> to stimulate" (86)<br>a. attempt<br>b. goal<br>c. rush<br>d. eagerness  | _____ 10. " <i>flamboyant</i> personalities" (105)<br>a. annoying<br>b. likable<br>c. showy<br>d. intelligent                             |

## ■ Written Response

Use the information from the text to support the following statement:

**The reality of the American classroom is that some time is spent on critical thinking but very little emphasis is placed on creative thinking.**

Response Approach: First define critical thinking and relate the characteristics to the classroom. Then define creative thinking and discuss how the inhibitions operate in the average American classroom.

## SUMMARY

Textbook reading is study reading.

Reading a textbook and reading a novel differ, both in difficulty level and in purpose. Textbook reading is study reading. Students must select the textbook information to remember and organize it to facilitate future study. The following systems can be used to organize textbook information:

*Annotating* is a method of using symbols and notations to highlight main ideas, significant supporting details, and key terms.

A summary is a brief, concise statement in your own words of the main point and significant supporting details.

The *Cornell method of notetaking* includes summary sentences and marginal notes.

The layout of the *outline* is a graphic presentation of main ideas and significant supporting details.

*Mapping* is a visual system of condensing material to show relationships and importance.