The Barrett Taxonomy of Cognitive and Affective Dimensions of Reading Comprehension

In reading methods courses, textbook manuals, and lists of behavioral objectives, three kinds of questions are usually mentioned: 1) literal, 2) inferential, and 3) assimilative, which includes critical questioning for factual material and creative questions for stories, poems, plays, etc...

The reading manuals are usually very helpful to the teacher in guiding questioning, but the other subject areas rarely have manuals with such explicit help.

Teachers often try to use the literal, inferential, and assimilative categories in the content areas, but find there is need for clarification or examples of the categories.

The Barrett Taxonomy (Clymer, 1968), designed originally to assist classroom teachers in developing comprehension questions and / or test questions for reading, is especially useful for classroom questioning in other content areas as well.

The first two categories, literal comprehension and reorganization, deal with the facts as presented orally or in the books the students have read, and thus result in closed questions that have a single correct response. A possible exception is Synthesizing (2.4) if the combination of facts presented leads to a totally new idea. Under those conditions, the student has creatively added his or her uniqueness to the presented information. However, in classroom learning, synthesis is most often the putting together of facts to reach a generalization or concept or definition.

The remaining categories will always involve the student's own background of experience. As a result, it is possible to have as many different, but correct, responses as there are students present, since each brings to school a different background of home, family, friends, and learnings. These categories therefore lead to the

development of open-ended questions.

Although the classroom teacher who focuses on these higher questions has to allow more time for the varied responses, the degree of learning that can be evaluated is at least as great, and often greater, since adequate response to questions at these levels must incorporate the information that could have been gathered by "fact" questions. Therefore, as much or more can be gained for teacher and for students from a lesson with only a few higher level questions and the varied responses, since all the "facts" are checked <u>while</u> the students get practice in using higher cognitive thinking processes.

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The Complete Barrett Taxonomy

1.0 Literal Comprehension

Literal comprehension focuses on ideas and information which are <u>explicitly</u> stated in the selection. Purposes for reading and teacher's questions designed to elicit responses at this level may range from simple to complex. A simple task in literal comprehension may be the recognition or recall of a single fact or incident. A more complex task might be the recognition or recall or a series of facts or the sequencing of incidents in a reading selection. (Or these tasks may be related to an exercise which may itself be considered as a reading selection .) Purposes and questions at this level may have the following characteristics.

1.1 Recognition

Recognition requires the student to locate or identify ideas or information explicitly stated in the reading selection itself or in exercises which use the explicit ideas and information presented in the reading selection. Recognition tasks are:

1.1.1 Recognition of Details

The student is required to locate or identify facts such as the names of characters, the time of the story, or the place of the story (or just about any other kind of explicit fact or detail requiring literal comprehension.)

EXAMPLES AND PATTERNS:

1. Locate the name of _____

2. Find the following information: date of flight, time in orbit, speed of the space craft, and the height reached.

3. Watch for details as you read.

4. Find the story by using the Contents pages.

5. Read and find out: If _____ thinks _____ ; the time of day _____
.

6.   Add each explorer to your chart telling "Who," "What," "Where," and "When." (This exercise even though it involves the recognition of sixteen separate details is considered on question.)

Skim (or read) for locations, names, or dates.

1.1.2 Recognition of Main Ideas

The student is asked to locate or identify an explicit statement in or from a selection which is a main idea of a paragraph or a larger portion of the selection. (At times caution and real discernment must be utilized to distinguish a main idea from a detail.)

EXAMPLES AND PATTERNS:

1.   Find out what _____ is going to do.

2.   What happened when or during _____ ?

3.   What important thing did the character find out?

4. What part did the character play in _____ ?

5.   Underline the main ideas in this _____ .

1.1.3 Recognition of a Sequence

The student is required to locate or identify the order of incidents or actions explicitly stated in the selection.

EXAMPLES AND PATTERNS:

1.   Read to find out : What did _____ do first?

2.   What did _____ do next?

3. What did _____ do last?

4. Be prepared to tell how Geraldine changed her white dress to red and yellow and what happened then. (This sentence contains two separate questions: how Geraldine changed her dress requires the recognition of a sequence, Level 1.13; what happened then requires the recognition of a main idea and is classified at level 1.12.

1.1.4 Recognition of Comparison

The student is requested to locate or identify likenesses and differences in characters, times, and places that are explicitly stated in the selection. (Levels 1.14, 1.24, and 3.4 involve comparisons. Seeing likenesses and differences, seeing relationships, and making comparisons between characters, incidents, and situations are fairly synonymous at these levels. However, when a cause and effect relationship exists, it shall be classified at the next higher level of the taxonomy provided the criteria of some other level are not more nearly met. There is a level for cognition of comparisons, a level for recall of comparisons, and a level for inferring of comparisons. Examples for each of these levels define what constitutes a comparison question.)

EXAMPLES AND PATTERNS:

1. Read to find out the differences between _____ and _____ .

2. Look for ideas which conflict with each other.

3. Are _____ and _____ the same?

4. Find similes; find metaphors.

5. Read to find out how _____ changed.

1.1.5 Recognition of Cause and Effect Relationships

The student in this instance may be required to locate or identify the explicitly stated reasons for certain happenings or actions in the selection. (Cause and effect are not restricted to motivations and

interests. For example, there are cause and effect relationships which are inorganic.)

EXAMPLES AND PATTERNS:

1. Find out the reasons for _____ ?

2. What caused _____ ?

3. What were the results of _____ ? (In this example the effect has to be recognized.)

4. Find the sentence that tells why _____ did (or was) _____ .

5. What happened to shorten his stay at _____ ?

1.1.6 Recognition of Character Traits

The student is required to identify or locate explicit statements about a character which help to point up the type of person he or she is.

EXAMPLES AND PATTERNS:

1. Read orally the parts which prove that he was clever, bold, kind, courageous, and intelligent.

2. Find the words and phrases which describe the characters. (Some of these words and phrases describe character traits. Of course, many descriptive words and phrases do not pertain to character traits.)

3. Find agnomens. (Nicknames)

1.2 Recall

Recall requires the student to produce from memory ideas and information explicitly stated in the reading selection. Recall tasks are:

1.2.1 Recall of Details

The student is asked to produce from memory facts such as the names of characters, the time of the story, or the place of the story. (Recall of almost any explicit fact or detail from the selection is included. A single detail as well as several details scattered throughout the story are both level 1.21 questions.)

EXAMPLES AND PATTERNS:

1. What hardships were endured?

2. How much land was claimed?

3. Who paid for his journey?

4. Over what kind of land did they travel? (This question requires recall of details from several places in the story; however, no sequencing or reorganization is asked for.)

5. Write a list of all the details you can remember.

6. Recite the _____ listed.

1.2.2 Recall of Main Ideas

The student is required to state the main idea of a paragraph or a larger portion of the selection from memory, when the main idea is explicitly stated in the selection.

EXAMPLES AND PATTERNS:

1. What did the _____ mean to this world?[

2. What important statement did he make?

3. What uses were made of _____ ?

4. What knowledge was gained from _____ ?

5. What did he or she do _____ ?

6.   What did he or she say? (This question refers to what Stanley says when he first met Livingston and in this instance constitutes a level 1.22 thought process.)

7.   What happened to _____ ?

1.2.3 Recall of a Sequence

The student is asked to provide from memory the order of incidents or actions explicitly stated in the selection. (A sequence will be constituted only when order of occurrence is specifically required.)

EXAMPLES AND PATTERNS:

1.   Describe in correct sequence _____ .

2.   Look at the illustrations and tell the story in sequence. (The illustrations aid the recall but are not sufficient.)

3.   Number these _____ in the order in which they took place in the selection.

4.   Make a chart that shows the _____ throughout the selection.

5.   Tell in correct order _____ .

6.   What happened on the fourth day?

1.2.4 Recall of Comparison

The student is requited to call up from memory the likenesses and differences in characters, times, and places tat are explicitly stated in the selection. (Questions are classified at this level if they ask for likenesses and/ or differences.)

EXAMPLES AND PATTERNS:

1.   Compare and contrast one journey with another journey as to: climate, terrain, natives, length of time, difficulties and successes.

2.   How was this _____ different from others?

3.   In what ways were _____ and _____ similar? different?

4.   Compare and contrast each of the following pairs: (Each pair constitutes a question.)

5.   Compare the size of _____ and _____ .

1.2.5 Recall of Cause and Effect Relationships

The student is requested to produce from memory explicitly stated reasons for certain happenings or action in the selection.

EXAMPLES AND PATTERNS:

1.   Why did _____ do _____ ?

2.   Why was _____ so determined to _____ ?

3.   What was the purpose of _____ ?

4.   What caused _____ ?

5.   Why did _____ decide to _____ ?

6.   How did _____ accomplish _____ ? (This action in such instances causes an effect.)

7.   What was the reaction of _____ to _____ ?

1.2.6 Recall of Character Traits

The student is asked to call up from memory explicit statements about characters which illustrate the type of persons they are.

EXAMPLES AND PATTERNS:

1.   Why are they well suited to _____ ?

2. How did Stanley feel? (The story states that Stanley felt shy.)

3. How had he shown he was _____ ?

4. What was _____ like?

5. Summarize her attitude toward life. (In spite of the use of the word summarize, this question actually calls for no more than the recall of an explicit statement.

2.0 Reorganization

Reorganization requires the student to analyze, synthesize, and/ or organize ideas or information explicitly stated in the selection. To produce the desired thought product, the reader may utilize the statements of the author verbatim or he or she may paraphrase or translate the author's statements. Reorganization tasks are:

2.1 Classifying

In this instance the student is required to place people, things, places, and / or events into categories. (When pupils are asked to recognize or recall certain kinds of details, relationships, or traits, they are in effect classifying, but at a lower level of the taxonomy. The key to this level is that things must be sorted into a category or a class.)

EXAMPLES AND PATTERNS:

Read each phrase below. Does it tell you "who," "what," "when," "how," or "where?"

1. "Sank here." (A phrase taken from a selection)

2. Which of the following are _____ ?

3. Place the following under the proper heading.

4. Classify the following according to _____ .

5. Which of the following _____ does not belong. (Where based upon

the selection and not merely a matter of word meaning. Care also has to be exercised in such cases to make sure the inferring of a comparison, level 3.4 is not necessitated.)

2.2 Outlining

The student is requested to organize the selection in outline form using direct statements or paraphrased statements from the selection.

EXAMPLES AND PATTERNS:

1. Organize the facts into main heads and subheads to form an outline.

2. Complete the following outline.

3. Divide the story into _____ parts.

2.3 Summarizing

The student is asked to condense the selection using direct or paraphrased statements from the selection. (This level is interpreted as also being applicable when less than the entire selection is condensed.)

EXAMPLES AND PATTERNS:

1. What has happened up to this point?

2. Tell the story in your own words.

2.4 Synthesizing

In this instance, the student is requested to consolidate explicit ideas or information from more than one source. (The pupil is required to put together information from more than one place. More is required than just a collecting of information for this information must become fused so that information from more than one source provides a single answer to a question.

While the taxonomy refers to a single selection, quite often in order t answer a question, information obtained from a previous selection or

selections must be utilized. The intent of the taxonomy, despite its restrictive reference to <u>the</u> selection, is not only the reading comprehension questions from review units, lessons, and exercise, but also many other reading comprehension questions.)

EXAMPLES AND PATTERNS:

1. How long did the entire _____ last ?

2. Fill in your time line.

3. What was the speed of the _____ ?

4. Did _____ have enough _____ ?

5. Compute _____ .

6. How many times did _____ take place ?

7. On what day did _____ happen ?

8. Figure out _____ .

3.0 Inferential Comprehension

Inferential comprehension is demonstrated by the student when he or she uses the ideas and information explicitly stated in the selection, his or her intuition, and his or her personal experience as a basis for conjectures and hypotheses. Inferences drawn by the student may be either convergent or divergent in nature and the student may be asked to verbalize the rationale underlying his or her inferences. In general, then, inferential comprehension is stimulated by purposes for reading and teachers' questions which demand thinking and imagination that go beyond the printed page. (Personal experience is interpreted to include formal learning experiences, as well as those things which the reader has personally experienced in a first hand situation. Prior knowledge, regardless of where this knowledge came from, is an integral part of inference. The crucial factor distinguishing inference questions from recognition and recall questions is that their answers are not explicitly stated but must be inferred.)

3.1 Inferring Supporting Details

In this instance, the student is asked to conjecture about additional facts the author might have included in the selection which would have made it more informative, interesting, or appealing. (Whether or not additional details are indeed "more informative, interesting, or appealing" is largely subjective. If the inferring of a detail is required, the question is to be placed at this level.)

EXAMPLES AND PATTERNS:

1. Did he realize _____ ?

2. Was the discovery planned or accidental? (The classification of this question at this level is another example of making a debatable decision in favor of the higher category. The statement in the text says, "He sailed west toward Greenland, but because of bad storms he went off course and came instead upon an unknown land.")

3. How did she converse with the natives?

4. What was the weather like?

5. Do you think _____ ?

6. Did _____ believe? (Such a question may go beyond inference and require level 5.2, Identification.)

3.2 Inferring Main Ideas

The student is required to provide the main idea, general significance, theme, or moral which is not explicitly stated in the selection. (Such questions may pertain to part of a selection.)

EXAMPLES AND PATTERNS:

1. What is the main idea of this _____ ?

2. Discuss the significance of _____ ?

3. Read these short workbook selections and then select or write the best title for each. (This question goes beyond synthesis and requires inference.)

4. What is the poem or story saying?

5. Answer this riddle. (Where more than mere word meaning is required.)

6. Read these paragraphs and then write or select the main idea of each.

7. Write a sentence summarizing the main idea of _____ .

3.3 Inferring Sequence

The student, in this case, may be requested to conjecture as to what action or incident might have taken place between two explicitly stated actions or incidents, or he or she may be asked to hypothesize about what would happen next if the selection had not ended as it did but had been extended.

EXAMPLES AND PATTERNS:

1. Many days from _____ through _____ are omitted in her report. Suggest the events that happened in those days.

2. What will happen next?

3. What happened between _____ and _____ ?

4. Place these _____ in logical order.

3.4 Inferring Comparisons

The student is requited to infer likenesses and differences in characters, times, places, things, or ideas. Such inferential comparisons revolve around ideas such as : here and there, then and now, he and she, and she and she.

EXAMPLES AND PATTERNS:

1. Compare: effectiveness and value to future explorers.

2. Compare _____ as to completeness and importance or detail.

3. How does _____ resemble _____ ?

4. Compare _____ with _____ .

5. Are _____ and _____ related?

6. Complete the following similes or metaphors. (If based on ideas in the selection.)

3.5 Inferring Cause and Effect Relationships

The student is required to hypothesize about the motivations of characters and their interactions with time and place. He or she may also be required to conjecture s to what caused the author to include certain ideas, words, characterizations, and action in his or her writing. ("Why" and "Because" are often clues to this category.)

EXAMPLES AND PATTERNS:

1. Why did Marco Polo say, "Take this book and cause it to be read to you?" (The answer requires inferring why people would have to have the book read to them.)

2. Why was it necessary to _____ ?

3. Why would _____ ?

4. How did _____ know _____ ?

5. Why did they _____ ?

6. Why did the author include _____ ?

7. What is the result of _____ ?

8. What might have happened if _____ ?

9. What makes this _____ a _____ ?

10. What makes you think _____ ?

11. Did _____ because _____ ?

12. How could _____ ?

13. Why is it helpful to have a _____ ?

3.6 Inferring Character Traits

In his case, the student is asked to hypothesize about the nature of characters on the basis of explicit clues presented in the selection.

EXAMPLES AND PATTERNS:

1. List their character traits.

2. What did _____ prove about their attitudes toward _____ ?

3. What does _____ tell us about her?

4. Is _____ very wise?

5. What kind of person is _____ ?

6. What words will describe _____ ?

7. What was _____ 's attitude about _____ ?

3.7 Predicting Outcomes

The student is requested to read an initial portion of a selection and on the basis of this reading he or she is required to conjecture about the outcome of the selection. (An initial portion of a selection may be no more than the title.)

1. Do you think _____ will _____ ?

2. What do you think will happen?

3. Will he help them?

4. Someone may predict _____ ?

5. Read _____ and guess what will happen.

3.8 Interpreting Figurative Language

The student, in this instance, is asked to infer literal meanings from the author's figurative use of language.

1. What is meant by the phrase, "continue unrolling the map"?

2. Interpret the following figurative expressions: ...

4.0 Evaluation

Purposes for reading and teacher's questions, in this instance, require responses by the student which indicate that he or she has made an evaluative judgment by comparing ideas presented in the selection with external criteria provided by the teacher, other authorities, or other written sources, or with internal criteria provided by the reader's experiences, knowledge, or values. In essence evaluation deals with judgment and focuses on qualities of accuracy, acceptability, desirability, worth, or probability of occurrence. (Evaluative judgment is the key to this category.) Evaluative thinking may be demonstrated by asking the student to make the following judgments.

4.1 Judgments of Reality or Fantasy

Could this really happen? Such a question calls for a judgment by the reader based on his or her experience.

1. Is _____ imaginary?

2. How many unreal things can you find?

3. Did _____ really happen?

4. Is _____ fact or fiction?

5. Is _____ possible?

4.2 Judgments of Fact or Opinion

Does the author provide adequate support for his or her conclusions? Is the author attempting to sway your thinking? Questions of this type require the student to analyze and evaluate the writing on the basis of the knowledge he or she has on the subject as well as to analyze and evaluate the intent of the author.

Examples and Patterns:

1. Do you think _____ had anything to do with _____ ?

2. Which _____ seem to be correct?

3. What strange ideas did _____ have?

4. Which _____ are fact? opinion?

5. Based on the facts that are given, does _____ seem reasonable?

4.3 Judgments of Adequacy and Validity

Is the information presented here in keeping with what you have read n the subject in other sources? Questions of this nature call for the reader to compare written sources of information with an eye toward agreement and disagreement and completeness and incompleteness.

1. Did _____ ever actually _____ ?

2. Continue to check on _____ .

3. Why was _____ true? not true?

4. Is adequate information given about _____ ?

5. Is _____ really _____ ?

6. Which ideas are still accepted and which ones are no longer believed?

7. Label each _____ true or false.

8. Find proof from other sources that _____ ?

4.4 Judgments of Appropriateness

What part of the story best describes the main character? Such a question requires the reader to make a judgment about the relative adequacy of different parts of the selection to answer the question. (It is believed that this level should not be limited to the main character, nor should it be limited to just narrative text. One can judge the appropriateness of text support to prove a subject or topic.)

4.5 Judgments of Worth, Desirability and Acceptability

Was the character right or wrong in what he or she did? Was his or her behavior good or bad? Questions of this nature call for judgments based on the reader's moral code or his or her value system. The same holds true for judging the moral character of a political, social, or economic policy in informational or expository text as well as evaluating an author's proposal.

EXAMPLES AND PATTERNS:

1. Do you like this character?

2. How do you feel about this character?

3. Is _____ the right thing to do?

4. Is _____ acting fairly?

5. Why was it wrong for _____ to _____ ?

6. What do you think of _____ 's attitude?

7. Is a high degree of _____ a good quality to have?

5.0 Appreciation

Appreciation involves all the previously cited cognitive dimensions of reading, for it deals with the psychological and aesthetic impact of the selection on the reader. Appreciation calls for the student to be emotionally and aesthetically sensitive to the work and to have a reaction to the worth of its psychological and artistic elements. Appreciation includes both the knowledge of and the emotional response to literary techniques, forms, styles, and structures.

5.1 Emotional Response to the Content

The student is required to verbalize his or her feelings about the selection in terms if interest, excitement, boredom, fear, hate, amusement, etc. It is concerned with the emotional impact of the total work on the reader. (The emotional impact of the <u>total</u> work on the reader is not considered necessary.)

EXAMPLES AND PATTERNS:

1. Are you surprised?

2. Why did you like or dislike this selection?

3. Was this selection interesting? funny?

4. What part of the story did you find most exciting?

5. Select your favorite story or passage.

6. Questions requiring the pupil to respond to the plot.

7. Did the story have a happy ending?

8. Which _____ did you enjoy the most?

5.2 Identification with Characters or Incidents

Teachers' questions of this nature will elicit responses from the reader which demonstrate his or her sensitivity to, sympathy for, and empathy with characters, happenings, and ideas portrayed by the author.

EXAMPLES AND PATTERNS:

1. What words will describe the feelings of _____ ?

2. How did they feel when _____ ?

3. Will _____ be difficult for _____ ? (This goes beyond level 3.7, prediction.)

4. Would you _____ ?

5. Encourage pupils to identify with _____ .

6. Do you think he will follow the advice?

7. Did she act recklessly? (This would be an example of level 4.5, except that in order to make a decision as to whether or not she acted recklessly, the situation must be identified with.)

8. Write your own ending to this story. (It is believed that this question goes beyond inferring of a sequence and the making of a prediction and falls at level 5.2.)

9. Devise a conversation between _____ and _____ .

10. What would you do if you were _____ ?

11. What is _____ thinking?

12. How would you have felt if you were _____ ?

13. How did _____ talk when _____ ?

14. Relate _____ to you own life.

5.3 Reactions to the Author's Use of Language

In this instance the student is required to respond to the author's craftsmanship in terms of the semantic dimension of the selection, namely, connotations and denotations of words. (Level 5.3 pertains essentially to the appreciation of the author's skill and craftsmanship in selecting and using words. Such appreciation is dependent upon the denotation and connotations of words. Emotions are inherent in appreciation.)

EXAMPLES AND PATTERNS:

1. Questions requiring recognition or discussion of qualifiers.

2. Why is _____ a good term?

3. Demonstrate how _____ 's voice sounded when he spoke _____ .

4. What personifications, allegory, puns, malapropisms did the author use?

5. What "loaded" language was used? propaganda? understatements? exaggerations? emotion-laden words?

6. How did the author express the idea of _____ ?

7. In what way is the word _____ used in the selection?

5.4 Imagery

In this instance, the reader is required to verbalize his or her feelings with regard to the author's artistic ability to pain word pictures which cause

the reader to visualize, smell, taste, hear, or feel.

1.   Picture may be drawn to illustrate the different phases of the antelope hunt. (This was classified at level 5.4 which would be perfectly congruent if Barrett had used the word express instead of verbalize.)

2.   Based upon the selection draw a picture or make a design. (Caution must be exercised in determining that such questions <u>do require appreciation of the author's artistic ability to create imagery</u> and not just understanding of word or sentence meaning.)

3.   Read rhythmically and expressively. (Includes choral reading.)

4.   Dramatize the story.

5.   Read the part the way the character might have talked. (This question goes beyond identifying as spelled out at level 5.2 and requires level 5.4.)

6.   Find the phrase which helps you build a mental picture of _____ .

7.   In a mind's-eye picture, how did the _____ look?

8.   Reenact the _____ scene.

9.   How does _____ make you feel?

10. Take the role of _____ . (This goes beyond identification)

11. Questions requiring appreciation of dialogue may require utilization of this level.

12. What _____ has the author created?

13. How did the author cause you to _____ ?