Constructing Evaluation Device and Items

Achievement in the affective area of learning is frequently evaluated by the use of such devices as attitude scales, performance checklists, structured and unstructured interviews, oral tests, and essay and problem-solving test items.

Generally, the first step in the process of evaluating learner achievement of affective objectives is to examine your unit and lesson objectives to see whether performance in the affective domain is involved, either directly or indirectly. Most workplace objectives cannot be classified in just one learning domain. For example, typing instructors don't teach learners just how to type so many words a minute -- they teach them how to be typists.

The affective aspect of this basically psychomotor objective requires a commitment by the learner to “try harder” and is, therefore, classified as partially in the affective domain of learning. Thus, you need to look for words in your objectives that imply standards and values.

The second step is to determine what evaluation techniques to use to measure learner progress toward achieving the objectives. The third step is to construct the devices and items you have selected.

Types and Construction of Devices and Items

Essay items may be used to assess learner achievement of affective objectives in the upper levels of the affective domain-valuing, organizing, characterizing by a value or value complex.

For example, if some of your learners have not regulated their lives to get a balance between school hours, working hours, and rest hours, one of your objectives might be for learners to accept the value of regulating hours to meet the demands of all their activities. The following essay item will evaluate (in part) learners' achievement of this affective objective:

John Combs is enrolled in the automobile transmission rebuilding program at Suburban Technical Center. He drives to school, where he spends four hours in class. Plan a daily activities time schedule for John, following the criteria developed in class, and using your own experience in following the personal plan that you developed in class. Ten points will be awarded for a completed plan that involves all the criteria.

Learners' responses to this essay item could give some evidence of their progress toward achievement of the affective objective -- one can infer that, if learners write realistic plans for John Combs that attempt to balance his activities, they probably are at least beginning to value the need for living a balanced life.

As you can see, this essay item states the situation in the first three sentences. The fourth sentence tells the learners what they are to do -- plan a daily activities time schedule. The essay item then specifies the guides to follow -- criteria and own experience. Last, the details for
evaluating are stated -- 10 points for applying all the criteria.

If you have a number of essay items in a test, you will need a set of general directions in which you tell learners:

- the length of time for completing the test
- the total value of all items and grade weighting (for example, if the total points on the test are 80, then A = 76-80, B = 70-75, and so on)
- any other information that is needed (e.g., to write their responses on a separate piece of paper or to write in pencil).

What we have said about the use of essay items and the rules for constructing them also applies to problem-solving items or case studies. Like the essay items, problem-solving items can assess the achievement of objectives in the upper levels of the affective domain—valuing, organizing, characterizing by a value or value complex.

Problem-solving items and case studies call upon learners to place themselves in or react to a situation in which their prior experience is required to solve the problem or evaluate the situation. The item should describe the situation, what the learner is to do, and the end expectations.

The essay item discussed earlier could be worded as follows to make it a problem-solving item:

**John Combs is enrolled in the automobile transmission rebuilding program at Suburban Technical Center. He drives to school, where he spends four hours in class. He then drives to work, where he spends four hours. John has been late to work three times this week. What would you suggest to help John solve this problem? Ten points will be awarded for a well-conceived plan.**

Oral examinations can also be used to assess achievement of affective objectives. Oral test items can be developed for all levels of the affective domain—from receiving (attending) through characterizing by a value or value complex.

In using this type of evaluation technique, special care must be taken to avoid embarrassing a learner, especially since the learner’s response will normally be made in front of the entire class. For example, if one of the objectives is to get along with the on-the-job instructor, you could give the test in private, asking a question such as "How are you getting along with Ms. Ames?" You might follow this question with another, such as "Why do you feel this way?" or "What has happened to make you feel this way?"

Again, the oral questions should be planned and written down before the test begins, and possible learner responses should be recorded. Since the question in the example just given could have either a positive response (e.g., "We're really getting along fine") or a negative response (e.g., "I can't stand her"), follow-up questions should be planned for both types of responses.

Attitude scales are another way of getting an accounting of learners’ interests and feelings at all levels of the affective domain. The results of an attitude scale will give you some indication of how learners feel. However, a disadvantage of any instructor-made attitude scale is that it is so easy for learners to fake their feelings.
One form of attitude scale is the **rating scale**. In the affective domain, these scales usually have five ratings for each statement, from strongly agree to strongly disagree. Most authorities indicate that a rating scale should include not less than three, or more than seven, ratings for each statement.

Since learners need to value an object (or job, or friend, or instructor, or other subject being rated) before they can strongly agree or strongly disagree, rating scales are probably best for the upper levels of objectives classified in the affective domain, although this is not a hard-and-fast rule.

In constructing a rating scale, you should provide general directions for the group of attitudinal statements you want learners to rate. All the ratings should be located in a horizontal row either before or after each of the statements, as shown in the partial rating scale in **Sample 1**. Some authorities suggest that the sequence of the statements should be scrambled so that learners do not establish a pattern in their ratings. If you decide to do this, be sure this information is in the directions.

From the examples given, you can probably see how difficult it would be to translate the results of attitude scales into grades. However, you can assign a point value to each space on the line, with the **most desirable** attitude worth **five** and the **least desirable** attitude worth **zero**. Adding all the points in the test and dividing by the number of items will give you an average score for each learner. By giving a pretest and posttest and computing the class average on each, you can determine the amount of attitude change that has resulted from a unit of work.

**SAMPLE 1. RATING SCALE**

<table>
<thead>
<tr>
<th>Directions: You are to circle how you feel about the following aspects of your on-the-job training. If you strongly agree with the statement, circle the strength to which you agree with the statement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA = Strongly Agree</td>
</tr>
<tr>
<td>A = Agree</td>
</tr>
<tr>
<td>U = Undecided</td>
</tr>
<tr>
<td>D = Disagree</td>
</tr>
<tr>
<td>SD = Strongly disagree</td>
</tr>
<tr>
<td>Example: I wish I had more time for my on-the-job training.</td>
</tr>
<tr>
<td>1. I wish my on-the-job training had started during my freshman year.</td>
</tr>
<tr>
<td>2. I wish my on-the-job instructor would explain more things to me.</td>
</tr>
</tbody>
</table>

Another type of attitude scale is the semantic differential scale. To construct this type of scale, you place two opposing words or ideas at either end of a line. It is important that you select words or phrases that are (1) directly related to the attitudes you are attempting to measure and (2) truly opposite to each other, not just somewhat different.

If you had a group of learners who wanted to learn to be more cooperative with people in authority positions, you might use this technique to see what progress or achievement they were making. Again, you should provide a general set of directions at the beginning of the rating scale (see **Sample 2**).
SAMPLE 2. SEMANTIC DIFFERENTIAL SCALE -- DIRECTIONS

**Directions:** You have been practicing being more cooperative with your teachers and your on-the-job instructor. A list of opposing words appears below. You can rate how you feel about each of the opposing words by circling the number that represents the strength they feel at a point on one of the seven spaces between each pair of words. The higher the number the stronger the feeling. You have 15 minutes to respond to the following set of 50 opposite terms.

If one of the terms describes exactly how you feel, place a i in the blank nearest the term.

<table>
<thead>
<tr>
<th>Hot</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Cold</th>
</tr>
</thead>
</table>

If one of the terms describes rather adequately how you feel, place ai. in the blank two spaces from the term.

<table>
<thead>
<tr>
<th>Hungry</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Full</th>
</tr>
</thead>
</table>

If one of the terms describes somewhat how you feel, place a i in the blank three spaces from the term.

<table>
<thead>
<tr>
<th>Sleepy</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Rested</th>
</tr>
</thead>
</table>

If you are undecided or have no feelings related to the terms, place a i. in the middle space.

<table>
<thead>
<tr>
<th>Healthy</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Sick</th>
</tr>
</thead>
</table>

In some schools and training programs, instructors must provide written comments about the progress learners are making. You will find that attitude scales can be a valuable tool to serve this purpose.

An excellent way to develop an attitude scale is to:

- listen to the words and statements of your learners that reveal or relate to their attitudes and values
- write them down on index cards
- build the scales using some of these items.

A scale developed in this way will be much more realistic to the learners.

**Checklists** are another useful type of evaluation device. A checklist can be used to record observed learner behavior in the affective domain. This method of observing and recording affective behavior patterns over a period of time is one of the best techniques for evaluating learner achievement. You can record all levels and kinds of affective behavior, such as participation in class discussion, cooperation with Others, or increased attention to personal appearance.
You will find that learners like to keep a record of their own behavior, especially when they have helped to develop the checklist. These checklists can be useful as a topic of discussion when you have conferences with learners.

There are many forms the checklist could take. In one type of checklist, an individual checklist is developed for each student to keep a record of his/her own actions, as in the partial checklist shown in sample 3.

**SAMPLE 3. INDIVIDUAL CHECKLIST**

<table>
<thead>
<tr>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directions:</strong> Record the date and time when behavior occurs in school in the columns to the right of the behavior statement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joined in class discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had assignment done on time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteered to do something</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are also standardized attitude tests you could use for determining likes and dislikes of learners. You can check with the counselors or human resource experts in your school or organization to see whether such tests have been given to the learners. If so, you could discuss the results with the counselor or specialist.

**Constructing and Administering a Test**

All the elements that make a good evaluation test or technique apply to assessing the achievement of affective objectives.

- The test must be **valid** -- do what it is supposed to do.
- It must be **reliable** -- do consistently what it is supposed to do.
- It must be **discriminating**--reveal true progress of learners.
- It must be **comprehensive**--cover the objectives.
- It must be **easy to score**.

If your assessment of learner affective performance is to be valid, reliable, and fair, you must be sure that:

- The device or item you select truly evaluates the learning specified in the objectives.
- The rules for constructing the device or item are followed.
- A scoring key is developed prior to administration of the essay, oral, and problem-solving test items.
- The environment for taking the test or filling in the evaluation device is controlled.
In the administration and scoring of the test, the objective is to emphasize fairness to each learner. Here are a few practices that can aid in conducting a fair written test. Prepare the test far enough in advance so that:

- **time estimates can be made** for completing each section and this information can be added to the test
- **directions for completing the different types of items** can be tried out and modified as needed
- **copies of the test** can be made for each learner
- **the key for scoring** can be made out.

When the test is administered, you need to create an **atmosphere** that allows learners to concentrate on taking the test. See that the room is reasonably quiet and free from distractions. That the temperature is comfortable, and that the lighting is adequate.

Give any instructions prior to handing out the tests. Explain the purpose of the test, how it will be scored, and any instructions not included in the written directions. You may want to have learners raise their hands when help is needed, and then move in response to their request rather than having the learners come to you.

Some of the evaluation devices, such as the attitude checklist, will not be completed within a class period. Rather, these devices will be completed gradually, over a period of time. However, you should select specific class time to discuss with learners the purpose of the device and how to use it. If the learners are to check their own performance, you should check with them periodically to be sure they are using the device satisfactorily.