UNIT II   SCALING TECHNIQUES

I - Rating scale :

It involves qualitative description of a limited number of aspects of a thing or of traits of a person. Here we judge an object in absolute terms against some specified criteria There is no rules with points of scales ,in practice 3 to 7 points scales are generally used.

 There are various types of rating scale;

Simple category scale :

    It has two response eg YES , NO. This scale is particularly useful for demographic question or where dichotomous response is adequate.

b) Multiple Choice – Single

When there are multiple options for the respondent and only one answer is sought this scale is preferred.

c) Multiple Choice – Multiple response scale

It allows the respondent to select one or more alternatives from multiple choice.

Likert Scale –

It is a mostly used summated rating scale. It consist of statements that express either a favorable or unfavorable attitude   toward the object of interest. The respondent is asked to agree or disagree with each statement. Each response is given a numerical score to reflect its degree of attitude favorableness and the scores may be totaled to measure the respondent's attitude. This data provides interval data.

Semantic differential

It helps to measure the psychological attitude. It is used in marketing problems, political issues, and personalities. This method consist of bipolar rating scales, usually with seven points by which one or more respondents rate one or more concepts on each scale item. It produces interval data. The total set of response provides a comprehensive picture about the respondent rating and object which is measured.

Numerical Scale

It have equal intervals that separate their numeric scale points. The verbal statement serve as the labels for the extreme points. It is often five point scale . The scale provide absolute & relative measure of the subject.

Multiple rating scale:

It is similar to numerical scale, but differs in two ways 1) It accepts a circled response from the rater 2) The layout allows visualization of the results. The advantage is that a mental map of the respondent evaluation is evident to both the rater and the researcher. This scale produces interval data.

Fixed sum scale

In this scale two categories are presented that must sum to 100. up to 10 categories can be used. The advantage is it's compatibility. It provides continuous data. The scale is used to record to attitudes , behaviour and behavioural intent.

Graphic rating scale:

It was created to enable researcher to discern fine differences. It uses pictures , icons or other visuals to communicate with the respondents.

Ranking Scales

In this the subject directly compares two or more objects and makes choices among them. The respondents were asked to select one as best or most preferred.

Paired –comparison

In this respondent can express attitudes clearly by choosing between two objects.

Forced Ranking Scale:

The list of objects are ranked relative to each other .This method is faster than paired comparisons and is usually easier and more motivating to the respondent.

Comparative Scales

Another version of the preceding scale would label the categories "excellent" ,"very good" , "Good", "fair" and "poor". Thereby eliminating the implicit comparison. The problem with comparative scale is that the reference point is unclear and different reference points or standards.

Scale Construction Techniques

In research while measuring attitudes of the people we generally follow the technique of preparing the opinonnaire (attitude scale) in such a way that the score of the individual responses assigns him a place on a scale. In this respondent express his opinion on various statement. While developing such statement the researcher must note the following points;

1. That the statement must elicit responses which are psychologically related to the attitude being measured.
2. That the statement need be such that they discriminate not merely between extremes of attitude but also among individual who differ slightly.

Different scales for measuring attitudes of people

Name Of the scale construction approach	Name of the scales developed
1. Arbitrary approach	Arbitrary scales
2. Consensus scale approach	Differential scales (Thurstone Differential scale)
3. Item analysis approach	Summated (Likert Scale)
4. Cumulative scale approach	Cumulative Scale (Guttman's Scalogram)
5. Factor analysis approach	Factor scales (semantic differential , Multi-dimenstional scaling)

1. Arbitrary Scale;

It is developed on ad hoc basis and are designed largely through the researcher's own subjective selection of items. The researcher select few statement or item which he believes are appropriate to a given topic and it is include in measuring instrument.. Then people are asked to check in a list for their opinion.

Merits:

- It is easy to develop quickly with less expense.
- It can be designed highly specific and adequate
- Demerits ;
- It is not reliable
- It rely on researcher's insight and competence.

2. Differential scale (Thustone –type scale)

It is associated with differential scale which have been developed using consensus scale approach. In this selection is made by panel of judges The procedure is The researcher gather a large number of statements The statements are submitted to panel of judges.

Each judge is request to arrange in position according to opinion.Each judge is request to place the statement in first, second groups etc according to his favorableness.

In case of disagreement between the judges in assigning a position to an item that item is discarded.A final selection of statements is then made .The position of statements on the scale is determined by judges.**Merits**It appropriate when we measure single attitude.It is very reliable method

Demerits

- It is costly method
- Judge own attitude may reflect in arrangement

3. Summated Scale (Likert Scale)

It developed by utilizing the item analysis approach wherein in a particular item is evaluated on the basis of how well it discriminates between those persons whose total score is high and those whose score is low. Those items or statements that best meet this sort of discrimination test are included in the final instrument.

Procedure:

Researcher collect a number of statements relevant to the attitude being studied.

A trial test should be made with small group of people

The response to various statements are scored in such a way that a response of most favorable attitude is given the highest score of 5, and the most unfavorable attitude is given the lowest score of 1.Then the total score of each respondent is obtained by adding his scores for separate statements.

Then arrange these scores & find out with those statements which have a high discriminating power. This way we determine which statement consistently co relate with high favorability & which with low favorability.

Only those statements that correlate with total test, should be retained in the final statement. And others must be removed.

Merits:

1. it is easy to construct in comparison to differential scale.

2. It is more reliable.

3. Each statement in this is given a test for discriminating ability, so it permits the use of only those statements that have direct relationship to the attitude being studied.

4. We can study how responses differ between people & how response differ between stimuli.

5. It takes less time to construct

Demerits:

1. In this method we can examine whether respondents are more or less favorable to the topic, but we can't tell how much or less they are.

2. The interval between strongly agree & agree may not be equal to the interval between agree & undecided.

3. Often the total score of an individual respondent has little clear meaning since the given score can be secured by a variety of answer pattern.