

## A Scale to Measure the Attitude of the Postgraduate Scholars towards Extension Work

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### ABSTRACT

*The major job of extension is spread out knowledge, skill and attitude which are beyond the reach of people to receive through formal education. The persons can make themselves competent for extension by learning three major components of extension viz. extension education, extension service and extension work. It is expected to have constructive feelings towards extension education, extension work and extension service amongst those who want to develop their career in extension. When work of extension is carried out by any organizations or individuals with the feelings of altruism, selflessness or humanity to help the farmers, it is known as extension work. Many NGOs and extension educationists while doing social work perform this type of work with emotional attachment. Extension work is an effective and productive way to help resource poor farmers. Keeping this in view a standardized scale has been developed to measure the attitude of the postgraduate scholars towards extension work as one of the significant elements of extension. A summated (likert) rating scale was been developed. The process started with identifying the dimension, collection of items followed by relevancy and item analysis and checking the reliability and validity for precision and consistency of the results. A total of 20 statements were framed in which finally 10 statements were finally retained which has practical applicability in measuring the attitude of postgraduate scholars towards extension work. The scale contains total ten statements, out of which six are positive and four statements are negative. The scale developed was found highly reliable.*

**Keywords:** Extension Work, Attitude, Likert Scale, Thurstone, Edwards, Guilford

### INTRODUCTION

The major job of extension is spread out knowledge, skill and attitude which are beyond the reach of people to receive through formal education. The actions of 'Extension' are broadly divided into three major ways they

are extension education, extension work and extension service. It is essential to have motivating attitude towards extension education, extension work and extension service amongst those who want develop their career as extension personnel.

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When function of extension is carried out by any organizations or individuals with the feelings of altruism, selflessness or humanity to help the farmers, it is known as extension work. Many NGOs and extension educationists while doing social work, perform this type of work with emotional affection. Extension work is an effective and productive way to help resource poor farmers. Keeping this in view a standardized scale has been developed to measure the attitude of the postgraduate scholars towards extension work as one of the important elements of extension.

Amongst the methods obtainable for the development of scale, the procedure suggested by Likert (1932) and Edward (1957) was used in this study for scale construction and for ascertaining the response of the scale. The technique selected to construct the attitude scale was “Scale Product Method” which is combination of the technique of Equal Appearing Interval Scale of Thurstone (1946) for selection of the items and Likert’s techniques of summated rating for ascertaining the response on the scale. Similar procedure was also followed by Patel et al. (2013), Patel and Chauhan (2008) Patel and Chauhan (2015) and Vaidya and Chauhan (2008). The following procedure was applied to develop scale.

## MATERIALS AND METHODS

### Selection of Statements

The items making up orientation scale are known as statements. A statement is

something said about mental object. As a first step in developing scale a list of statements were prepared by reviewing the available literature and consulting academicians and researchers who are having expertise in that particular field. A list of 42 statements were prepared and these statements were edited to match the Edwards criteria in which finally 30 items were retained and presented to judges for their rating.

**Judge’s rating of attitude statements:** With a view to judging the degree of “Unfavorableness” to “Favourableness” of each statement on the five point equal appearing interval continuum a panel of 50 judges was selected. The judges chosen for the study comprised extension educationists and statisticians with considerable practical experience from the Anand Agricultural University. The judges were contacted individually along with letter of instructions to guide them for rating the statements in desired manner for each set of the statements.

**Calculation of scale and quartile value:** The five points of the rating scale were assigned, ranging from 1 for most unfavourable and 5 for most favourable. On the base of judgment, the median value or scale value ( S value) and the Q value for the statement concerned was calculated, the inter-quartile range [ $Q = (Q_3 \text{ or } C_{75}) - (Q_1 \text{ or } C_{25})$ ] for each statement was also worked out for determination of ambiguity involved in the statement. Following formulas were applied to work out S,  $Q_3$  and  $Q_1$  values.

$$S \text{ or Median Value} = L + \frac{0.50 - \sum Pb}{Pw} \times i$$

Where,

- S = The median or scale value of the statement
- L = Lower limit of the interval in which the median falls
- $\sum Pb$  = The sum of proportion below interval in which median falls
- $Pw$  = The proportion within the interval in which median falls
- i = The width of the interval and is assumed to be equal to 1.0

$$C_{25} \text{ or } Q_1 = L + \frac{0.25 - \sum Pb}{Pw} \times i$$

Where,

- $C_{25}$  = The 25<sup>th</sup> centile value of the statement  
 $L$  = Lower limit of the interval in which the 25<sup>th</sup> centile falls  
 $\sum Pb$  = The sum of proportion below interval in which 25<sup>th</sup> centile falls  
 $Pw$  = The proportion within the interval in which 25<sup>th</sup> centile falls  
 $i$  = The width of the interval and is assumed to be equal to 1.0

$$C_{75} \text{ or } Q_3 = L + \frac{0.75 - \sum Pb}{Pw} \times i$$

Where,

- $C_{75}$  = The 75<sup>th</sup> centile value of the statement  
 $L$  = Lower limit of the interval in which the 75<sup>th</sup> centile falls  
 $\sum Pb$  = The sum of proportion below interval in which 75<sup>th</sup> centile falls  
 $Pw$  = The proportion within the interval in which 75<sup>th</sup> centile falls  
 $i$  = The width of the interval and is assumed to be equal to 1.0

**Final statements for attitude scale:** When there was a good conformity among the judges, in judging the degree of agreement or disagreement of a statement, Q was smaller compared to the value obtained, when there was relatively little agreement among the judges it was reverse. Only those items were selected whose median (scale) values were greater than Q values. However, when a few items had the same scale values, items having lowest Q value were selected. Based on the median and Q values 10 statements were finally selected to constitute attitude scale. The scale values were ranging from 1.62 to 3.38.

**Reliability of the scale:** A scale is consistent and dependable when it consistently produces the reliable results when applied to the same sample. In the present study, split-half method of testing reliability was used. The 10 statements were divided into two halves with five odd numbered in one half and other five even-numbered statements in the other. These were administered to the twenty-five respondents. Each of the two sets of statements was treated as a separate scale and then these two sub-scales were correlated. The coefficient of reliability was calculated by the Rulon's formula (Guilford, 1954), which came to 0.7787.

As reliability is directly related with the length of the scale when we split the scale on odd and even number items. The reliability

coefficient which has been calculated is the value of half size of the original scale. Thus correction factor is calculated by using Spearman Brown formula (Kishan et al., 2016).

$$rtt = \frac{2 roe}{1 + roe}$$

$rtt$  = Coefficient of reliability of original test

$roe$  = reliability of coefficient of odd and even score

The coefficient of reliability was calculated by the Spearman Brown formula which came to be 0.8755 for Extension work. Thus, the scale developed was found highly reliable.

**Content validity of the scale:** The validity of the scale examined for content validity by determining how well content were selected by discussion with specialists, extension academicians, etc. thus, the present scale satisfied the content validity.

**Scoring system:** The responses of the selected 10 statements can be collected on five points continuum *viz.* strongly agree, agree, undecided, disagree and strongly disagree with respective weights of 5, 4, 3, 2, and 1 for the favourable statements and with the respective weights of 1, 2, 3, 4 and 5 for the unfavourable statements. To know the level of extension work orientation of person the score of each statement can be summed up.

**Table 1: Calculation of S values and Q values to measure attitude of postgraduate scholars towards extension work**

NO	Statement	S Value	Q Value	Decision
1	I like to start NGO to serve farming community.	2.10	1.21	Rejected
2	Serving farmers without any remuneration is beyond my reach.	2.22	1.91	<b>Selected</b>
3	I like joining myself to work for farmers sympathetically.	2.00	0.89	Rejected
4	Rural farmers don't deserve free help.	3.38	2.16	<b>Selected</b>
5	I prefer doing extension work without any financial wage.	2.41	1.72	<b>Selected</b>
6	Supporting Indian farmers selflessly is not cheerful task.	3.00	1.74	<b>Selected</b>
7	It is our responsibility to help poor farmers without any reward.	1.70	1.16	Rejected
8	In leisure time I like to serve farmers unselfishly.	2.00	0.81	<b>Selected</b>
9	It is my moral duty to help farmers without any reward.	1.70	1.21	Rejected
10	Priority of my life is not helping poor farmers free of cost.	3.21	2.39	<b>Selected</b>
11	Any acts of wellbeing of poor farmers charitably deserves support.	2.00	0.86	Rejected
12	I prefer to join informal group doing welfare of poor farmers.	2.00	0.89	Rejected
13	Poor farmers don't need free support if they execute hard work.	2.40	1.81	Rejected
14	For me working for poor farmers free of cost is real humanity.	1.90	1.08	<b>Selected</b>
15	I find real enjoyment in my work since it is very interesting.	1.70	1.09	<b>Selected</b>
16	I feel that the future of the nation lies only. in extension work.	2.00	1.32	Rejected
17	Serving poor communities through NGO is a matter of satisfaction for me.	2.10	1.15	<b>Selected</b>
18	I feel that helping through NGO is the ideal way to help farmers.	2.11	1.32	Rejected
19	I feel proud to work with NGO sector to help farmers.	2.00	0.93	Rejected
20	I believe extension work is the means to inspire youth for retaining in agriculture.	1.62	1.31	<b>Selected</b>

**Table 2: Final attitude scale with 10 statements representing the attitude of postgraduate scholars towards extension work**

No.	Statements	SA	A	UD	DA	SDA
1	I prefer doing extension work without any financial wage. (+)					
2	Rural farmers don't deserve free help. (-)					
3	In leisure time I like to serve farmers unselfishly.(+)					
4	Supporting Indian farmers selflessly is not cheerful task. (-)					
5	For me working for poor farmers free of cost is real humanity. (+)					
6	Priority of my life is not helping poor farmers free of cost. (-)					
7	Serving poor communities through NGO is a matter of satisfaction for me. (+)					
8	Serving farmers without any remuneration is beyond my reach. (-)					
9	I find real enjoyment in my work since it is very interesting. (+)					
10	I believe extension work is the means to inspire youth for retaining in agriculture.(+)					

SA=Strongly Agree A=Agree UD=Undecided DA=Disagree SD=Strongly Disagree

## RESULTS AND DISCUSSION

The final scale was called to be the standardized one which consisted of 10 statements. The scale developed to measure the attitude of postgraduate scholars towards extension work where responses had to be recorded on a five point continuum representing strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2, and 1, respectively. The attitude score of each respondent can be calculated by adding up the scores.

## CONCLUSION

This scale was made to be standardized one to measure the attitude of postgraduate scholars towards extension work which helps in showing the intensity of postgraduate scholars to accept extension work as their profession to work for the benefit of farming community without any altruistic feeling. This scale also aids in enabling the universities and extension departments in developing course curriculum in making future decisions regarding the development of extension work.

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