



DEVELOPMENT OF TESTING DESIGN (SCALE) TO MEASURE ATTITUDE OF POST GRADUATE STUDENTS TOWARDS AGRICULTURAL RESEARCH

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Abstract

Due to non-availability of a proper scale to measure attitude of post graduate students towards Agricultural Research in Gujarat State, it was thought necessary to construct a scale for the purpose. Keeping this in view, an attempt has been made to develop a scale for measuring the attitude of postgraduate students. The scale consists of twenty statements (items) out of which sixteen were positive (+) statements and four were negative (-) statements. Reliability of the scale was tested by following the split half method. Likert's techniques of summated rating for ascertaining the response on the scale.

Key words: Attitude, Post graduate students, Reliability, Research and Validity.

Introduction

Attitude has been defined as "It is the feelings of liking, disliking, attraction, repulsion, interest or apathy towards other persons, objects, situations or ideas." Psychological object may be any symbol, institution, person, phrase, slogan, idea or ideal towards which people may differ from each other with respect to positive or negative aspect. The cognitive component of an attitude consists of the beliefs, which involves attributes like favorable or unfavorable, desirable or undesirable, good or bad etc. The feeling component refers to the emotion which gives attitude to a motivating character or action tendencies. The action tendency component of an attitude includes all behavioral readiness associated with it. These three components of attitude, are, however, consistently related to each other. The psychological object for the present study has been conceptualized as the agricultural research.

Methodology

Among the techniques available for construction of scale, the methodology suggested by Likert's (1932) and Edward (1957) was used in this study for scale construction and for ascertaining the responses of the scale. Likert's techniques of summated rating for ascertaining the responses of the scale.

Items collection

The items making up an attitude scale are known as statements. A statement may be as anything that is said about psychological object. As a first step in developing the attitude scale towards agricultural research a number of statement

about agricultural research gathered from the agricultural students, relevant literature, researchers, extension personals and officials of directly and indirectly exposed to such knowledge system.

Editing of items

The collected statements were edited in the light of the criteria suggested by Thurstone (1946).

Judges rating of attitude statements

In order to judge the degree of "Favorableness" and Unfavourableness" of each statement, the judges selected for the study extension educationists, statisticians, researchers *etc* in the Navsari Agricultural University, Gujarat state.

Determination of Scale

To measure the attitude of individual respondents towards agricultural research, five-point scale was used. The five points of the rating scale were assigned, ranging from the score assigned for the positive statement were, 5 for Strongly Agree, 4 for Agree, 3 for Undecided, 2 for Disagree and 1 for Strongly Disagree. The scoring for the negative statement was just reverse.

The investigator has developed an attitude scale to measure attitude of the postgraduate students towards agricultural research, while constructing a scale the investigator has resorted to the methodology suggested by Likert's (1932). The scale consists of twenty statements (items), out of which sixteen were positive (+) statements and four were negative (-) statements. The scoring procedure was as follows.

S. No.	Type of statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1	Positive (+)	5	4	3	2	1
2	Negative (-)	1	2	3	4	5

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Then, attitude towards agricultural research of the postgraduate students was divided into three groups.

S. No.	Category	Score
1	Less favourable attitude	$< \bar{X} - S.D.$
2	Moderately favourable attitude	In between $\bar{X} \pm S.D.$
3	Highly favourable at titude	$> \bar{X} + S.D.$

Final statements for Attitude Scale

The scale value was ranging from 1.60 to 3.85 with 0.5 class intervals.

Reliability of the Scale

Reliability of the scale was tested by following the split half method. The scale was administrated to 20 postgraduate students from N.M. College of Agriculture and ASPEE College of Horticulture and Forestry, NAU, Navsari. Then the scale was split into two halves on the basis of odd and even number of statements. Thus, two sets of scores were obtained and correlation coefficient (reliability coefficient) was calculated by Spearman Brown formula;

$$r_{tt} = \frac{2 r_{I/II}}{1 + r_{I/II}}$$

Where,

r_{tt} = Reliability coefficient of the whole test.

$r_{I/II}$ = Reliability coefficient of the half test found experimentally.

$$r_{I/II} = \frac{\sum O \times \Sigma E - \{(\sum O \times \Sigma E) / n\}}{\{\sum O^2 - (O^2/n)\} \{\Sigma E^2 - (E^2/n)\}}$$

Where,

0 = Score for odd items,

E = Score for even items,

N = Total number of the postgraduate students,

Σ = Summation

The calculated value of reliability Co-efficient (r= 0.78) was found to be significant indicating that internal consistency of the scale was reliable.

Content validity of the Scale

Validity of the scale examined for content validity by determining how well content were selected by discussion with post graduate students and specialists, etc. thus, the present scale satisfied the content validity.

Scoring System

The scale consists of twenty statements (items), out of which sixteen were positive statements and four were negative statements. To measure the attitude of individual respondents towards agricultural research, five-point scale was used. The score assigned for the positive statements were, 5 for strongly agree, 4 for agree, 3 for undecided, 2 for disagree and 1 for strongly disagree (Table 1).

References

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 Likert RA (1932). A technique for the measurement of attitude scales. *Arch. Psychol.*, New York, No. 140.
 Thurstone LL (1946). The measurement of attitude, *American J. Soci.*, Chicago Univ. Chicago Press, 39-50.

Table 1: Statements of Scale to measure the attitude of individual respondents towards agricultural research

S. No.	Statements	S.A.	A.	U.D.	D.A.	S.D.
1	2	3	4	5	6	7
	Agricultural Research					
1	Agricultural research prepares an individual for solving the field problems of farmers. (+)					
2	Agricultural research taken up through agriculture college gives only theoretical knowledge. (+)					
3	Agricultural research promotes mal -practices in agricultural enterprises. (+)					
4	Agricultural research helps in developing positive attitude in students towards the adoption of modern agricultural technologies. (+)					
5	Agricultural research is not at all necessary in India. (-)					
6	Agricultural research helps in developing love towards nature. (+)					
7	Agricultural research explores the new technologies of farm production. (+)					
8	I believe that agricultural research assists to be recognized as a knowledgeable faculty. (+)					
9	I think that agricultural scientists encourage the students to accomplish the research work. (+)					
10	I accept that agricultural research helps the develop an efficient resources for the nation. (+)					
11	I feel that agricultural research helps the graduate to develop the overall personality. (+)					
12	I feel that agricultural research helps to graduate to be good business managers. (+)					
13	The agricultural research improves the quality of work. (+)					
14	I feel that agricultural research helps P.G. students to understand skill to solve the field problems. (+)					
15	I feel that agricultural research helps agricultural graduates to develop self confidence to work with famers. (+)					
16	I feel that agricultural research helps agricultural graduates to learn ability to work in rural field. (+)					
17	I feel that agricultural research provides more opportunities for new innovations. (+)					
18	Agricultural research does not develop confidence in P.G. students to accept agriculture as a profession. (-)					
19	Agricultural research in India is not related to actual field condition. (-)					
20	Agricultural research is wastage of time, money and labour. (-)					

S.A.= Strongly agree A.= Agree U.D.= Un decided D.A.= Disagree S.D.= Strongly disagree