

Construction of scale for measuring attitude of students towards academic environment

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ABSTRACT

Due to the non-availability of a proper scale to measure students' attitude towards academic environment, it was thought necessary to construct a scale for the purpose. For this purpose an attempt was made to develop a scale for measuring the students attitude towards academic environment. Method of summated rating scale by Likert was used. Seventeen statements were selected from 31 statements for which t-values with highest values were worked out ie with t-values more than 1.75 with equal number of both positive and negative statements.

Keywords: Students; attitude scale; academic environment

INTRODUCTION

To measure the attitude of students towards academic environment a scale has been developed. Edwards (1969) defined attitude as the degree of positive or negative affect associated with some psychological object. Attitude was operationally defined as the students' degree of favourable or unfavourableness towards academic environment.

METHODOLOGY

Method of summated rating scale by Likert (1932) was used to construct the attitude scale of students towards academic environment.

Collection and editing of items: Ninety statements representing the attitude of students towards academic environment were collected initially from literature and interaction with experts and then edited on the basis of criteria suggested by Edwards (1969). Finally 31 statements were selected. The statements representing the attitude of students towards academic environment were administered to 60 respondents. The respondents were asked to indicate their degree of agreement or

disagreement with each statement on five-point continuum ranging from 'strongly agree' to 'strongly disagree'. The scoring pattern adopted was 5 weight to 'strongly agree' response, 4 to 'agree' response, 3 to 'undecided' response, 2 to 'disagree' response and 1 to 'strongly disagree' response, if these were favourable attitude statements. For unfavorable statements the scoring pattern was reversed. The responses were recorded and the summated score for the total statements was obtained. For each individual the maximum possible score on 31 statements was 155 and the minimum was 31. The scores were arranged in descending order. Twenty five per cent of the highest and lowest scores each were taken for the item analysis, meaning 15 respondents each from the high and low groups. These responses were subjected to item analysis for selection of the items that constituted the final attitude scale.

The critical ratio ie t-value which is a measure of the extent to which a given statement differentiates between the high and low groups of respondents for each statement, was calculated by using the formula suggested by Edwards (1969):

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{S_H^2 + S_L^2}{n_H + n_L}}}$$

where \bar{X}_H = Mean score on a given statement for the high group, \bar{X}_L = Mean score on a given statement for the low group, S_H^2 = Variance of the distribution of the responses of the high group to the statement, S_L^2 = Variance of the distribution of the responses of the low group to the statement, n_H = Number of respondents in the high group, n_L = Number of respondents in the low group

As n_H was equal to n_L (15 each) the modified formula as given below for calculating the t-values of the statements was used:

$$t = \frac{(\bar{X}_H - \bar{X}_L)}{\sqrt{\frac{(\bar{X}_H - \bar{X}_H)^2 + (\bar{X}_L - \bar{X}_L)^2}{n(n-1)}}$$

$$(\bar{X}_H - \bar{X}_H)^2 = \frac{X_H^2 - (X_H)^2}{n}$$

$$(\bar{X}_L - \bar{X}_L)^2 = \frac{X_L^2 - (X_L)^2}{n}$$

After calculating the t-values for all the items of the attitude scale, the values of the statements were arranged in descending order from the highest to the lowest and 17 statements were selected from attitude scale whose values were highest ie with t-values more than 1.75 for both positive and negative statements.

Reliability of attitude scale: According to Kerlinger (1973) reliability is the accuracy or precision of measuring an instrument. To know the reliability of the test, retest method was used.

Test and retest method: The set of 17 statements which represented the attitude of respondents towards academic environment was arranged with the five-point response continuum and was administered to fresh group of 50 respondents. After a period of 15 days the scale was again administered to the same respondents and thus a set of score was obtained. The correlation coefficient for both the sets was worked out which was 0.86 indicating that the attitude scale was highly suitable for administration to the rural youth as the scale was stable and dependable in its measurement.

Table 1. Final scale administered to the respondents

Statement	SA	A	UD	DA	SDA	t-value
Teachers facilitate students to share their ideas in classroom.						1.78
Teachers in the university are fair and unbiased towards all students.						0.41
I am happy with the fair and impartial evaluation of teachers.						1.49
*I feel frustrated because of ragging in the campus.						1.82
*I feel satisfied with the teaching using various teaching aids.						2.08
I overcome classroom problems with the help of teachers.						1.37
Teachers encourage me to be an active person in the class.						1.46
I am happy with the student-teacher relationship in this university.						1.87
*I experienced stress-free environment in this campus.						1.84
*My campus environment encourages me to go for higher studies.						1.91
Teaching in this campus is not student friendly.						1.67
*I feel that my university has good support system for students who get stressed.						1.95
I enjoyed more with the social life in this campus.						0.77
In my view more opportunities are being provided by the university which encouraged me to dedicate to learn.						0.43
*I am forcefully doing my academic work rather than with interest.						1.83
*I experienced that the student accommodation is pleasant in this university.						2.17
I feel unhappy because of the grading system followed by the university.						0.25
*My university is not able to provide me good career opportunities.						2.11
*In general this university has clean and safe environment for the students.						2.03
*I am burdened with the more academic work.						1.99
I feel stressed to follow the university rules and regulations.						0.48
*I am suffering from the examination pattern of the university.						1.94
*I am enjoying the facilities (lab, playground, library, buildings, etc) provided by my college.						1.83

SA: Strongly agree, A: Agree, UD: Undecided, DA: Disagree, SDA: Strongly disagree; *Statements selected for the study

Validity of attitude scale

Content validity: The validity of the test depends upon the fidelity with which it measures what is expected to measure. This method was used in the present scale to determine the content validity of the scale. As the scale value differences for almost all statements included had a very high discriminating value, it seemed reasonable to accept the scale as a valid measure of the attitude.

Administration of the scale: The scale thus met the reliability and validity test satisfactorily indicating its ability as an instrument for measuring attitude of students towards academic environment.

CONCLUSION

This study was aimed at constructing a scale to measure the attitude of students towards academic

environment. The affective aspect of attitude scale consisted of 17 items with high reliability and more predictive validity. This scale can be used in future studies on perceptions and feelings of students towards academic environment. It will be helpful to the policy makers and administrators to develop suitable coping strategies towards academic environment by knowing the attitude of students towards academic environment.

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