A SCALE TO MEASURE THE PERCEPTION OF STAFF TOWARDS STUDENT READY PROGRAMME

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ABSTRACT

This study aimed to develop a robust scale for measuring staff perception towards the Student READY Programme (SRP) using Likert's summated rating scale methodology. Fifty statements were initially enlisted based on literature review and expert discussions. Relevancy ratings were sought from 160 scientists and extension specialists affiliated with the Indian Council of Agricultural Research (ICAR) and State Agricultural University (SAU). Sixty-six judges responded within a month, leading to the isolation of 38 statements in the initial screening. The first stage of screening focused on identifying statements with relevancy weightage scores exceeding 0.70, relevancy percentages surpassing 70 per cent, and mean relevancy scores exceeding 3.70. This process resulted in the final selection of 24 statements after modifications and additions based on expert comments. These statements underwent item analysis with 48 agriculture staff from non-sample areas, ultimately narrowing down to a final set of 19 statements based on 't' values (>1.75) from the analysis. The reliability of the scale was determined through a split-half method, resulting in an 'r' value of 0.759, exceeding the standard of 0.70. This indicates the scale's high reliability and validity. The instrument developed to measure staff perception towards SRP is deemed reliable and can be utilized by researchers in similar studies.

Keywords: agriculture, staff, perception, scale construction, student READY programme

INTRODUCTION

The Student Rural Entrepreneurship Awareness Development Yojana (READY) initiative, recommended by the Indian Council of Agricultural Research (ICAR), was inaugurated by Hon'ble Prime Minister Narendra Modi on July 25th, 2015, across the country's Agricultural Universities (AUs). Implemented in the final year of undergraduate education in fields such as agriculture, agricultural engineering, biotechnology, community science, dairy technology, food technology, forestry, fisheries, horticulture, and sericulture since 2016-2017, this program strives to empower graduating students with the skills and knowledge needed to thrive as entrepreneurs in the agricultural sector.

In a bid to comprehensively evaluate and enhance the program, researchers delved into the perspectives of those overseeing the Student READY Programme (SRP). This inquiry goes beyond the surface, capturing the collective beliefs, opinions, and attitudes of staff members regarding the program's relevance, effectiveness, benefits, and its overall impact on the agricultural domain. The examination of these perceptions aims to provide valuable feedback and insights, guiding the ongoing refinement of the SRP. Thus, the research was conducted with the objective of developing and standardizing a scale to measure the staff's perception towards SRP.

OBJECTIVE

To develop and standardize a scale to measure the perception of staff towards student ready programme

METHODOLOGY

This study involved the participation of 48 agriculture staff members from non-sample areas, utilizing Google Forms as the survey platform. To construct the perception scale, the method proposed by Likert (1932) for developing a summated rating scale was employed (as followed by Harikrishna et al., 2021). The ensuing sections provide a comprehensive account of the procedures undertaken, detailing the process followed in standardizing the scale for measuring staff perception towards the Student READY Programme (SRP).

RESULTS AND DISCUSSION

Perception of staff towards SRP

The process of scale development involved several deliberate steps. The details of the steps followed in developing the scale to measure the perception of staff towards SRP are discussed below:

Collection of statements

In the initial phase, an extensive review of existing literature on the Student READY Programme (SRP) was conducted, drawing insights from diverse sources. Subsequently, a compilation of 50 statements was crafted,

each addressing the staff's perception of the SRP. These statements were formulated through a synthesis of insights gleaned from the literature and consultations with experts in agriculture extension and other relevant fields within the chosen areas.

Editing of statements

Following the guidelines proposed by Edwards (1957), a meticulous editing process was applied to refine the statements. This scrutiny led to the exclusion of 12 statements, while the remaining 38 statements, meeting the established criteria, were retained for further processing in assessing the staff's perception.

Table 1: Items generated with Relevancy Weightage (RW), Relevancy Percentage (RP) and Mean Relevancy Score (MRS)

Sr. No.	Statements	RW	RP	MRS	Selected/ Rejected
1	Students can discover their potential through Experiential Learning Programme (ELP)	0.88	87.88	4.39	Selected
2	Laboratory work delivers efficient skills to the students	0.67	67.27	3.36	Rejected
3	ELP creates opportunity to strengthen the existing knowledge of students	0.84	83.64	4.18	Selected
4	Better incorporation of teaching and learning aids is required	0.67	67.27	3.36	Rejected
5	Students are not willing to do hard jobs of practical training	0.52	52.42	2.62	Rejected
6	Work overload affects the involvement of experienced teachers in READY Programme	0.82	81.52	4.08	Selected
7	Lack of proper planning and guidance from teachers	0.50	50.00	2.50	Rejected
8	Teachers need to motivate the students to update their practical skills	0.76	75.76	3.79	Selected
9	Students gets acquainted with poverty alleviation programmes	0.63	63.33	3.17	Rejected
10	READY Programme helps to assess the practical knowledge among students	0.82	82.42	4.12	Selected
11	Difficulty in transportation, boarding, and lodging while visiting the institutes	0.62	61.82	3.09	Rejected
12	Rural Awareness Work Experience (RAWE)builds self-confidence among students	0.82	81.52	4.08	Selected
13	Concentration on one village leads to limited exposure	0.62	61.82	3.09	Rejected
14	RAWE helps the students to learn and prepare farm plans for individual farm families	0.75	74.85	3.74	Selected
15	RAWE helps to link the farming community and scientists of the host institute	0.75	74.55	3.73	Selected
16	Difficulty in choosing RAWE areas where majority of people are engaged in agriculture	0.59	59.09	2.95	Rejected
17	RAWE evaluation has sufficient scope for development of analytical abilities among students	0.77	77.27	3.86	Selected
18	Convenience and time availability of farmers is difficult	0.65	65.45	3.27	Rejected
19	RAWE helps the farmers to contact the university easily through students	0.75	75.45	3.77	Selected
20	Agri clinic helps the students to get training in basic and applied aspects of Agriculture	0.76	76.36	3.82	Selected
21	Difficult for the students to give proper remedial measures to the farmers on consultation with experts	0.63	63.03	3.15	Rejected
22	Students can understand farmers problems by organizing field visits with the help of scientists	0.75	74.85	3.74	Selected
23	Selecting number of students per group is difficult task	0.47	47.27	2.36	Rejected

Sr. No.	Statements	RW	RP	MRS	Selected/ Rejected
24	Difficulty in getting acceptance from respective industries for the programme	0.68	67.58	3.38	Rejected
25	Agro-Industrial Attachment (AIA) helps the students to understand and distinguish the job responsibility	0.77	77.27	3.86	Selected
26	AIA helps the students to get expertise in entrepreneurial and managerial skills	0.76	76.06	3.80	Selected
27	AIA helps the students to get knowledge on purchase of inputs for agricultural production from various agencies	0.75	74.85	3.74	Selected
28	READY Programme helps the students to formulate an original idea or area of inquiry	0.57	57.27	2.86	Rejected
29	Student Project helps them to improve the ability to design and execute a project	0.78	78.48	3.92	Selected
30	READY Programme helps the students to identify problems of their interest and field	0.68	68.18	3.41	Rejected
31	Student Project helps to train the students for analysis and interpretation of data / results	0.68	68.18	3.41	Rejected
32	Consistent monitoring stimulates better performance of Student READY Programme	0.81	81.21	4.06	Selected
33	The students performance should be assessed in terms of capacity to understand and solve rural problems	0.66	66.36	3.32	Rejected
34	Teachers with keen interest should be involved	0.74	74.24	3.71	Selected
35	Periodic evaluation may be done to give equal importance to all the activities	0.79	79.09	3.95	Selected
36	Continuous guidance by the coordinator is essential	0.80	80.00	4.00	Selected
37	Lack of supervision and follow-up programme by the coordinator in charge	0.75	74.85	3.74	Selected
38	Project reports prepared by the students helps to evaluate the overall understanding of READY Programme	0.75	74.85	3.74	Selected

Relevancy weightage test

The validity of the generated items was ascertained by distributing these statements to 160 judges, consisting of experts from SAUs and ICAR Institutes. These experts, well-versed in the field, were instructed to evaluate the relevance of each statement in gauging the staff's perception of SRP. The evaluation utilized a five-point scale, ranging from 'Most Relevant' (MR) to 'Not Relevant' (NR), with corresponding scores of 5, 4, 3, 2, and 1. Within a month, 66 judges provided their responses out of the total panel. The cumulative scores for each item were tallied across all respondents, and the appropriateness of each item was quantified through 'Relevancy Weightage' (RW), 'Relevancy Percentage' (RP), and 'Mean Relevancy Score' (MRS), calculated using the provided formulas.

$$\text{Relevancy Weightage (RW)} = \frac{[(MR \times 5) + (R \times 4) + (SWR \times 3) + (LR \times 2) + (NR \times 1)]}{\text{Maximum possible score } (66 \times 5 = 330)}$$

$$\text{Relevancy Percentage (RP)} = \frac{[(MR \times 5) + (R \times 4) + (SWR \times 3) + (LR \times 2) + (NR \times 1)]}{\text{Maximum possible score } (66 \times 5 = 330)} \times 100$$

$$\text{Mean Relevancy Score (MRS)} = \frac{[(MR \times 5) + (R \times 4) + (SWR \times 3) + (LR \times 2) + (NR \times 1)]}{\text{Number of judges responded}}$$

Using these three criteria the statements were screened for their relevancy and those having relevancy weightage of more than 0.70, relevancy percentage of more than 70 per cent and mean relevancy score of more than 3.70 were considered for final selection. By this process, 22 statements were isolated in the first stage of screening, which were suitably modified and rewritten wherever applicable. Two statements were added as per the comments of experts. Thus finally 24 statements were selected after the relevancy test.

Item analysis

The chosen 24 statements underwent item analysis to elucidate their ability to distinguish respondents with varying perceptions of SRP. These scrutinized statements,

reflecting the perception of SRP, were then presented to 48 agriculture staff members from a non-sample area selected for the study. Using both personal interviews and Google Forms, respondents were prompted to express their level of agreement or disagreement with each statement on a five-point scale: strongly agree, agree, undecided, disagree, and strongly disagree, corresponding to scores of 5, 4, 3, 2, and 1, respectively.

Table 2: Items generated with t values based on item analysis

Sr. No	Statements	t value
1	Students can discover their potential through Experiential Learning Programme (ELP)	3.80
2	ELP creates opportunity to strengthen the existing knowledge of students	1.95
3	Students find difficulty to generate substantial profit under ELP	2.90
4	Rural Awareness Work Experience (RAWE) builds self-confidence among students	3.56
5	Students learn the skill to prepare farm plans for individual farm families	1.73[NS]
6	RAWE helps the farmers to contact the university easily through students	2.94
7	RAWE links farming community and scientists of the host institute	1.63[NS]
8	RAWE evaluation has sufficient scope for development of analytical abilities among students	4.75
9	Agri clinic helps the students to get training in basic and applied aspects of agriculture	4.69
10	Students can understand farmer's problems by organizing field visits with the help of scientists	2.76
11	Agro-Industrial Attachment (AIA) supports the students to get expertise in entrepreneurial and managerial skills	4.78
12	AIA helps the students to understand and distinguish the job responsibilities in various departments of an organization	3.81
13	Students gain knowledge on purchase of inputs for agricultural production from various agencies	1.03[NS]
14	Work overload affects the involvement of experienced teachers in READY Programme	1.89
15	Teachers need to motivate the students to update their practical skills	1.96
16	READY Programme helps to change the attitude of students towards agriculture and allied enterprises	7.10
17	Student Project helps them to improve the ability to design and execute a project	6.92
18	Consistent monitoring stimulates better performance of students in READY Programme	4.75
19	Periodic evaluation may give equal importance to all the activities	6.17
20	Lack of supervision and follow-up by the coordinator in charge hampers student's involvement	5.22
21	READY Programme helps to assess the practical knowledge among students	3.95
22	Continuous guidance by the coordinator is essential	1.69[NS]
23	Project reports prepared by the students helps to evaluate the overall understanding of READY Programme	5.50
24	Teachers with keen interest should be involved	1.70[NS]

The recorded responses were totaled for each respondent across all statements. Subsequently, these respondent scores were organized in descending order. The top 25.00 per cent with the highest scores formed the high group, while the bottom 25.00 per cent with the lowest scores comprised the low group. Item analysis was then applied to these responses, aiming to select the items that would constitute the definitive perception scale for staff towards SRP.

The critical ratio *i.e.,* 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 is calculated by using the following formula.

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

Where,

$\bar{X}_H$ = Mean score on given statement of the high group

$\bar{X}_L$ = Mean score on given statement of the low group

ΣX_H^2 = Sum of squares of the individual score on a given statement for high group

$\sum X^2_L$ = Sum of squares of the individual score on a given statement for low group

n = Number of respondents in each group

$\sum$ = Summation

t = Extent to which a given statement differentiate between the high and low group

After computing 't' value for all the items with the help of above formula, items with 't' value equal or greater than 1.75 were selected and those with 't' value below 1.75 were rejected as the thumb rule suggested by Edwards (1957).

Following the item analysis, a total of 19 statements were ultimately chosen and incorporated into the perception scale for staff regarding SRP.

Standardization of scale

A scale should measure what it intends to measure and it should be consistent in its measurement. A scale thus has to be standardized before it is administered. The present scale developed was also standardized by testing its reliability and validity.

Reliability of the scale

Reliability in its true sense refers to precision of the scale constructed for any purpose. It is otherwise called extent to which repeated measure produces the same result. In any social science research newly constructed scale has to be tested for its reliability before it is used.

Split half method was employed in the present study using odd even method. Using SPSS software, the scores were subjected to a correlation test to determine the reliability. The split half test reliability coefficient was found to be 0.611. The 'r' value of the scale was found to be 0.759, which is higher than the standard of 0.70, indicating higher reliability of the scale. It was concluded that the perception scale constructed for staff towards SRP was reliable.

Validity of the scale

Validity refers to the ability of the instrument to measure what it proposed to measure. Validity of the scale to measure the perception of staff towards SRP was ensured by establishing through content validity and statistical validity.

In the present study, the statements were identified through review of relevant literature and discussion with experts in the field. The experts opinion was sought to know the relevancy of the statements. This justified the content validity of the scale. The data were subjected to statistical validity to know the validity of the scale. The validity co-efficient was found to be 0.871 for scale, which is greater than the standard requirement of 0.70 value. Hence the validity coefficient was also found to be most appropriate and suitable for the tool developed.

Administration of perception scale and method of scoring

The final scale comprises of 19 statements. The responses were obtained on five-point continuum namely strongly agree, agree, undecided, disagree and strongly disagree with weightages of 5,4,3,2 and 1, respectively. Perception score of the respondents were calculated by adding up the score of all statements. Thus, 95 and 19 were the maximum and minimum scores, respectively. Perception index for staff was calculated using the following formula.

$$\text{Perception Index} = \frac{\text{Obtained score}}{\text{Total obtainable score}} \times 100$$

Table 3: Final statements of perception of staff towards Student READY Programme (SRP)

Sr. No	Statements	SA	A	UD	DA	SDA
1	Students can discover their potential through Experiential Learning Programme (ELP)					
2	ELP creates opportunity to strengthen the existing knowledge of students					
3	Students find difficulty to generate substantial profit under ELP					
4	Rural Agricultural Work Experience (RAWE) builds self-confidence among students					
5	RAWE helps the farmers to contact the university easily through students					
6	Students can understand farmer's problems by organizing field visits with the help of scientists					
7	RAWE evaluation has sufficient scope for development of analytical abilities among students					
8	Agri clinic helps the students to get training in basic and applied aspects of agriculture					
9	Agro-Industrial Attachment (AIA) supports the students to get expertise in entrepreneurial and managerial skills					
10	AIA helps the students to understand and distinguish the job responsibilities in various departments of an organization					

Sr. No	Statements	SA	A	UD	DA	SDA
11	Student Project helps them to improve the ability to design and execute a project					
12	Project reports prepared by the students helps to evaluate the overall understanding of READY Programme					
13	READY Programme helps to assess the practical knowledge among students					
14	Consistent monitoring stimulates better performance of students in READY Programme					
15	Periodic evaluation may give equal importance to all the activities					
16	READY Programme helps to change the attitude of students towards agriculture and allied enterprises					
17	Teachers need to motivate the students to update their practical skills					
18	Work overload affects the involvement of experienced teachers in READY Programme					
19	Lack of supervision and follow-up by the coordinator in charge may hampers student's involvement					

CONCLUSION

The perception scale developed was found to be reliable and valid. The perception scale developed was administered to 48 agriculture staff of non sample area, there were no complications in using the scale. Hence it can be concluded that the scale developed was useful in explicitly measuring the perception of staff towards Student READY Programme (SRP). Researchers can use the scale in future for measuring the perception of staff towards SRP in similar studies.

ACKNOWLEDGEMENT

CONFLICT OF INTEREST

This is to declare that there is "No conflict of interest" among researcher.

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