person specifications in distance agricultural education and their native place found negative and non significant. It meant that there was no clear-cut difference between students from urban and rural background on interest. The caste of the respondents did not show any relation with interest in distance agricultural education.

The annual income of family of respondents and interest in distance agricultural education showed positively and significant relationship at 0.01 per cent level of probability. It means that as compared to students belonging to low income group family, students belonging to family having medium and high income level had comparatively higher interest in distance agricultural education. The source of information utilized by the respondents was found to be related with interest in distance agricultural education. It indicates that the majority of student seeking information regarding educational programme and admission procedure directly from Agril. Study Centre and friends had comparatively higher interest in distance agricultural education.

CONCLUSION

From the above findings it could be concluded that near about half of the respondents were interested in distance agricultural education as a job opportunity course more than that of general education, whereas 15.55 per cent said that they liked to work for the development of farmers. It was also noticed from correlation analysis that, independent variables viz. age, education, education of father, annual income and source of information used by the respondents had found positive and significant relationship with the interest in distance agricultural education. The caste of the respondents did not show any relation with interest in distance educational research.

REFERENCES


Effectiveness of Skill Teaching Methods for Cut Flower Growers

an Experimental Study

C. Karthikeyan¹ and P. S. Swathi lekshmi²

Training plays a major role in capacity building and enhancing the skills of farmers in their quest towards enhancing the agricultural production and productivity. Investment in Human Resource Development in the form of imparting adequate training of farmers, especially in the priority sectors such as floriculture, would help the farmers in upgrading their skills in the process of adopting their improved technologies and thus preparing them to become effective players in the Global trade.

OBJECTIVES

Against this background a study was undertaken with the following objectives:

1) To test the effectiveness of training modules in terms of knowledge gain related to skill practice.
2) To find out the relative effectiveness of the different training modules in terms of knowledge gain related to skill practice.

METHODOLOGY

The study was conducted in the Nilgiris district of Tamil Nadu, since it has been identified as an intensive floriculture area, suitable for the export production of cut flowers. Out of the four taluks of Nilgiris district, three taluks considered as potential production centers for cut flowers, were selected. A sample consisting of 150 potential cut flower growers was selected comprising 50 from each taluk, using snow ball sampling method. Multiple group random design was adopted for the study. Based on Judges opinion, three training modules (treatments) namely demonstration, practicing through coaching and video were selected and tested for their relative effectiveness using this research design. Each treatment was replicated thrice. Considering 12 respondents per replication, there were 36 respondents per treatment. Thus a total of 108 respondents formed the subject for the three treatments.

Thus, nine randomized groups were selected to find out the relative effectiveness of the three selected

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Effectiveness of Skill Teaching Methods

training modules in terms of knowledge gain relating to skill practice. ‘Before-After’ techniques of measurement was used to find out the effect of a particular treatment.

The training need assessment of the respondents pertaining to skill aspects in various subject matter areas relating to cut flowers was carried out and ranked. Based on the mean score and rank obtained it was decided to consider the skill aspect relating to the subject matter area namely packaging of cut flower which had the highest mean score and ranked as first by the respondents, based on their training needs. The cut flower selected for the study was carnation based on the preference expressed by the respondents, among the choice of cut flower crops on which training was to be imparted.

The data were collected through a well structured interview schedule. Suitable statistical techniques such as paired ‘t’ test, Mc Nemar test, analysis of variance and analysis of covariance were carried out to analyse the data and provide meaningful interpretations.

**FINDINGS AND DISCUSSION**

**Effectiveness of the treatments in terms of knowledge gain related to skill practice**

The skill practice namely, packaging technology of carnation was communicated to the experimental groups through three different treatments namely, demonstration (T₁), practicing through coaching (T₂) and video (T₃). The knowledge level of the subjects relating to the skill practice before and immediately after exposure were assessed to find out the knowledge gain. Paired ‘t’ test was applied to find out, whether there was any significant difference in knowledge gain due to the three treatments and the results are presented in Table 1.

Table 1 shows that all the three treatments T₁, T₂ and T₃ were distinctly different in terms of knowledge gain relating to the skill practice as indicated by highly significant ‘t’ value.

The mean knowledge gain was maximum for those subjects who were exposed to the skill practice through video (T₃) with a score of 12.60 which resulted in 90 per cent of knowledge gain. This was followed by the group exposed to practicing through coaching (T₂) with a score of 11.86 which represented 84.71 per cent of knowledge gain. The mean knowledge gain was minimum with regard to demonstration (T₁) with a score of 11.33 which ensured 92 per cent of knowledge gain.

It is interesting to note that video has emerged as a most effective method in imparting skill related knowledge surpassing even demonstration. The subjects for these treatments, from among the placement owners were owning and frequently using video system. This being a popular medium among the respondents would have attracted better attention from them than the other two methods.

This finding is in agreement with that of Sadamata and Sinha (1974) who reported that persons viewing the farm telecast would gain 24 to 90 per cent information. This finding also agrees with that of Mankar (1966) who stated that demonstration was effective to impart both knowledge and skills and Anuragonsasekara (1987) who revealed that Television was an effective medium to impart both knowledge and skills to the learners. Here, it has been proven that practicing through coaching has an edge over the demonstration in terms of knowledge gain relating to the skill practice.

From the results in Table 1 it could be inferred that all the three selected treatments T₁, T₂ and T₃ were effective in imparting the knowledge component of the skill regarding packaging technology of carnation with considerable variation in their effectiveness in terms of knowledge gain.

The significance of change caused by each treatment on the subjects knowledge level regarding the skill practice was confirmed through MC Nemar test. The proportion of subjects who gained adequate knowledge due to their exposure to the three treatments T₁, T₂, T₃ are presented in Table 2.

It is evident from Table 2 that through video (T₃) more number of subjects (97.22%) changed their knowledge level related to skill when compared to T₁ and T₂. In the treatment T₂ the percentage of subjects who changed their knowledge level was 94.44, whereas in T₁, it was 91.66. The results vividly indicate that among the three treatments, video had resulted in substantial knowledge gain related to skill.
Effectiveness of Skill Teaching Methods

Table 2. Significance of change in knowledge gain relating to skill practice among the experimental groups (N=36 per treatment)

<table>
<thead>
<tr>
<th>Type</th>
<th>Change</th>
<th>T₁,1</th>
<th>T₁,2</th>
<th>T₁,3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Subjects who had adequate knowledge (7 and above) before exposure and lost after exposure (+, -)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B.</td>
<td>Those who had adequate knowledge before and after (+,+)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C.</td>
<td>Those who did not possess adequate knowledge before and after (-,-)</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>D.</td>
<td>Those who did not possess adequate knowledge initially but gained adequate knowledge due to exposure to treatments (-,+), (+,-)</td>
<td>33</td>
<td>34</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>X² value (McNemar Test)</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

Relative effectiveness of different treatments in terms of knowledge gain related to skill practice

Analysis of variance technique was applied to find out the relative effectiveness of the chosen treatments and the results are presented in Table 3.

Table 3. Analysis of variance for knowledge gain related to skill practice (N=108)

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>2</td>
<td>45.055</td>
<td>22.527</td>
<td>46.880**</td>
</tr>
<tr>
<td>Error</td>
<td>104</td>
<td>105</td>
<td>57.861</td>
<td>0.551</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>107</td>
<td>102.917</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 reveals that there existed significant difference between the three treatments, T₁, T₂ and T₃ at 0.01 level of significance in imparting knowledge related to the skill.

The relative effectiveness of the three treatments in respect of knowledge gain showed significant difference. The critical difference for the treatments was 0.34. The mean scores of the three treatments are arranged from the highest to lowest and presented below.

T₃ > T₂ > T₁

All the three treatments were effective and they were significantly different from each other in terms of knowledge gain relating to the skill practice. It can be concluded that among the three treatments, video was found to be the most effective method and superior one to transfer knowledge aspects relating to skill practice. This was followed by practicing through compared to other two methods in respect of knowledge gain related to skill practice.

The distinct characteristics of video medium such as attracting and holding attention of the audience and forming correct images for better understanding might have facilitated the subjects to gain more knowledge than from the rest.

Analysis of covariance for different treatments in terms of knowledge gain relating to the skill practice

It was known in the analysis of variance that there existed significant difference between the treatments T₁, T₂ and T₃. However to substantiate the results and to have a precise estimate of treatment means and their comparison, analysis of covariance was performed for knowledge gain relating to the skill practice. The pre-exposure knowledge score of the subjects was used as a concomitant variable to increase the validity of the results. The results of the covariance analysis on knowledge gain is presented in Table 4.

Table 4. Analysis of covariance for different treatments in terms of knowledge gain relating to the skill practice (N=108)

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Adjusted Sum of squares</th>
<th>Mean square</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>2</td>
<td>8.190</td>
<td>4.095</td>
<td>3.54**</td>
</tr>
<tr>
<td>Error</td>
<td>104</td>
<td>120.006</td>
<td>1.153</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>128.197</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

S.E. = 0.254  C.D. = 0.5054

** Significant at 0.01 level

The results in Table 4 further confirms that the treatments differ significantly in their effectiveness in terms of knowledge gain relating to the skill practice. Video (T₃) was found to be the most effective treatment followed by practicing through coaching (T₂). Among the treatments, demonstration was found to be the least effective treatment in respect of communication. Significant difference was observed between the three treatments in respect of knowledge gain relating to the skill practice. On the whole, it could be inferred from the results that all three selected treatments were effective in terms of knowledge gain relating to the skill practice.
knowledge gain of the skill practice.

Based on the findings, the null hypothesis that there would be no difference in knowledge gain related to skill among the subjects exposed to the treatments T₁, T₂ and T₃ was rejected.

CONCLUSION

Training has become an important tool for capacity building and for honing and sharpening the skill of farmers who form the backbone of the Agricultural economy of our country. Selection and administration of the right kind of training module for the chosen subject matter of training is vital for bringing about the desirable changes in the knowledge, skills and attitude of the individual farmer. From the foregoing study it could be observed that among the three treatments used such as demonstration, practicing through coaching and video, video was most effective in knowledge gain related to skill practices in carnation crop. Video as a audio-visual aid motivates the learners by arousing interest by providing a change from the usual through its sound, background music, pictures, photos, which provides a change in the atmosphere of the learning situation which in turn greatly contributes to learning. Learning is more effective when more number of senses are involved providing a synergistic effect to the learning process. In the present era of globalisation and liberalization, in order to help the Indian farmers to compete in the global market and to get competitive prices for their products, investment in human resource development in the right modality alone would pay rich dividends. For this the correct choice and use of the apt training module plays a vital role in enriching the skills of the farmers and preparing them to play a competitive role in the global market.

REFERENCES

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The world community has turned into a global village with advances in Information and Communication Technology (ICT). Communication is the web that holds a society together. Culture and civilization over the ages, have rested on communication. Various mass media like radio, television, printed materials have been employed as the potential channels for carrying technologies from research station to the rural masses. Printed words still command respect and attract readers despite severe challenges from glamorous electronic media. A considerable increase in the rural literacy has enhanced the scope of farm publications in rural communities.

The farm literature revolution began with the inception of Agricultural Universities in sixties. Besides the universities, research institutes, state and central departments of agriculture, input organizations, co-operatives, NGOs, training institutes, K.V.Ks and private companies are also producing farm publications and having the extensive use of publications for communicating new technologies to the clientele. Use of print media is of simple language, on a specific topic and generally illustrated with pictures which can reach a large number of farmers quickly and simultaneously (Natraju, 1996). The success of any print media depends on the readers, information need and the extent to which it is being utilized by them. There is every likelihood for enhanced reading and proper utilization of information if the literature is need based and content adequately satisfy the information needs of the prospective readers.

The Rajasthan Agricultural University (RAU), Bikaner, has been bringing out the farm publications regularly for more than last two decades in the areas of agriculture, animal science, agricultural engineering and home science. The purpose behind the production of such literature is to motivate the people for the desired action and for the adoption of the new technologies; Therefore, the present study was undertaken with the following objectives:

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Information Need and Utilization Pattern of Subscriber of RAU Publications

Rajendra Rathore¹ and R. N. Trikha²

<table>
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<tr>
<th>REFERENCES</th>
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</thead>
<tbody>
<tr>
<td>1. Senior Assistant Professors, Department of Home Science Extension Communication and Management, College of Home Science, Rajasthan Agricultural University, Bikaner (India)</td>
</tr>
<tr>
<td>2. Professor and Head, Agricultural Communication, GPPUAT, Pantnagar, Uttarakhand (India)</td>
</tr>
</tbody>
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