Chapter-II

REVIEW OF LITERATURE

The importance of extension teaching methods in relation to gain of knowledge had become a topic of key interest. Investigations conducted in India and abroad in this direction had revealed that various extension teaching methods differ in their effectiveness depending upon the subject matter as well as the type of respondents.

In this chapter, a pertinent review of literature concerning the relative effectiveness of different extension teaching methods, gain in knowledge by the respondents and the relationship of various socio-personal characteristics of the respondents with gain in their knowledge through different extension teaching methods has been given. The information available in this regard is compiled under the following sub-heads:

2.1 RELATIVE EFFECTIVENESS OF SELECTED EXTENSION TEACHING METHODS AND GAIN IN KNOWLEDGE BY THE RESPONDENTS

2.1.1 General

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2.1 RELATIVE EFFECTIVENESS OF SELECTED EXTENSION TEACHING METHODS AND GAIN IN KNOWLEDGE BY THE RESPONDENTS

2.1.1 General

UNESCO (1958) reported that people retain 20 per cent
of what they hear, 30 per cent of what they see, 50 per cent of what they hear and see, 70 per cent of what they actually do and 90 per cent of what they hear, see and do.

Malhotra (1974) conducted a study on the effectiveness of combination of communication media. The findings revealed that all the media were effective in communication, but a combination was more effective than a single medium. Brainard (1978) assessed the effectiveness of seven alternative media formats. These were: (1) print, (2) picture, (3) sound, (4) print/picture, (5) print/sound, (6) picture/sound, (7) print/picture/sound. He encountered that different media combinations are likely to be differentially effective.

Hansra and Bhardwaj (1983) tested the effectiveness of some selected modes of communication and the respondents were members of ladies Charcha Mandals and the content was 'immunization'. It was concluded that all the selected modes, i.e. printed material followed by group discussion, printed material only, tape recorded message followed by group discussion and tape recorded message only were significantly effective for imparting knowledge to the respondents. Mohindra (1984) reported that we retain only 10 per cent of what we read, 20 per cent of what we hear, 50 per cent of what we say and hear, 70 per cent of what we say as we talk and 90 per cent of what we say as we perform an act.
Wahab and Khattab (1994) found that the most important methods for extension workers were, in order of preference: farm visits, extension publications, extension meetings, field demonstrations and home visits. Dahiya et al (1997) found that a combination of media (photographs, slides/commentary with discussion, models, charts and specimens, and leaflets) with lecture was helpful in retaining and sustaining attention interest and knowledge and also helped to clarify the message.

2.1.2 Demonstration

Wilson and Gallup (1955) reported that demonstration aroused imagination and motivated people by seeing, hearing, discussing and doing. Mishra (1957) revealed that a large contribution was made by method demonstration or the adoption of improved implements and other improved practices. The use of fertilizers and improved seeds was very little affected through the method demonstration.

Lokhande (1959) reported that to learn skill by the farmer, demonstration was more effective even than the combination of personal contact with group discussion.

Rao (1961) reported that demonstrations were the most frequently used by the Agricultural Extension Officers (AEOs) as other audio-visual aids like films and slides were not easily available. He also reported that only 40 to 50
per cent of the AEOs were able to conduct demonstration effectively. For popularizing fertilizer and line sowing, demonstration was reported the best. Combination of field trip, movie and demonstration was adjudged as the best for popularizing Japanese method of paddy cultivation, improved seeds, pests and disease control. Sohal and Singh (1968) suggested that more emphasis should be laid on demonstration rather than mere lecturing.

Singh and Singh (1976) observed that 'demonstration plus slide show' was most effective combination at awareness, whereas 'field trip followed by a slide show' made greater contribution towards enhancing knowledge and 'radio plus demonstration' proved to be the most effective at adoption stage. The study further revealed that combinations were more effective than single medium.

Mangat (1984) revealed that discussion when added to demonstration improved effectiveness in imparting training to the farmers.

### 2.1.3 Video/Films

Rao (1964) reported that the film was significantly superior to lecture method in imparting knowledge on foliar spray of urea and retention of gained knowledge by the farmers. Baker (1979) compared three media presentation modes. These were: a sound motion picture, a sound still
picture and verbal print presentation mode. He inferred that learning occurred from each presentation mode. Ghazzanei (1980) found that both film presentation and slide presentation had relatively lesser effect on learning than lecture presentation. Order of presentation had its effect on the performance in favour of the lecture followed by medium presentation. Manchanda (1981) reported that film was more effective in presenting knowledge and retention of the gained knowledge on better nutrition as compared to slide-tape presentation and lecture method. But film was inferior to printed material followed by group discussion. McCrimson *et al.* (1992) found that the respondents perceived the use of video as a positive supplement to the turf grass management course, but not as a substitute for traditional teaching methods. He also revealed that the field trips were more effective than video-tapes.

### 2.1.4 Slide-Tape Synchronization

Robert (1974) compared the lecture and slide-tape method of instruction. He conferred that both the lecture and slide-tape methods of instruction were efficient in producing mean gains. However, neither method was more efficient than the other. Winterfeld (1974) studied the difference between learning from: (a) recorded message, (b)
recorded message with realistic pictures. He found that there was significant difference between the control and the treatment group. The groups who had audio-visual treatment scored significantly higher than the groups who had audio treatment only.

Davis (1975) reported that combined slide and sound presentation method was more effective than the traditional method of teaching. Phair (1975) indicated that media using combined visual and auditory communicative modes resulted in more effective learning than sound or print alone. The filmstrip which involved pictorial images and sound track was more effective than either the printed narration or soundtrack on immediate and delayed recall.

Robert (1974) compared the lecture and slide tape methods of instruction. He conferred that both the lecture and slide-tape methods of instruction were efficient in producing mean gain in knowledge.

Snyder (1978) postulated that treatment with tape recorder in imparting comprehension in reading and listening did not give significant differences in reading scores before and after the treatment. Brown (1979) inferred that the use of supplementary material accompanying the audio-cassette tape presentation is more effective than listening audio-tape only.
Manchanda (1981) reported slide-tape presentation was better than lecture method for gain in knowledge and its retention on better nutrition. But this method was inferior to printed material followed by discussion and film presentation of the same topic.

Nagraj and Reddy (1985) reported that tape recorded lecture was superior to lecture method of presentation in making farmers to gain more knowledge. The probable reason could be that when lecture was presented through tape recorder it might have commanded more attention of the farmers due to its novelty effect and thereby it might have led to higher gains in knowledge among farmers as compared to lecture alone. Reddy and Reddy (1986) reported that slides and flannel graph as two media combinations and tape-recorder and flip chart-flannel graph as three media combinations were effective in bringing about desirable behavioural changes among the rural people with regard to poultry farming.

Singh and Verma (1987) reported that there was a significant gain in knowledge for the simple and complex messages after the exposure through the slide stories for imparting nutritional information to rural women. Riar (1992) studied the effectiveness of two extension teaching methods, viz. lecture-discussion and slide-cum-tape recorded message. The finding revealed that these methods were
significantly effective in imparting knowledge to the farmers about poplar cultivation. Lecture-cum-discussion method was significantly more effective than slide-cum-tape recorded message method.

A careful analysis of the studies reviewed in this section would reveal that combination of different extension teaching methods is more effective than use of a single method. However, the knowledge regarding comparative effectiveness of different extension teaching methods for training of field extension workers particularly in agriculturally advanced areas is lacking.

2.2 RELATIONSHIP OF SELECTED SOCIO-PERSONAL CHARACTERISTICS OF RESPONDENTS WITH THEIR GAIN IN KNOWLEDGE THROUGH SELECTED EXTENSION TEACHING METHODS

2.2.1 Age

Singh (1973), Chauhan (1980) and Jalota (1981) indicated that age showed a positive and significant relationship with the gain in knowledge. Age was positively but non-significantly correlated with the gain in knowledge of the trainees according to Sharma (1973), Singh (1974) and Sidhu (1983).

Negative and significant correlation has been observed between the age of the respondents and gain of knowledge on the effectiveness of extension teaching methods.

No relationship between the knowledge gained and age of the respondents on the effectiveness of extension teaching methods has been reported by Bedi (1971), Gopal (1974) and Bains (1979). Malhotra (1974) concluded that the younger women gained more knowledge than the older women with different modes of presentation.

Khanna (1980) inferred that there was no significant effect of age of the respondents on gain in knowledge due to discussion method, but there was a negative and significant relationship between age and gain in knowledge due to straight talk.

2.2.2 Education

Sharma and Dey (1970), Singh (1973), Prema and Menon (1974), Pandey and Roy (1977), Chopra (1980), Khanna (1980), Jalota (1981), Bhardwaj (1981), Manchanda and Hansra (1983) and Sidhu (1983) reported that education had a close positive relationship with response to extension teaching methods with gain in knowledge by the respondents and also
found that gain of knowledge increased with increasing level of education attainment in all the programmes.

Bhaskaran and Mahajan (1968) indicated that education in general, had shown a close positive relationship with respect to extension teaching in respect of retention of knowledge. Manchanda (1981) found that education was positively and significantly correlated with gain in knowledge.

No significant correlation between education and gain in knowledge has been reported by Bains (1979) and Khanna (1980). Interestingly, negative and significant correlation has been reported for gain in knowledge and education by Cheema (1982). The reason explained by him was that the trainees with high level of educational qualifications, were having their pre-treatment scores more than those of the less educated.

Gupta (1970) reported that education is negatively correlated with knowledge gained under $F_0$, $F_1$ and $F_2$ level of feedback, while in $F_3$ level of feedback, education has no relationship with respect to gain in knowledge. Singh et al. (1996) reported that education had positive impact on gain in knowledge.

**2.2.3 Social Participation**

Khuspe (1970) found that social participation was not
significantly related with gain in knowledge. Singh and Singh (1976) observed that the overall effectiveness of exhibition, field trip and demonstration had no significant correlation with social participation.

No significant difference between the social participation and gain in knowledge had been reported by Manchanda and Hansra (1983). Singh (1973) indicated that social participation of the respondents was positively correlated but not significant with utility of farm broadcasts. Chopra (1980) observed a positive and significant relationship between social participation and television viewing of respondents.

2.2.4 Mass Media Exposure

A positive and significant correlation between mass media exposure of respondents and gain in knowledge was reported by Prema and Menon (1974) and Manchanda and Hansra (1983). Manchanda (1981) found that mass media exposure was positively and significantly correlated with gain in knowledge. Singh et al (1996) reported that mass media exposure had positive impact with gain in knowledge.

2.2.5 Other Socio-Personal Characteristics

Gupta (1970) reported that professional experience of the respondents had no relationship with gain in knowledge
under different levels of feedback. Siddaramaiah and Rajanna (1984) reported that farmers having varying personal characteristics differed in their knowledge scores over all treatments. The respondents belonging to younger age, higher education, large farm size, higher media participation, more extension contacts and high cosmopolitans scored significantly high over the other categories of the farmers.

Balasubramanian and Enigo (1996) found that the level of education, sex, age, community and income of respondents had no significant influence on the level of their achievement in agricultural extension programmes. Borgia et al (1997) observed a marked effect of age and educational level on knowledge coefficient. KG values decreased with an increase in age and with decrease in educational level.

From the preceding review of research work, it is found that majority of the investigators have indicated that effectiveness of the different extension teaching methods was significantly influenced by the socio-personal characteristics of the respondents, i.e. age, education, social participation, mass media exposure, professional experience etc. Secondly, no attempt has been made to study the gain in knowledge through various extension teaching methods in imparting knowledge to the Agricultural Development Officers about hybrid seed production technology of sunflower. So, it will be appropriate to conduct the
present study which will be useful for the benefits of the extension personnel directly or indirectly involved in further transfer of technology to the farmers.