Training evaluation — a qualitative approach

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ONE SIGNIFICANT CHANGE that has come about in development programs, particularly rural and environmental issues is the concept of training.

It is widely accepted now and special emphasis laid on training and trainers, beneficiaries, government and NGO's involved has been part of most developmental effort. This ensures higher levels of democracy, accountability, feasibility, appropriateness, monitoring and maintenance, apart from ensuring greater hope of sustainability.

A major limitation of training programme is to evaluate its effectiveness. In this paper an attempt has been made to develop a qualitative measure based on subjective and quasi objective response to training as part of IRWS & ES project of government of Karnataka (aided by World Bank). This technique is general enough to be applicable to a wide class of training programme whose evaluation for its effectiveness needs to be determined.

Districtwise response and state level response

The districtwise response graphs and net state level response is based on the values indicated in Table 1, obtained from the feedback from participants and trainers. This was done by having a structural format of response from participants and trainers.

Step 1

Values of various districts under awareness about the project (A1.....A5), awareness about environmental sanitation (E1.....E5) and awareness about handpump and maintenance (H1.....H5) are tabulated (refer to Table 1).

Step 2

Calculate percentage-wise distribution of villages under various components A, E & H (Refer table 1).

Step 3

Awareness indices is calculated as follows for the three training components. (See below).

Where

A1/H1/E1 - No of villagers with response between 1-20 per cent and others as shown.

Since we have used interval arithmatic but final figure has to be obtained at a point we have used the following formula to obtain the same.

To arrive at a representative figure of response under each of the components, we take moments of awareness of each of the components about the mid point. For example:

$$\text{Awareness about the project in percentage} = \frac{[A_1(-0.4) + A_2(-0.2) + A_4(0.2) + A_5(0.4)]}{\text{total number of villages}} + 0.5 \times 100$$
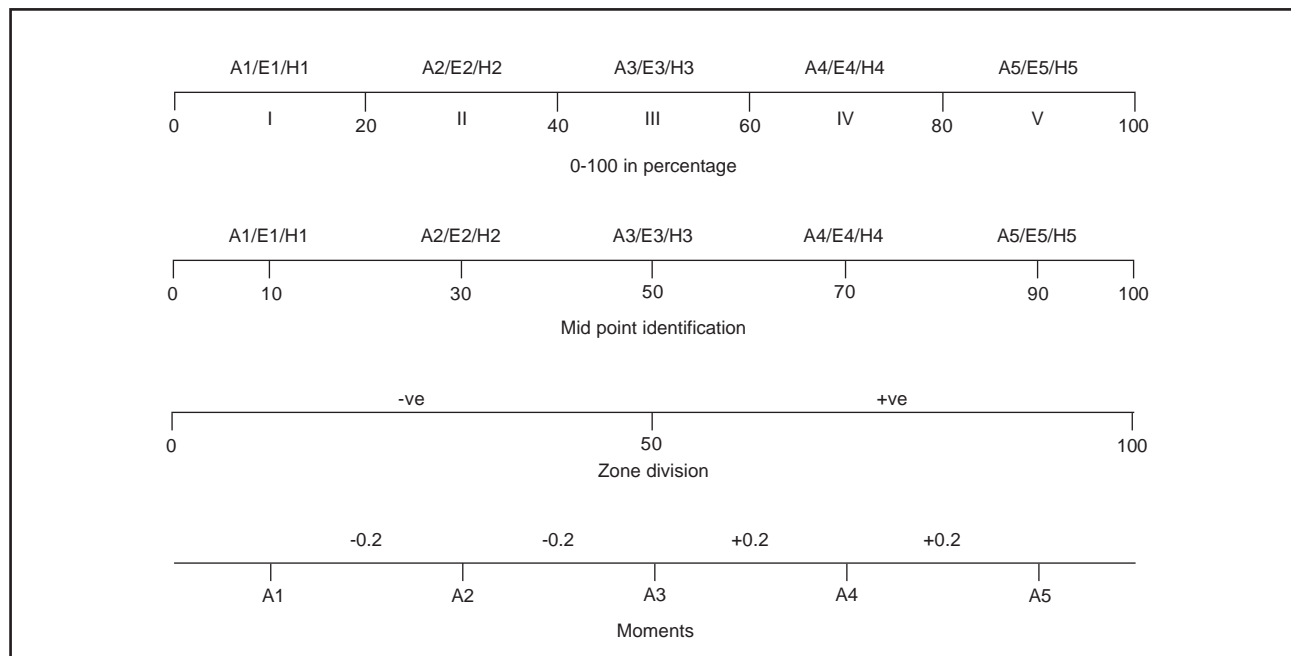
Table 1. Classification of villages* based on response to training

District	Awareness about the project					Awareness about environmental sanitation					Awareness about handpump and maintenance				
	A1	A1	A1	A1	A1	E1	E1	E1	E1	E1	H1	H1	H1	H1	H1
Bidar	-	-	3	15	-	-	-	3	14	1	-	-	3	15	-
Mysore	-	-	12	12	5	-	1	13	11	4	-	-	14	9	6
Shimoga	-	-	1	8	20	-	-	1	9	19	-	-	1	8	20

Similarly the other 7 district figures.
* The numbers indicate the number of villages in each category

Similarly percentage awareness about other components is calculated.

Sample calculations

Calculations pertaining to one of the districts (Mysore) is as follows:

The values of awareness about the project A1, A2, A3, A4 and A5; awareness about the environmental sanitation E1, E2, E3, E4 and E5 and awareness about handpump and maintenance H1, H2, H3, H4, & H5 indicated in Table 1, are based on structured feedback formats obtained for each of the project villages. Using these structured formats villages are classified under various categories.

Using these values net awareness about the project (A), awareness about handpump and maintenance (H) and awareness about environmental sanitation (E) is obtained as follows:

$$\text{Awareness about the project in percentage} = \frac{[A1(-0.4) + A2(-0.2) + A4(0.2) + A5(0.4)]}{\text{total number of villages}} + 0.5 \times 100$$

$$= \frac{[0(-0.4) + 0(-0.2) + 12(0.2) + A5(0.4)]}{29} + 0.5 \times 100$$

$$= 65.2$$

Similarly,

Awareness about environmental sanitation in percentage = 62.4

Awareness about handpump and maintenance in percentage = 64.5

These values are multiplied by effort adjustment factor i.e. 0.85 to obtain more realistic values.

Correction factor

This is more along the lines of effort adjustment factor (EAF) commonly seen in many situations where objective measures are extracted out of subjective and quasi objective data/statistics.

This factor is a function of many parameters and the net result of this is to come up with a number (normally between 0.1 to 2.0) depending on detailed analysis of the study.

Effort adjustment factors are based on social-economic, literacy, environmental and historical factors.

Total response of training (districtwise)

The response of training in percentage is calculated using the following formula.

$$\text{Total response of training in percentage} = \frac{A^* + H^* + E^*}{3}$$

where

A* Awareness about the project in percentage

H* Awareness about the handpump and maintenance in percentage

E* Awareness about environmental sanitation in percentage.

Note: The values of A*, E* and H* are A, E, H values after multiplying with EAF.

Using the above formula, total response to training for each district is obtained and is tabulated in table and the average of the same indicates response to training at the state level and is 62.6% (approximately).

References

Report on response to training - integrated rural water supply and environmental sanitation (Professor M.H. Dhananjaya, Professor B.G. Sangameshwara, Dr Ashok Rao and Padmasree, March 1995).

Assessment of training needs prepared for IRWS and ES project, Government of Karnataka. Indian society for technical education (1993).

Evaluation of village water supply planning (Sandy Cairncross et al - John Wiley, 1986).