

## **Perceived Effectiveness of Educational Module on Brucellosis in Dairy Animals**

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### **ABSTRACT**

The study was carried out in six district of Haryana and Punjab state to assess the perceptions of dairy farmers on effectiveness of educational modules on brucellosis in dairy animals. To disseminate the information among dairy farmers regarding brucellosis prevention in dairy animals an “Educational module” was developed and the action research study explored the feedback on the module. The findings revealed that majority of the respondents were highly satisfied with information function of educational module followed by subject quality and functionality component of educational module. Perceived feedback on effectiveness of different characteristics revealed that module meet the needs of target group, applicability of educational module in field condition, color scheme used in information module, quantity of information provided and sufficient and simplicity of content for enhancing knowledge were ranked in respective order among the five component of information module.

**Keywords:** Brucellosis, Dairy farmers, Educational module, Perceived feedback

### **INTRODUCTION**

In present era, well-designed, job oriented and experience based learning environments have the immense potential to support individual learners in transferring their knowledge to solve real-world problems (Brown *et al.*, 1994). This can be achieved by developing a well-planned, self-learning educational module. Educational modules consist of concise units of study material composed of theoretical and practical content delivered to learners. Information module or educational module is reusable and adaptable to different learning scenarios and objectives (Barbosa, 2004). Such modules aims at providing ways to establish effective educational products capable of creating and or improving motivational learning situations and provide a complete set of features addressing the conceptual, instructional and didactic

perspectives to the learners (Merrill, 1983). The experimental module designed for the present study was intended to provide a context for learning materials to dairy farmers on brucellosis. For theoretical contents information were incorporated from books, research papers, web information, research scientist experience and so on in educational module. Practical contents included the instructional activities and evaluations, and their resulting artifacts which were incorporated through photograph and graphics in information module. Brucellosis is the second most important zoonotic disease after rabies affecting public health and economy of many nations throughout the world particularly India (Hegazy *et al.*, 2016), the educational module was developed having significant relevance to overcome against brucellosis. Therefore, concerning above risk and high probability of disease incidence among dairy farmers and

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rural people, the present study aims to explore the perceived effectiveness of Educational module on brucellosis in Dairy animals.

### METHODOLOGY

The study was carried out in six districts of Haryana and Punjab state. These districts were selected based on highest cattle population. From Punjab state; Ferozpur, Gurdaspur and Ludhiana and from Haryana state; Sirsa, Hisar and Karnal district were selected as these districts have first, second and third rank in cattle population, respectively. From each selected districts, 10 commercial dairy farmers were selected through snowball sampling method. Thus, a total of 60 respondents were selected and interviewed to get first hand information. The degree of effectiveness of the developed Educational Module on brucellosis was assessed through respondent's perceived feedback. In this study a simple interview schedule was used to measure the perceived feedback on effectiveness of Educational Module on brucellosis. It was anticipated that better the perception of respondents in terms of satisfaction derived from the various components of information module greater is its effectiveness. On the basis of satisfaction level, the

respondents were categorised into three groups viz., highly satisfied, satisfied and least satisfied. Then frequency, percentage, weighted mean score and rank were calculated for each component and each statement.

### RESULTS AND DISCUSSION

#### Perceived feedback about different component of Educational Module

The satisfaction level about different component of Educational Module was assessed and it was found (Table 1) that respondents were highly satisfied with "Information function" with weighted mean score of 0.87. This could be due to the fact that educational module adequately covered content and presented with simplistic features which made it relevant among the users. "Subject quality" followed with weighted mean score of 0.83. The probable reasons for this could be because respondents had different preference on preciseness, simplicity, text size etc. Functionality component received a weighted mean score of 0.79; which may be due to the fact that respondents found that it beneficial for them. "Engagement and aesthetic value" received weighted mean score of 0.76 and 0.72 respectively. Findings of

**Table 1: Respondents perceived effectiveness about different component of "Educational Module" on Brucellosis in Dairy animals (n=60)**

Component of Educational Module	Highly Satisfied	Satisfied	Least Satisfied	WMS	Rank
Engagement	25 (41.67)	27 (45.00)	8 (13.33)	0.76	IV
Functionality	33 (55.00)	17 (28.33)	10 (16.67)	0.79	III
Aesthetic value	19 (31.67)	32 (53.33)	9 (15.00)	0.72	V
Information function	39 (65.00)	18 (30.00)	3 (5.00)	0.87	I
Subject quality	35 (58.33)	19 (31.67)	6 (10.00)	0.83	II

(\*Figures in parentheses indicate percentage)

**Table 2: Perceived Effectiveness of Engagement Component of Educational Module**

Characteristics	Highly Satisfied	Satisfied	Least Satisfied	WMS	Rank
Create interest among users	22 (36.67)	34 (56.67)	4 (6.66)	0.77	II
Meet the needs of target group	24 (40.00)	33 (55.00)	3 (10.00)	0.78	I
Spacing is artistic and appropriate	17 (28.33)	38 (63.33)	5 (8.33)	0.73	III
In Module content is given more importance than appearance	14 (23.33)	41 (68.34)	5 (8.33)	0.72	IV

(\*Figures in parentheses indicate percentage)

the study are in accordance with the study of Verma *et al.* (2019) and Shrija *et al.* (2018). After obtaining perceived effectiveness of educational module on brucellosis, problem or lacuna were solved by incorporating the suggestion of respondents.

The findings revealed that majority of the respondents were satisfied with all characteristic of 'engagement component' of educational module. 'Educational module' meet the need of target group was given first rank with weighted mean score of 0.78, because respondents found that it is directly related to dairy animals and help in solving the problem of brucellosis. Create interest among users was accorded second rank with weighted mean score of 0.77; this could be because respondents get attracted towards educational module. While spacing is artistic and appropriate and content was given more importance than appearance in educational module with weighted mean score of 0.73 and 0.72, respectively. The probable reasons for this could be because respondents had varying degree of exposure.

Findings regarding functionality component and its satisfaction level revealed that applicability of educational module in field condition was ranked first with weighted mean score of 0.90. The possible reasons behind this

could be the incidence of brucellosis in dairy animals which respondents perceived. The degree of easiness in obtaining desired information in simplest way was with weighted mean score of 0.75 while heading and subheadings which helped the users in locating the information with weighted mean score 0.72.

The findings further reveals that majority of the respondents were satisfied with different characteristic of module in term of aesthetic value components. Color scheme used in educational module was ranked first with weighted mean score of 0.79 followed by layout of module is good was given second rank with weighted mean score of 0.78. The probable reasons for this could be because respondents had curiosity and interest in module. While visual appeal, content presentation style and gestural designed of aesthetic value component of educational module was given third, fourth and fifth rank with weighted mean score of 0.75, 0.73 and 0.72, respectively. The results receive support from Nain *et al.* (2019) where as information packages were perceived effective in terms of content, format and illustrations. The reasons behind this could be the easy understanding and systematic presentation of information in the educational module.

**Table 3: Perceived Effectiveness of Functionality Component of Educational Module**

Characteristics	Highly Satisfied	Satisfied	Least Satisfied	WMS	Rank
Applicability of Educational module in field condition	44(73.33)	14(23.33)	2(1.66)	0.90	I
Degree of easiness in obtaining desired information in simplest way	19(31.67)	37(61.67)	4(6.66)	0.75	II
The Module contains headings and subheadings which helps in clarifying and understanding the information to users	15(25.00)	40(66.67)	5(8.33)	0.72	III

(\*Figures in parentheses indicate percentage)

**Table 4: Perceived effectiveness of aesthetic value component of educational module**

Characteristics	Highly Satisfied	Satisfied	Least Satisfied	WMS	Rank
Layout of Educational Module	23(38.33)	34(56.67)	3(5.00)	0.78	II
Content presentation style	16(26.67)	39(65.00)	5(8.33)	0.73	IV
Gestural design of Educational Module	13(21.67)	43(71.67)	4(6.66)	0.72	V
Visual appeal	22(36.67)	31(51.67)	7(11.67)	0.75	III
Color scheme used in Educational Module	26(43.33)	31(51.67)	3(5.00)	0.79	I

(\*Figures in parentheses indicate percentage)

**Table 5: Perceived Effectiveness of Information Component of Educational Module**

Characteristics	Highly Satisfied	Satisfied	Least Satisfied	WMS	Rank
Clearly visible Content on each page	11(18.33)	44(73.34)	5 (8.33)	0.70	VI
Sufficient Quantity of information	29 (48.33)	26(43.34)	5(8.33)	0.80	I
Accuracy of Educational Module description	09 (15.00)	48(80.00)	3(5.00)	0.70	V
Credibility of information provided	24(40.00)	35(58.33)	1 (1.67)	0.79	II
Quality of visual information	17 (28.33)	36 60.00)	7 (11.67)	0.72	IV
Accuracy and appropriateness of the health information	16 (26.66)	43(71.67)	1 (1.67)	0.75	III

(\*Figures in parentheses indicate percentage)

**Table 6: Perceived effectiveness of subject quality component of educational module**

Characteristics	Highly Satisfied	Satisfied	Least Satisfied	WMS	Rank
Preciseness of content	21 (35.00)	36(60.00)	3(5.00)	0.77	II
Simplicity of content in enhancing knowledge	25(41.67)	31(51.67)	4(6.67)	0.78	I
Worth recommending to other users	19(31.67)	34(56.67)	7 (11.67)	0.73	III
Appropriateness of the text size of the words used	12 (20.00)	42 (70.00)	6 (10.00)	0.70	IV

(\*Figures in parentheses indicate percentage)

Results regarding perceived feedback about information component and its satisfaction level, it was found (Table 5) that quantity of information provided on module was ranked first with weighted mean score of 0.80 followed by credibility of information was ranked second with weighted mean score of 0.79, respectively. The possible reasons behind this could be the awareness of respondents about involvement of research scholar and scientist of ICAR-National Dairy Research Institute, Karnal in design and development of information module. Accuracy and appropriateness of the health information, quality of visual information and accuracy of information module was given third, fourth and fifth rank with weighted mean score of 0.75, 0.72 and 0.70, respectively. This is due to the fact that respondents found information useful in prevention of brucellosis.

Findings regarding subjective component of information module, it can be clearly seen (Table 6) that simplicity of content in enhancing knowledge was ranked first followed by preciseness of content about brucellosis in information module was ranked second with weighted mean score of 0.78 and 0.77, respectively. Recommending

educational module to other users and text size of the words used in information module was appropriate.

## CONCLUSION

From the study it may be concluded that the majority of the respondents were highly satisfied with information function, subject quality and functionality component of information module. Educational campaigns must be initiated by adopting such information module to increase awareness of brucellosis among dairy farmers. Such educational campaigns must also highlight the importance of disposing aborted foetuses and placentas appropriately and avoiding the high risks associated with inappropriate risky practices.

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