



Cereal Systems Initiative for South Asia

# Guide to user testing Communication Materials



Behavior change communication, or communication for development, plays an integral role in development programming designed to incentivize positive behavior change. In the pursuit of reducing food insecurity in South Asia, the Cereal Systems Initiative for South Asia (CSISA) has developed a wide variety of behavior change communication materials to convey to diverse audiences techniques for – and benefits of – sustainably intensifying rice-, wheat- and maize-based cropping systems. This document synthesizes CSISA’s best practices and lessons learned for designing behavior change communication materials. It also aims to serve as a guide to future design activities using the principles of human-centered design. Recommendations from this guide can be applied to not only the agriculture sector but also in areas where products or campaigns are designed for the end-users.

Social welfare programs often launch marketing campaigns to spread awareness among stakeholders of particular social issues or interventions as, more often than not, ineffective communication acts as the major barrier in conveying relevant information to the audience. These campaigns usually use printed materials such as posters, flyers, infographics and other illustrations to present information in simple and concise formats. To facilitate quick and easy understanding by target audiences, development communication materials should be as user friendly and readily comprehensible as possible. The process often requires multiple iterations and user testing with end-users.

## **Effective development of communication products:**

- Organize data and messages in a hierarchy or sequence
- Promote a clear flow of ideas that facilitates the understanding of later concepts
- Present ideas one at a time for clear and simplified messaging
- Start and end with attention-grabbing passages
- Allow multiple audiences to gain insight from the document
- Are perceived as relevant to (and by) end user(s)

This document highlights the importance of user testing communication materials and suggests a process by which the developer can ensure their products are effective. This guide will help designers understand how to rigorously test communication products before release and ensure maximum outreach.

The purpose of testing communication materials is to confirm that the target audience understands them and sees them as culturally and socially relevant. A user test solicits feedback from target audiences and invites participants to identify unclear, improper or irrelevant content, including the language used.

Online resources on crafting a campaign message show that an effective message captures the attention of the target audience, is easy to understand and remember, and does not require any further explanation. User tests also allow participants to suggest alternative formats if necessary. Revising communication products during the testing phase is easier and more cost effective than after materials have been disseminated (C-Change, 2012). Social and behavior change communication materials need to be tested multiple times before they are considered final. This is an essential step, particularly for materials and activities that aim to reach stakeholders belonging to diverse strata. User testing is the process of bringing together members of the priority audience to react to the components (with logic, language and

experience) of a communication campaign before it is produced in final form. User testing gauges the reaction of the selected group of individuals and helps determine whether the priority audience will find the components – usually draft materials – understandable, believable and appealing.

Testing communication materials helps confirm that they are effective, appropriate, understandable, attractive, and culturally relevant. Testing allows practitioners to gather feedback from target audiences, who may suggest alternative formats or identify confusing or unclear content. As explained by Doak et al. (1996), the logic, language and experiences represented in the document should match that of the respondents (Figure 1). Unless the logic, language and experiences inherent in the information match users', the information may be ignored or misunderstood. Language mismatch occurs when unexplained and unfamiliar words are used.

“Keeping the user front and center, resetting the paradigm, checking ideas and assumptions and learning from failure are not very different from how communication gets done in the first instance. But if you want to walk the tightrope between disruption and delivering outcomes, this approach definitely helps you to be surefooted in creating innovative solutions to problems of every kind, whether you are in Silicon Valley, or Bihar”

– Radharani Mitra,  
Global Creative Advisor of BBC Media  
Action on human-centered design.



Figure 1: Matching the instruction to users' logic, language and experience  
 Adapted from: Doak et al., 1996.



A developer should adopt a holistic view of the design process, viewing every component of the product from the users' perspective, and consider the following components before testing. Example questions relevant to each component have been presented in the Appendix.

Critical aspect of communication material

Description/definition

Usefulness	The ways in which the product will be used, anticipated benefits, anticipated problems, and ways to enhance its utility
Attractiveness	The product's visual appeal including color, illustrations, and its capacity to catch and hold the reader's attention
Reader comprehension	The viewer's understanding of the main ideas and the identification of any confusing aspects
Relevance	The level to which users feel the messages are appropriate for them
Persuasiveness	Whether messages are motivational and participants intend to follow the recommendations
Users' recommendations	Additional needs identified by users or changes suggested in product design



Source: Doak et al., 1985

## Methodologies for user testing

The basic steps in user testing materials and messages are to develop and review the communication objectives and the plan; identify pretesting objectives and develop a pretesting interview guide; collect and interpret data; revise materials if needed; and retest and revise until messages and materials are effective in achieving the communication objectives (Brown et al., 2008 ).

Several methodologies are used in the testing of materials because when messages are not easily understood, their effectiveness is diminished. One of the ways to do these tests is to interact closely with selected members of the target communities. This can be done in the form of focus group discussions (FGDs) (Lapka et al., 2008). FGDs are small group gatherings of 6–8 people who share characteristics such as age, sex, socioeconomic status, and literacy level. Discussions are led by a trained facilitator, and a separate, skilled note-taker is employed. The number of FGDs to be conducted depends on the diversity of the audience. While conducting FGDs, various principles of communication need to be applied including fair and ethical principles of primary research that guide interactions with human subjects.

Each participant in the FGD should be encouraged to voice her or his opinion, ensuring that the discussions are not influenced by a small group of vocal participants. An unbiased and trained professional can conduct follow-up, in-depth interviews one-on-one with representative members of the target audience to gather more detailed information about attitudes, beliefs and reactions to the draft materials. The number of these interviews again depends on the diversity of the target audience. The design and research teams should have a holistic understanding of the target audience and the iterative design process. The team should ideally be a heterogenous mix of researchers and designers, including people familiar with the local languages and dialects.

While conducting these interactions, it is also important to be conservative about the quantity of material to be tested with a single group. Participants may have limited time available and perhaps limited interest in – or an attention span for – the process. Being cognizant and respectful of their time constraints leads to more effective outcomes. Two illustrative case studies follow below, highlighting the role that user testing played in developing and refining communication materials in CSISA.



## Case Study 1

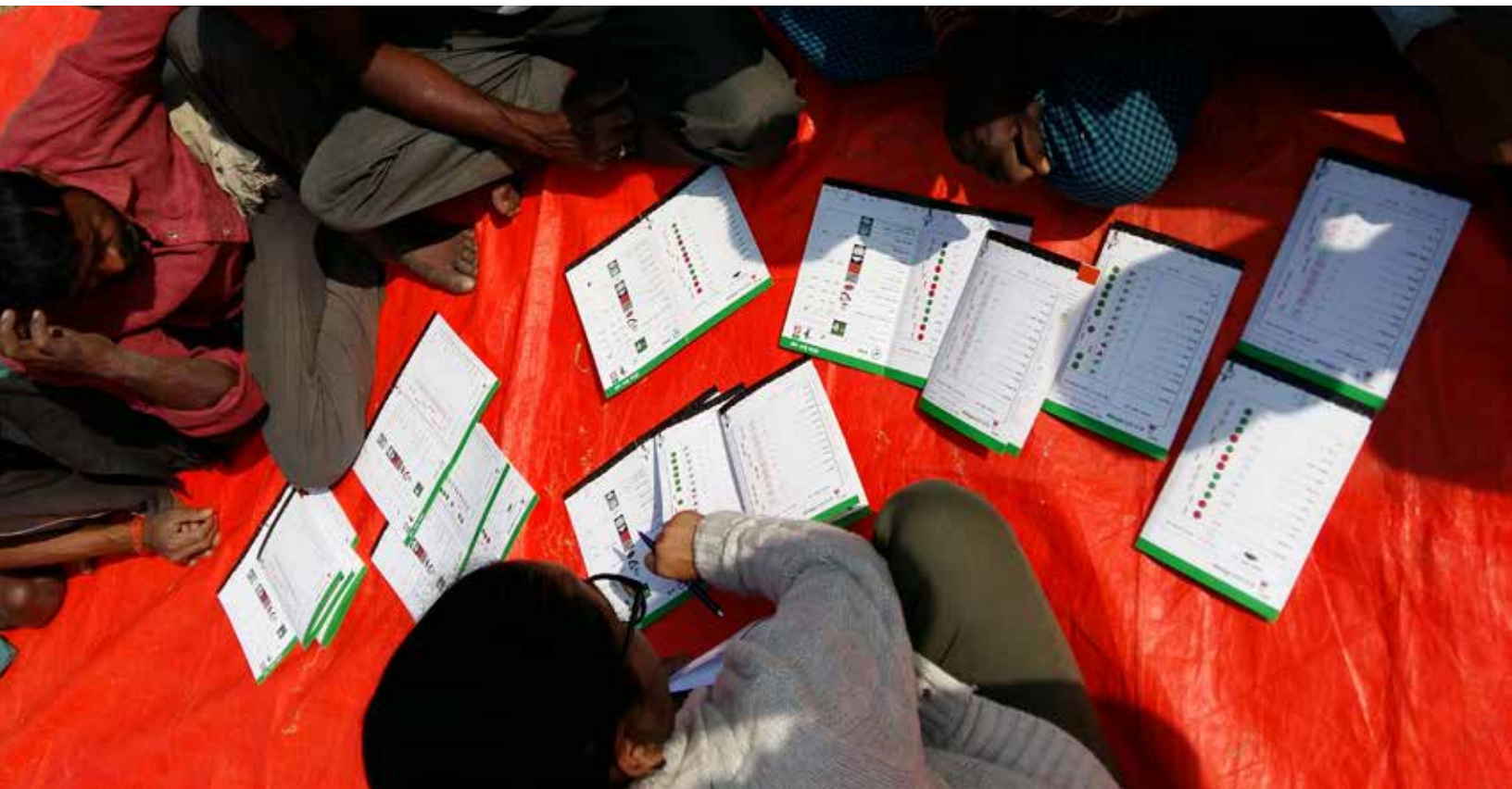
### Soil health card redesign

The Soil Health Card (SHC) scheme was launched by the Government of India in February 2015. Under the scheme, the government mandated the provision of soil health cards to all farmers. These cards will carry crop-wise recommendations of nutrients and fertilizers required by an individual farmer to improve soil productivity through the judicious use of inputs. All soil samples are required to be tested in a soil testing lab, with an expert then assessing the soil quality and suggesting measures to address any deficiencies. The SHC displays the test results and recommendations, along with the farmer's personal details such as Aadhaar card numbers and plot details. The program operates under the assumption that soil health cards will inform recipients of the status of their soil health and provide recommendations on the appropriate application of key nutrients with respect to the specific crops being grown. The program's reliance on an A4 size card to alter farmer behavior necessitates the careful assessment of the card's content and user-orientation.

Designing effective behavior-change communication products involves evaluating whether a particular design is effective at generating understanding among diverse end users.

CSISA conducted a series of user tests to understand the users' perspectives on the soil health card. In May 2017, CSISA tested the original soil health card with farmers in two districts of Bihar and in July 2017 with farmers of two districts in Odisha. Four different groups participated, comprised alternatively literate men and women who were progressive farmers and illiterate men and women who were marginal farmers. In total, 16 FGDs with farmers and 12 key informant interviews (KIIs) with 'gatekeepers' were conducted, involving block agriculture officers, *Krishi salakar*, and *Krishi Vigyan Kendra* scientists.

Based on feedback, the team developed three different cards, varying the presentation and sequence of the content in response to the feedback received in the first round.



For example, in one of the cards, recommendations were presented before the test results, while the order was reversed in another. The font size was increased, and the visuals were modified to make the SHC more user-friendly. In the second round, in-depth interviews were also conducted with farmers to better understand their perceptions of the cards. Each farmer was shown the cards one by one and was asked which card they understood better. The orders of cards were rotated with every group randomly to ensure that all alternative designs received attention. Thirty-six in-depth interviews and six FGDs with the farmers were conducted in one district in Bihar. Respondents were also given self-administered questionnaires. Odisha could not be included due to project constraints. The second round further helped CSISA identify additional changes that were required to make the SHC attractive and to be easily understood by farmers. During the final iteration, key principles remained the same but new designs were used and variations of the same card were created with each illustration presented in a different manner. As per the feedback from first two user tests, CSISA retained the values of the test results but demonstrated the high, medium and low levels with arrows and thumbs-up and thumbs-down symbols. Illustrations of all fertilizers and micronutrients were also used since all farmers could recognize the fertilizer images while only the educated farmers could read the reference text. This new design was retested in two districts of Bihar in December 2017. In total, seven FGDs were conducted.



## Case Study 2

### Posters on weed species of wheat and rice

To strengthen integrated weed management for key cereal crops and to inform relevant government recommendations and private sector market development activities, CSISA used crowd sourcing techniques to gather spatial information on the distribution of problematic weed species of rice and wheat in Bihar, and then developed posters of those weeds. Photos of 46 weed species of rice and 28 weed species of wheat were compiled, curated and arranged on an A0 size page, sequenced as grass species, broad leaf species and sedge species. The images were further arranged according to the level of dominance in the target area. A group of weed scientists and graphic designers carried out user tests of these posters in five different locations in and around Patna, Bihar, soliciting feedback from 30 farmers. Based on the feedback, the research team added a few species to the posters and replaced some images, facilitating better weed identification. The final layout was printed on an A0 paper and widely distributed to enumerators for the purposes of data collection. Information obtained in this study will be used to help researchers and extension agents target future research and develop outreach materials to improve weed management in the area's dominant cereal-based cropping systems.



## Limitations

While a high level of user orientation can be obtained through iterative user testing, the process still has limitations. One of the primary limitations is researchers' limited ability to reach prospective target audiences. As a rule, farmers tend to be busy and capturing their time for focus group discussions can prove difficult for researchers, as well as disruptive for farmers.

Another limitation of this approach is that the design team may not be able to incorporate every participant's feedback, so some judgment will be needed to ensure that the final product has the largest possible reach, without losing its focus by trying to respond to every observation or recommendation received.

## Conclusion

This guide described how to conduct development communication user tests so that designers have insight into what is most valuable to, and most valued by, target audiences of behavior change communication. Iterative user testing should be considered a key component of product design, not as an optional step, since it facilitates multiple rounds of testing and revision before a final product is launched.

The below 7-point strategy for conducting effective development communication user tests summarizes our recommendations.





# ITERATE

**I** – Introduce the material. Every respondent should have a copy to hold in their hands. Provide a short introduction to the material and allow the respondents to review it.

**T** – Test the material, not the respondents. It is important to assure the respondents that they are not being evaluated and resist the temptation to lecture.

**E** – Encourage the respondents to speak and reiterate what they have understood. Respondents should feel free to provide critical feedback on the material without any fear.

**R** – Rotate material in different sequences to prevent order bias. When testing material, design different versions of the same product with slight changes in color, presentation, sequence, orientation and design. This will enable one to test multiple formats with the same group. However, it is important to ensure that the sequence of the material is rotated so that the first option is not always considered either the best version or the worst.

**A** – Assess respondent behavior and body language, including the way material is held, pages are flipped (if relevant), and eyes move across the page. These criteria are all relevant to understanding where and when attention is paid to content. Passive observation is crucial to this exercise but it is also important to be cautious about making any judgements. Be neutral in your expressions and comments.

**T** – Transcribe everything. Written documentation of participant observations and comments will become essential in revising the material. Systematic documentation of feedback is most important when determining which recommendations to account for when redesigning.

**E** – Eat, sleep, repeat! Conduct multiple user tests over time to ensure that a representative sample has been reached and that the target audience has been able to provide feedback on the material.



## Appendix 1

### Usefulness

- (1) What information did you already know?
- (2) What new information did you learn?

### Attractiveness

(whether the design makes it easier to understand the SHC aside from whether they like how it looks)

- (1) What do you like about how the recommendation looks? (Color, design etc.)
- (2) What don't you like about how it looks?
- (3) What could we do to make it look more interesting?
- (4) What could we do to make it more attractive?

### Comprehension

- (1) What is the material recommending people to do?
- (2) What words or sentences are difficult to read or understand?
- (3) Can you think of another word or words that we can use to say that?

### Relevance

- (1) What type of person do you think this pamphlet is made for? Someone like you? Why? Someone else, not like you?

### Persuasiveness

- (1) Does this/would this card have any influence on how you grow your crops?
- (2) What parts do you not believe?
- (3) Do you think that other people will believe what it says?

### Recommendation:

- (1) What is missing in this message? What could be done to improve it?

Or, is there too much information on the card? If yes, which portion could be taken out?

- (2) What they do prefer: recommended nutrient quantity or recommended fertilizer quantity?
- (3) Unit to be used for area: ha, decimal, katha, etc.
- (4) For weight which unit to use: kg, Quintal, gm, etc.
- (5) Is information on timing of application important?
- (6) Whether the text font is readable or it need to be changed?

## References

Brown KM, Lindenberger JH, and Bryant CA, 2008. Using Pretesting to Ensure Your Messages and Materials Are on Strategy. Available at: <http://journals.sagepub.com/doi/pdf/10.1177/1524839908315134>

C-Change (Communication for Change), 2012. C-Bulletins: Developing and Adapting Materials for Audiences with Lower Literacy Skills. Washington, DC: FHI 360/C-Change.

Doak CC, Doak LG, and Root JH, 1985. Teaching Patients with Low Literacy Skills. 2nd Edition. JB Lippincott Company Philadelphia.

Doak CC, Doak LG, and Root JH, 1996. Teaching Patients with Low Literacy Skills. 2nd Edition.

JB Lippincott Company Philadelphia. Available at: <https://www.hsph.harvard.edu/healthliteracy/resources/teaching-patients-with-low-literacy-skills/>

Lapka C, Jupka K, Wray RJ, Jacobsen H, 2008. Applying Cognitive Response Testing in Message Development and Testing. Health Education Research, 23 (3): 467–476.

Singh V, Ganguly S, Dakshinamurthy V, 2018. Evaluation of India's Soil Health Card from Users' Perspectives. Available at: <http://csisa.org/wp-content/uploads/sites/2/2018/05/SHC-Research-Note-12.pdf>.

### Authors:

Sujata Ganguly, Vartika Singh,  
Cynthia Mathys and  
V. Dakshinamurthy

### Photographs and Design:

V. Dakshinamurthy  
CSISA team

September 2018

**फिट्टी की जांच में उत्तर या फॉर्म भरने की डायरी**

फॉर्म का नाम	नाम (विशेषज्ञ/पंच)
राष्ट्रीय (N) विश्लेषण	
प्रधान (P <sub>2</sub> O <sub>5</sub> ) विश्लेषण	
पोटैश (K <sub>2</sub> O) विश्लेषण	
कैल्शियम विश्लेषण	
सल्फर विश्लेषण	

अतिरिक्त नाम:

**वैयक्तिक जानकारी**

नाम : \_\_\_\_\_  
 पता : \_\_\_\_\_  
 मोबाइल नंबर : \_\_\_\_\_

उपस्थिति :  उपस्थित  अनुपस्थित

कारण :  कृषक  कर्मचारी

दिनांक : \_\_\_\_\_

किसान का नाम : \_\_\_\_\_  
 पता : \_\_\_\_\_  
 मोबाइल नंबर : \_\_\_\_\_

किसान की समस्या : \_\_\_\_\_

किसान की समस्या का कारण : \_\_\_\_\_

किसान की समस्या का समाधान : \_\_\_\_\_

किसान की समस्या का कारण : \_\_\_\_\_

किसान की समस्या का समाधान : \_\_\_\_\_

संस्थान का नाम : \_\_\_\_\_  
 पता : \_\_\_\_\_  
 मोबाइल नंबर : \_\_\_\_\_

संस्थान का नाम : \_\_\_\_\_  
 पता : \_\_\_\_\_  
 मोबाइल नंबर : \_\_\_\_\_

संस्थान का नाम : \_\_\_\_\_  
 पता : \_\_\_\_\_  
 मोबाइल नंबर : \_\_\_\_\_

**संयोजक इन्फो कार्ड**

**संयोजक इन्फो कार्ड**

उत्पादक पोषक तत्व	फिट्टी की जांच	संयोजक
राष्ट्रीय (N) (विशेषज्ञ)	100.0 से 200.0	
प्रधान (P <sub>2</sub> O <sub>5</sub> ) (विशेषज्ञ)	10.0 से 20.0	
पोटैश (K <sub>2</sub> O) (विशेषज्ञ)	80.0 से 120.0	
सल्फर (विशेषज्ञ)	10.0 से 20.0	
कैल्शियम (विशेषज्ञ)	0.78 से 1.2	
मैग्नीशियम (विशेषज्ञ)	7.0 से 12.0	
प्रधान (विशेषज्ञ)	3.0 से 5.0	
सल्फर (विशेषज्ञ)	0.5 से 1.0	
नीच नाम	6.5 से 7.5	
मैग्नीशियम (%)	0.5 से 0.75	
इन्फो (विशेषज्ञ)	2.0 से 3.0	

कार्य पूर्ण जांच	जांच	कार्य का नाम
राष्ट्रीय (N) विश्लेषण	<input type="checkbox"/>	
प्रधान (P <sub>2</sub> O <sub>5</sub> ) विश्लेषण	<input type="checkbox"/>	
पोटैश (K <sub>2</sub> O) विश्लेषण	<input type="checkbox"/>	
सल्फर विश्लेषण	<input type="checkbox"/>	
कैल्शियम विश्लेषण	<input type="checkbox"/>	
मैग्नीशियम विश्लेषण	<input type="checkbox"/>	
प्रधान विश्लेषण	<input type="checkbox"/>	
सल्फर विश्लेषण	<input type="checkbox"/>	
कैल्शियम विश्लेषण	<input type="checkbox"/>	
मैग्नीशियम विश्लेषण	<input type="checkbox"/>	
प्रधान विश्लेषण	<input type="checkbox"/>	
सल्फर विश्लेषण	<input type="checkbox"/>	
कैल्शियम विश्लेषण	<input type="checkbox"/>	
मैग्नीशियम विश्लेषण	<input type="checkbox"/>	

**संयोजक इन्फो कार्ड**



The Cereal Systems Initiative for South Asia (CSISA) is a regional initiative to sustainably increase the productivity of cereal-based cropping systems, thus improving food security and farmers' livelihoods in Bangladesh, India and Nepal. CSISA works with public and private partners to support the widespread adoption of resource-conserving and climate-resilient farming technologies and practices. The initiative is led by the International Maize and Wheat Improvement Center (CIMMYT), implemented jointly with the International Food Policy Research Institute (IFPRI) and the International Rice Research Institute (IRRI) and is funded by the U.S. Agency for International Development (USAID) and the Bill & Melinda Gates Foundation.

[www.csisa.org](http://www.csisa.org)

---

Funded by



BILL & MELINDA  
GATES foundation



---

Partners