Culture Specific Scale for Semi Urban / Rural India

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'Shagun Scale: Culture Specific Scale for measuring user feedback in Rural and Semi Urban India'

Abstract

This paper aims to explore some of the drawbacks of Likert Scale, a widely used statistical tool for measuring attitudes, emotions, opinions and feelings. It is observed consistently and extensively by social researchers that Likert scale is not understood uniformly by various people across various regions of the world. Major reasons being levels of literacy and education, differences in perception of the terminology (good, very good, bad, very bad),avoidance of giving extreme responses (tendency to give safer responses than the genuine responses owing to social desirability).

This study attempts to gather responses on Culture specific scale which is devised as an alternate to the regular Likert scale, in rural and semi-urban India. It further attempts to provide a possible solution to the problem.

During the study, 24 user were interviewed. 12 users were shown regular Likert scale and 12 users were shown Culture Specific Scale while the tasks remained uniform across the sample. Intention was to measure the differences in the number of extreme responses chosen in both groups. This difference would indicate if the two scales were perceived and understood and if it facilitated the expression of negative feelings / opinions.

Number of negative extreme responses chosen was higher on the Culture specific scale than that on the regular Likert scale. This was consistent with the assumption that a scale that has cultural relevance can be better understood by the users and also facilitates a genuine expression of negative emotion / opinions, that is , respondents face less inhibition while rating on Culture specific scale.

 The study focuses mainly on the issue mentioned above and proposes much wider scope for further inquiry into related limitations of the Likert scale, in the hope of making it a culturally effective measurement tool. In fact, author looks forward to calling it cultural version of Likert Scale provided it is supported by the sufficient data in future studies.

Introduction

Likert Scale is widely used in research to measure the level of agreement or disagreement by respondents. By definition "it is a method of ascribing quantitative value to qualitative data, to make it amenable to statistical analysis." Likert scale can be four-point, five-point, six-point, and so on. The even-numbered scale usually forces a respondent to choose while the odd-numbered scale provides an option for indecision or neutrality. It is named after its inventor, the US organizational-behavior psychologist Dr. Rensis Likert (1903-81), who advocated employee-centered organization.

Likert Scale is being used extensively across various types of training courses, evaluations and market surveys.

Researchers have been encountering several problems while using the scale. Some of them are as below:

1. A problem can occur where people may become influenced by the way they have answered previous questions. For example, if they have agreed several times in a row, they may continue to agree. They may also deliberately break the pattern, disagreeing with a statement with which they might otherwise have agreed.
2. There is much debate about how many choices should be offered. An odd number of choices allow people to sit on the fence. An even number forces people to make a choice, whether this reflects their true position or not.
3. Some people do not like taking extreme choices as this may make them appear as if they are totally sure when they realize that there are always valid opposing views to many questions. They may also prefer to be thought of as moderate rather than extremist. They thus are much less likely to choose the extreme options.
4. Social desirability is culturally dominant in most of the Asian countries. Hence they do not tend to choose an extreme negative option.

   This study has been conceptualized around aims to explore into Likert scale limitations mentioned in point 3 and 4 above. In the rural and semi-urban regions of India where the literacy levels are low, though the purchasing power has increased. It becomes increasingly apparent that the current Likert scale may not be the valid instrument to capture attitudes / emotions / opinions of such a population, mainly because of the following reasons:

   • Respondents may be illiterate and hence may not be able to read the numbers on Likert Scale. Or a respondent may not be educated enough to comprehend / understand the difference between any two points of the scale.

   • Culturally, Indians do not provide negative opinion and hence may refrain from disagreements. Numbers on extreme which say 'Do not agree' may never get selected.

- Respondents do not have exposure to surveys and hence may not understand the scale items and abstractness of the scale.

- The Likert Scale does not measure and capture the emotions behind an answer.

    It would be appropriate to mention some of the attempts made to address the above issues in recent times by the researchers in various fields.

    I.   'Another culture, another method', by Apala Lahiri Chavan,Human Factors International,

    The paper 'Another culture, another method' written by Apala Lahiri Chavan has researched on the concept of 'Emotion Ticket' to gauge the emotions when using any product / service. Emotion Ticket helps in getting qualitative feedback from user by using rasas or emotions used in traditional Indian art. Each rasa is expressed through images and dialogues from Bollywood films to help users articulate their feelings. These emotion tickets become a safer and easier medium through which users can express themselves

    II. The Pachod-Paisa Scale: A Numeric Response Scale by the Health and Social Sciences, Nandita Kapadia-Kundu and A.Dyachand. *(June-Dec 2007).*

    The paper presents a new numeric scale **The Pachod-Paisa Scale** for measuring emotions, attitudes, intentions, beliefs, opinions and evaluations. It is a numeric response scale which is meant to be a culturally sensitive alternative to the Likert-type scale. Based on the Indian monetary system (100 paisa = 1 rupee), *Pachod-paisa* is a ratio-level scale that, according to the authors, may be used in both community and clinical settings.

    Specifically, the authors begin by explaining the difficulty, within the South Asian context, of using response scales developed in or for Western countries, such as the Likert, Thurstone, and Guttman scales (e.g., those that consist of a 5-point scale ranging from "strongly agree" to "strongly disagree"). As the authors explain, this is because the "agreement" categories, when translated into various local languages, are prone to subjective interpretation within Indian culture. In contrast, the *Pachod-paisa* scale integrates the traditional "anna" denomination of the rupee (100 paisa = 16 *annas*), which has been used for hundreds of years in India as part of daily speech to denote various analogies. For instance, one might say that "this year the crop was only 50 paisa good".

In the present study, I would further quantify these emotions of users. The **Culture Specific Scale** that I am proposing would measure the extent of the emotion. It would help in quantifying the disgust / anger / happiness of the user when interacting with a product / service. This scale utilizes the currency amounts that are offered to relatives and friends, as the interval points on the scale. I am proposing to understand the emotion of the user and express it on a scale they can relate to, that is **Culture Specific Scale.**

Rationale behind the 'Culture Specific Scale' a measurement Tool based on Indian Cultural traditions and customs:-

When attending a wedding in India, gifts are usually given in cash and are called 'Shagun'. The amount of cash given is chosen from fixed amounts of Rs.50, Rs. 100, Rs. 200, Rs. 500, Rs.

1000, Rs. 2000 etc. There are also some amounts that are considered bad omen to gift eg Rs. 300, Rs. 400. Rs. 1 is always added to the amount that you wish to gift to add good luck. *(Rs. is the Indian currency)*

The decision of the amount of gift depends on various factors like:

- The kind of relation shared
- What they would do for you in return
- How much you love them
- Their value/position in your life

The construction of this scale is based on the following assumption:

- Respondents can understand the scale better as it has every day concepts like currencies and offering it as Shagun or token of love and affection.
- It will be perceived as less judgmental and hence respondents can express themselves without inhibitions.
- This scale is void of labels like 'difficult', 'very bad' which can be offensive and may never get selected.
- In all, the culture specific scale becomes a safer medium to express one's emotions/ attitudes/opinions.

Please refer 'Methodology' section for the image of the 'Culture Specific Scale'.

The key hypotheses of this study are:

- Culture specific scale is likely to elicit more number of negative/positive extreme ratings as compared to the regular likert scale.
- On an odd number Culture specific scale, lesser no of users will choose neutral ratings as compared to Likert scale.

Research design:
- This study utilizes rating scale measurements and interviews along with qualitative observation methods.

Procedure
- User Profiles and Tasks for the study are given in the 'Appendix' section at the end of the paper.
- Six users were chosen from each of the four user profile. Each user was exposed to four tasks on two different types of mobile phones, Nokia and Samsung.
- 12 users were exposed to Regular Likert Scale, upon completing each task on each of the mobile. Another 12 users were shown Culture Specific Scale.
- Thus each scale was shown 60 times across 12 users.

Examples of Scales (Regular Likert Scale and Shagun scale)
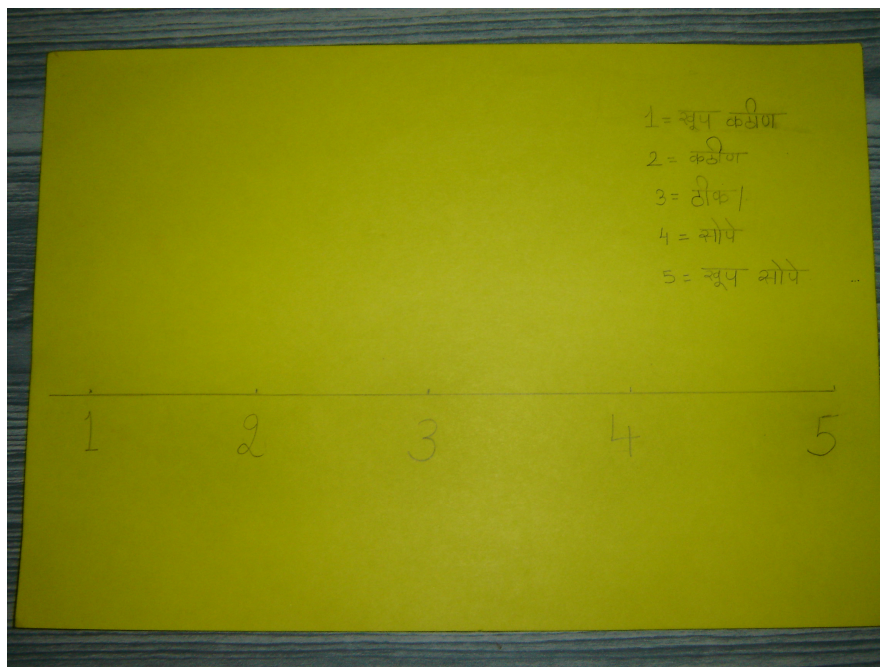
Regular 5 point Likert Scale

Culture Specific Scale: offers rating options in the form of Indian currencies

Culture Specific Scale being shown to the respondents.

Results and Discussion

Following data was derived for the analysis from the overall data. This table contains the frequency counts of each rating option as it occurred on each task by all the users. The frequency counts on two different scales are displayed separately for analysis.

Frequecy Counts across the tasks

	Nokia	Samsung			
				Likert scale rating	
				Shagun scale rating	
1	0	0			
Rs.10	0	4			
2	2	7			
Rs.20	2	7			
3	4	9			
Rs. 50	5	17			
4	24	23			
Rs. 100	16	19			
5	30	21			
Rs500	37	13			

Figure 1.1

The frequencies of the following ratings were considered for inferring the conclusions:

Number of rating of '5' (Very Easy) for tasks on Nokia on Regular Likert Scale = 30
Number of rating of 'Rs 5oo' (Very Easy) for tasks on Nokia on Culture specific scale = 37

- Tasks on Nokia generated a level of positive affect. These positive feelings are expressed as '5' which is the most positive extreme on Regular Likert Scale 30 times. Same tasks were given on the same mobile i.e. Nokia and users were shown Culture specific scale. On this scale the frequency of giving the most extreme rating of Rs 500, was 37, which is significantly higher than the frequency of such ratings on Regular Likert Scale. This difference supports the hypothesis that Culture specific scale is likely to elicit more number of extreme positive ratings.

> **Number of rating of '1' (Very Difficult) for tasks on Samsung on Culture specific scale= 0**
> **Number of rating of 'Rs 10' (Very Difficult) for tasks on Samsung on Culture specific scale = 4**

- Tasks on Samsung generated a level of negative affect/attitudes. These negative opinions are expressed as '1' which is the most negative extreme, for 0 times on Regular Likert Scale. When same tasks were given on the same mobile i.e. Samsung and users were shown Culture specific scale, the frequency of most negative extreme rating (Rs. 10) was 4 times. This is higher than the frequency of such rating on the Regular Likert Scale. This difference suggests that the Culture specific measurement tool is more likely to facilitate the expression of emotions and attitudes even when they are negative in nature.
That is, users are less conscious of expressing their negative feelings on culture specific measurement tools, as they are understood better and perceived as non-judgmental.

Qualitative Observations and Analysis:

While conducting the research with users following qualitative observations were noted.

- When users were introduced the Culture Specific Scale, they instantly understood the concept and could easily relate to it. Many user smiled and exclaimed that they understand the concept.
- Users are less conscious of expressing their negative feelings on culture specific measurement tools as they are understood better and easily
- Rating on Culture specific scale is perceived as non-judgmental and hence users express themselves with fewer inhibitions. Such responses are likely to be more genuine and valid.
- Regular Likert Scale uses labels like 'Bad', 'Very Difficult' which can be perceived as judgmental, offensive and hence less likely to be used as rating. In such cases users have given safer ratings of '3' .Many of the users appeared hesitant to give a rating below 3. They had to be facilitated by saying 'feel free to give the rating that you want to give, as there are no right or wrong answers'.
- Some users were found to be justifying themselves while giving negative rating on Regular Likert Scale' e.g. –
  - *"Samsung is good but I could not do it as I m new to use it…so I will give 4 (good)".-* a user who could not complete 3 of the 4 tasks on Samsung.
  - *" If I get used to it I think I will like to use this ,it looks good , I like it"-* a user who could not do 2 of the 4 tasks and had also taken long time to complete those 2 tasks .He wanted to give a rating of 2 but was hesitant and ended up giving 4.
- 'Shagun' is an event in their everyday lives and they understand the emotions when giving 'Shagun' or gift to someone.
- Giving Money to someone is a thoughtful activity. When the Respondents saw currency, they were more thoughtful on how much to give as opposed to numbers on Likert Scale which do not mean anything to them.

Conclusion

The results of this study partially supported the hypotheses. Providing culture specific rating scale will facilitate the expression of negative extremes that is choosing extreme options on the scale. This was observed for the rating of tasks on Samsung on Culture Specific scale.

Some of the reasons for this partial confirmation, which may also serve as directions for future research are:

- Current study is scoped to address the issue of Likert scale using judgmental terminology and hence may not facilitate the expression of negative ratings. Hence this version of our culture specific scale is designed to address it, by giving the options that are less judgmental in nature for example - offering Shagun. However, addressing other aspects of Likert scale limitations, like not having enough options to choose from, can possibly obtain robust data supporting the hypothesis.
- Some of the external factors may have influenced respondents' ratings. For example, respondent's pre-conceived notions about the mobile phone brands, look and feel, might have affected the ratings more dominantly than the nature of the scales shown.

References

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2. ttp://www.humanfactors.com/downloads/documents/AnotherCultureAnotherMethod.pdf
3. http://www.geert-hofstede.com/hofstede_india.shtml
4. http://changingminds.org/explanations/research/measurement/likert_scale.htm
   http://www.socialresearchmethods.net/kb/sampaper.php

Appendix

User Profile: 1 (F-Reg-Adv), Semi-Urban, College going female population

Demographics:

Age:	18-25
Gender:	Female
Ethnicity:	North /South Indians, other Indian communities.
Location:	Semi-urban
Education/Literacy Level:	Undergraduates, H.S.C. /S.S.C. (passed/ failed)
Languages Known:	Marathi, Hindi, Gujarathi, other Indian languages.
Occupation:	College going, not working.
Income Group:	Less than 50,000p.a. not working.
Frequency of product usage:	Medium to Very High

Note: These users use it frequently but may not be familiar with advanced use. Regular and basic usage, however motivated to learn advanced usage. Or Motivated to exposure for latest versions/functionalities of mobile. (This has the implications for eliciting the emotional responses e.g. liking, excitement, and comfort).

User Profile: 2 (F- Res) Rural -Homemakers

Demographics:

Age:	35-45
Gender:	Female
Ethnicity:	North /South Indians, other Indian communities
Location:	Rural Maharashtra
Education/Literacy Level:	Illiterate to S.S.C. passed/ failed
Languages Known:	Marathi, Hindi, Guajarati, other Indian languages.
Occupation:	Homemakers.
Income Group:	Not applicable
Frequency of product usage:	Low-Medium

Note: These users use mobiles less frequently and only for basic functions.

User Profile: 3 (M-Reg-Adv)

Demographics:

Age:	35-45
Gender:	Male
Ethnicity:	North /South Indians, other Indian communities
Location:	Rural Maharashtra
Education/Literacy Level:	Graduates, S.S.C. passed/ failed (TBD)
Languages Known:	Marathi, Hindi, Guajarati, other Indian languages
Occupation:	Labor work, Clerical work (driver, barbers, carpenters, shopkeepers, field workers, waiters, cleaners, shoemakers, newspaper seller, milkman & alike)
Income Group:	Not more than Rs 2, 00000-3, 00000p.a.
Frequency of product usage:	Medium to very high OR (Regular, Daily)

Note: These users use it daily with advanced functionalities.

User Profile: 4 (M- Reg-Res)

Demographic:

Age:	45- 60
Gender:	Male
Ethnicity:	North /South Indians, other Indian communities
Location:	Semi-urban Maharashtra
Education/Literacy Level:	Illiterate to S.S.C. passed/ failed (TBD)
Languages Known:	Marathi, Hindi, Guajarati, other Indian languages.
Occupation:	Labor work, retired, not working
Income Group:	Less than 1,00000p.a.
Frequency of product usage:	Low-Medium

Note: Regular but restricted usage could be dependent on others for advanced usage.

Script and Procedure:

User 1 will be shown Nokia phone followed by Samsung phone. In the end, the traditional Likert scale will be shown to capture feedback.

User 2 will be shown Nokia phone followed by Samsung phone. In the end, the Shagun scale will be shown to capture feedback.

Introduction:

My name is Mukta/Neha. We have come from Mumbai. We are working on how people use different kinds of mobile, what kind of things do they do with mobile, what do they like about it, what do they do not like, what are their difficulties with the mobile usage. This helps us in improving the mobile usage. We are hoping that you will find sometime for this today.(Pause for their response)

We will ask you to do some simple things with mobiles. After they are done, you can tell us how you found using it. We are going to give you two different mobiles to try out, for example, Nokia and, Samsung, so that we can know the difference. This will not take more than 15 to 20 minutes. (Pause for their response)

If you have any questions now or even later, please feel free to ask.In case, for any reason, you want to discontinue with it, you are free to do so.(Pause for their response)

Ice Breaker Questions:

- What are you currently doing? Are you working or are you a home maker?

- How long have you been using your cell phone?

- How many cell phones have you changed so far?

Task 1: To see the missed call you received while you were away.

It is a usual morning time around 9:30 A.M. You are busy doing daily prayer. You normally take around45 minutes complete it. Today you are alone at home, as everyone else has stepped out for their work. While praying, you heard a mobile ring twice. You could not pick it up because you don't like to get up till you are done with your prayer. Now that you are done with the prayer session, you want to see who has been trying to talk to you.

Here is the mobile, please show me how would you go about finding the calls that you missed.

Intention: To observe how easy it is to view a missed call. Do they get to see it in first attempt, do they go to 'Call Log'< 'Missed call' path. Which is the easier one for them?

Task 2: To find your plumber's phone number in your mobile phone.

Your neighbor has come to you for asking for help in fixing up the broken tap in her house. It has been flowing since last 15 minutes and all her efforts to stop are going in vain. You see that she needs urgent help in getting a plumber who would come and fix up the tap and stop the water wastage. You recollect that last month a plumber had visited your house to make a connection between your bathroom tap and

the washing machine. The plumber is in nearby area and if you call him, he can be here within next 10 minutes. You tell her about this plumber and, she instantly agrees to call him over. You now want to search plumber's, Rakesh's mobile number that is saved in your mobile and share it with your neighbor.

Intention: To find out how easily, how quickly could users find the number that they were looking for. In times of hurry how would they operate the mobile. This has the implications for emotional arousal, feeling anxious, and embarrassed.

Task 3: To charge your mobile handset.

You have planned to visit your sister's house. It is six hours journey from your town. You have made all your preparation for the journey and would be leaving within next one hour. Your son who is taking bath informs you, in the midst of it, that the mobile needs to be recharged before you leave the house. You need to start the recharging immediately as you need to leave within next one hour. How would you start recharging your mobile.

Intention: To know how familiar they are with the overall structure of the mobile phone. What is their struggle level and what type of difficulties they face.If not, how do they help themselves in such scenarios? This has the potential for arousal of emotional reactions like helplessness, irritation, help-seeking behavior, feeling embarrassed.

Task 4: To switch on or switch off your mobile.

You are going to attend a yoga session in your area. You are quite fond of this session and prefer to be at your own pace during the session. Moreover, your instructor too is particular that participants are not distracted by any other things like mobile calls or even mobile beeps. He prefers that participants' mobiles are switched off as soon as they enter the session hall. You are entering into the hall and now need to switch off your mobile. Please demonstrate us, how would you do it?

Intention: To find out how easily, and quickly could users switch off their mobiles. In times of hurry how would they operate the mobile? This has the implications for emotional arousal, feeling anxious, and embarrassed.

Task 5: To save a number in your mobile.

This is a typical evening in your daily schedule and you are out for vegetable shopping in the town market. You happen to meet an old friend of yours after really long time. Having met unexpectedly,both of you are very much excited to see each other. Soon you realize that you have almost forgotten about your vegetable shopping, and its 8:00 p.m.Nevertheless, you still want to continue chatting with this friend. Your friend asks for your mobile number and saves it in her mobile. She also has given her number to you on a piece of paper. You decide to go home and save it in your mobile. The number is 9819223306. You have now returned home and want to save her number. How would you go about it?

Intention: To find out how easily, how quickly can they save a number. This has the implications for how they feel about the mobile usage.

**Debrief and closure questions:**

- **How easy was it to use this phone?**

- **Will you recommend this phone to a friend?**

- **If you had to change one feature on this phone, what will it be?**

Likert Scale Measurement:

Please tell me on this scale. Show him a scale on a piece of paper.

"On this scale, number 1 means Very easy, 2 means Easy ,3 means Not Easy, 4 means Difficult, 5 means Very Difficult'. Now, tell me what number you would want to choose?'

Consider all the tasks you did just now,
(Pause to make sure, user has understood the scale and the question.)

Very easy	Easy	Not Easy	Difficult	Very Difficult

_1_____2_____3_____4_____
_____5__
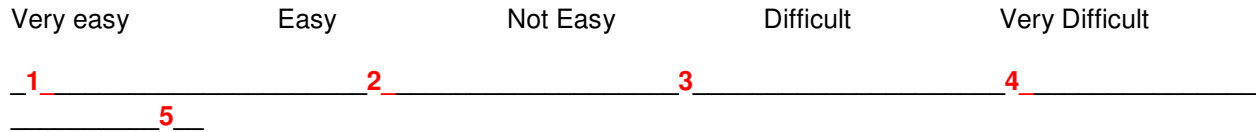
'What number would you choose for your overall experience while doing these things few minutes back? OR How did you feel while using this mobile for doing these tasks?

Shagun Scale Measurement:

"Radhika, thanks for doing this task for us.

Now after using these phones, you have to give some shagun to this phone like you give to your friends and relatives in a marriage. How much would you be willing to pay to this phone?

Rs 21, Rs 51, Rs 101, Rs 501, Rs 1001

Closure:

"Radhika, this was of great help to us. Please feel free to share or ask us anything you may have in mind. Do you want to ask? If not, then thank the participant.