

QUASI-Q-SORTING INNOVATION: THE USE OF TANGIBLE CUES IN SORTING METHODOLOGY

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ABSTRACT

Q-sort is a qualitative research method that is gaining popularity outside of its traditional psychology and social sciences areas. The Quasi-Q-sort is a derivative of the Q-sort that affords more latitude in the design and administration of the process. This paper reports how the Quasi-Q-sort method was applied in an innovative way to categorise according to tangible attributes in addition to the standard semantic sorting protocol. The Sensory Quasi-Q-Sort (SQQS) was used to obtain unprompted and spontaneous respondent categorisation of 40 hotel comment cards (HCC). Respondents identified attributes that could be clustered to form a description-based classification not restricted to semantic context. This study showed divergence in categorisation indicating varying first impressions of HCCs by guests. Emergent themes identified were Question Format, Graphic Design/Appearance, Dimension, Texture/Paper weight, Ready to mail format, Time taken to complete, Ease-of-use, Geographic/Locality, and Familiar/Expected/Customary form/Appearance. SQQ-sorting is a valuable way of adding to the richness of qualitative research as it allows inclusion of dimensions previously ignored. As part of a mixed method approach, this is a simple cost effective, efficient and effective method to obtain valuable perspective on how objects are perceived by all the human senses. Such data can influence design and marketing concepts.

Keywords: *Q-sort, Hotel Comment Card, Tangible Attributes, Quasi-Q-sort, Innovation*

Introduction

Q-sort is a qualitative research method that is gaining popularity in areas such as attitudinal studies (Cross, 2005) and environmental planning (Cotton & Devine-Wright, 2011). Quasi-Q-sort is a derivative of the Q-sort introduced by Dunlap and Hadley (1965) and affords more latitude in the design and administration of the process. This paper reports how the Quasi-Q-sort method

was applied in an innovative way to categorise according to tangible attributes in addition to the standard semantic qualitative sorting protocol.

The Q methodology was mooted by William Stephenson and described as an “audacious methodological adaption for studying *intra-individual*, rather than interindividual, differences” (McKeown & Thomas, 2013, p.x). Stephenson’s (1953) Q-sort technique was designed to investigate a person’s self-concept thereby providing a way to reveal the subjectivity involved in any situation (Brown, 1996) ranging from the abstract to the concrete. Differing from conventional surveys and questionnaires, the Q method overcomes the limitations that come about from the pre-determined categories determined by the researcher (Smith, 2001), and can “describe a population of ideas” in contrast to R “a population of people” (Risdon et al., 2003, p.377) therefore reducing the sample size (Smith, 2001) and suitable when budgetary resources are limited (McKeown & Thomas, 2013). Q-sorting therefore offers both flexibility and simplicity making it highly cost and time effective yet robust research methodology.

Robbins and Krueger (2000, p.636) conclude that the Q method is a “rigorous, hermeneutic, and iterative technique that allows the researcher to surrender the monopoly of control in their relationship with the researched”. Graaf and Van Exel (2009, p.61) assert that the Q method excels in providing the researcher, “whether an academician or a practitioner, the opportunity to examine and build theory without pre-developed categories”. Despite the increasing popularity of the Q methodology, many people interested in it find difficulty in obtaining relevant background literature and instruction on its usage (Van Exel & de Graaf, 2005) thereby hindering more widespread uptake among qualitative and mixed method researchers. There, however, have been subsequent instructional articles that have promoted the Q method in qualitative research (e.g. Shinebourne, 2009; McKeown & Thomas, 2013) and market research (Gabor, 2013).

The Q-sort is the instrument of the Q method and conventionally involves the rank ordering of a set of statements from agree to disagree but has been applied to other samples such as “pictures, recording, and any other stimuli amenable to appraisal” (Brown, 1996, p.561). To overcome the lengthy hand scoring procedure and resultant susceptibility of errors, Wilbur, Gooding and Vincent (1970) advocated computerisation to aid scoring of responses. According to Thomas and Watson (2002), Q-sorts can be used to measure responses to Web pages, pictures or smells, and simplifies administration as participants need not be randomly selected and may be administered over the Internet.

Often considered as quantitative analysis due to its association with factor analysis, Q-sort gauges the level of agreement to a set of statements, referred to as the Q set or Q sample that often consists of 40 to 50 statements (e.g. Van Eeten, 1998). Ekinci and Riley (1999) illustrate the value of the relatively laborious Q-sort technique as the first steps in developing a scale. They propose that the Q-sort technique plays a valuable role in construction of a “well-established instrument for measuring customer satisfaction or service quality that is focused on hotel services and that is reliable and valid” (Ekinci& Riley, 1999, p. 291).Webler, Tuler and Krueger (2001, p.437) undertook a four-step Q-sort process because “it was well suited to uncovering patterns of belief situated within people’s subjectivity” despite the highly involved process.

The Quasi-Q-sort is an experimental derivative of the Q-sort and appropriate for this qualitative study as it does not impose predetermined structure on the sorting process and does not apply statistical treatments. The “Quasi-Q-sort Approach” was developed by Dunlap and Hadley (1965) and applied in the self-evaluation of conference leadership skill. “Quasi-naturalistic Q samples are similar to those obtained from interviews, but are developed from sources external to the study, for instance, taking statements from an interview with an expert on a topic without the expert being included in the study” (Du Plessis, 2005, p.143). Furnham (1990) used Quasi-Q-sort in a study using questions from questionnaires performed by two of the three raters performing a content analysis. Like the Q-sort, Quasi-Q-sort is underpinned by the ranking of a pre-determined set of statements that is semantically framed, and therefore constrained in terms of flexibility.

The Quasi-Q-sorting applied in this study, the Sensory Quasi-Q-Sort (SQQS), is a departure from the typical statement based sorting regimen by allowing the respondent to categorize tangible sample units in a spontaneous manner thereby avoiding any preconceptions or judgment. It however retains the ability to incorporate both graphical and textual means of investigation which takes into account how humans think, both visually and in words (Kosslyn, 1980), unlike most research tools that are “verbocentric” (Zaltman, 1997, p. 425). This research process is dynamic and interactive as the participant plays an active role without the potential distraction derived from the group dynamic of a focus group. As the hotel comment cards (HCC) are presented differently in terms of typeface, size, colour and graphics, they warrant “aesthetic judgment” (Amin, 2000, p. 410) for which SQQS is appropriate. This method allows the elicitation of consumer responses from unstructured data that mirrors Zou and Lee’s (2007) approach that utilises the sense-making abilities of consumers in shaping and detecting patterns. While Pitt and Zube (1979) previously used photographs in their unforced

Q-Sort study on people's perception of landscape visual quality, SQQS is multi-sensory.

SQQS sorting provides an ideal opportunity to understand participant behaviours in addition to their value system: as customer feedback is highly value laden, such an approach is therefore highly relevant to HCCs. SQQS is unique in that it allows respondents to utilise all of their human senses to evaluate the sample and respond to visual, auditory, gustatory, olfactory and tactile stimuli. Whilst the literature shows that respondents have primarily used sight and even possibly smell-derived statements (Thomas & Watson, 2002), SQQS allows respondents to use all their sensory perceptions in experiential evaluation of a sample. Similar to the modified Q-sort utilised by Borthwick (1995) whereby interviews were conducted after the naturalistic Q-sample was sorted to obtain participant reflections of the Q-sort, this study included post sorting focused interview questions.

Objectives

The objective of the SQQS was to obtain unprompted and spontaneous respondent categorisation of the 40 HCCs collected from 3 to 5 star hotels in Australia, Singapore and Malaysia. The HCC, being hitherto practically nondescript to the typical guest, is categorised from a guest perspective with respondents identifying “stimuli that can be clustered to form a description”-based classification (Ekinici & Riley, 1999, p.287). Taking into account the possibility of idiosyncratic behaviour among the respondents which could result in a wide range of sorting criteria, this exercise was carried out to determine if there was a distinct pattern in how guests categorized the sample. If a recurring pattern emerged, it would indicate how guests may typically perceive the HCC and could inform the design parameters of future HCCs.

Methodology

Sampling

A sample of forty HCCs was selected at random from the total sample of seventy-one HCCs using an online calculator (GraphPad Software, 2005). The reduction was to expedite the independent sorting process. A convenience sample of fifteen (15) respondents was enlisted from the local community primarily in Joondalup, Western Australia to participate in the SQQS. The criteria applied for selection were that the participant: 1) was an adult; 2) had a professional background; and 3) had stayed previously in hotels internationally and domestically. The researcher attempted to enlist a heterogeneous sample group in terms of demographic profile to assure a sufficiently wide range of sorting outcomes. The participant demographics are shown in Table 1.

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Table 1: Sensory Quasi-Q-sort (SQQS) Participant Demographics.

Gender	Female (9), Male (6)
Profession	Human Resources Executive (1), Marketing Executive (1), Banker (2), Engineer (1), Hotelier (1), Public Relations Manager (1), Civil Servant (1), Primary School Administrator (1), Secretarial Staff (2)

Process

The participants were individually given the HCCs not in any particular order. Participants were instructed to place the HCCs in piles as they pleased based on their own created themes or categories as determined by each participant after a preliminary survey of the HCCs. Participants were allowed to change their categories and to move HCCs from one category to another. Once they were satisfied that all HCCs were placed into the correct categories (as determined by the participants), the sorting process for the participant was completed. No time limit was stipulated and the exercise was conducted in the participants' homes or any other location where the participants felt the most at ease. At the end of each sorting exercise, the researcher recorded the number of piles and conducted a focused interview which provided an opportunity for respondents to elaborate on the process and outcome. The data was recorded on a scoring sheet (see Appendix 1).

Results of SQQS Sorting and Discussion

This study showed categorisation of the sample was idiosyncratic and there was a divergence in the categories that were created. As the participants were not prompted during the sorting process, the results were recorded unedited. While most categorisation immediately showed obvious thematic patterns, some themes emerged during the interviewing process. Ranging from what initially appeared to be a single attribute (number of sorts) (Respondent 2) up to six discrete attributes, the thought process of the participants were clearly varied/differentiated. This variety suggests that the participants typically had a spontaneous impression of the sample item and the results could be extrapolated to represent the first mental impression that guests would have when encountering a HCC.

When asked if given an opportunity to re-sort the HCCs whether they would sort them differently, all the respondents indicated that they would not make any changes. In the case of HCCs, it would appear that on the one hand respondents are not likely to have post-decision dissonance thereby suggesting that their assessment is static or HCCs are items that do not require too much

consideration. On the other hand, the respondents could have been sure of their judgement underpinned by experience and cognition.

Ten out of the fifteen participants used “dimension” as at least one of their categories. In total, five participants used presentation (appearance) as their main categorisation criteria and four participants used the question format. Three participants used geographic location, either country or city, as their categories. The full results are presented in Appendix 2.

Emergent themes identified were:

- a) Question Format (open versus closed questions)
- b) Graphic Design/Appearance
- c) Dimension (A4, A5, etc.)
- d) Texture/Paper weight
- e) Ready to mail format (configured for easy postage)
- f) Time taken to complete (type an number of questions)
- g) Ease-of-use (simple instructions; uncomplicated questions)
- h) Geography/locality
- i) Familiar/expected/customary form/appearance

Given the findings, it would appear that the participants used visual cues as a major factor in their categorisation. Eight participants indicated that they had sorted based solely on the outward appearance of the HCCs and had not considered the content at all. This suggests that a critical aspect of HCC design is its appearance and ability to visually stimulate guests. This means that an appealing HCC would likely have a higher chance of guest attention and interest. However, this may be idiosyncratic as three participants sorted the sample HCCs according to geographic location of the hotel and did not identify appearances nor content as salient attributes. Furthermore, eight participants sorted according to question format, HCC dimensions, time taken to complete and ease-of-use, such that it appeared to be a sort by ‘user-friendliness’. Three participants referred to the textural aspect of the HCCs as a part of their sorting process.

Qualitative Data

Confidentiality

The SQQS sorting process provides an opportunity to obtain participant feedback on their thoughts and feeling about the exercise. One of the SQQS participants indicated that the DL fold with flap format facilitated confidentiality as the HCC could be easily sealed upon completion. The participant, however,

remarked that although this may be advantageous, it actually diminished the chances of usage because it was perceived as an additional effort which involved having to perform “another action”. That participant, however, did not differentiate between a wet-to-seal or self-adhesive flap although the latter would conceivably more convenient. Therefore what management might have considered to have been a feature that would encourage usage, albeit at additional production cost, could be counterproductive and actually discourage it instead. Another participant indicated that provision for the HCC to be sealed greatly influenced the perception of confidentiality. If a HCC did not have the capability of being sealed, its integrity was perceived to be suspect and it therefore did not warrant usage. However, the participant was also of the opinion that, even if a HCC could not be sealed, should it contain instruction that the completed HCC be returned to a senior member of the staff, there would be a sense of the seriousness the management placed on the feedback and that would persuade the participant to use it.

Four respondents incorporated the HCC format in their sorting criteria and three of them indicated that they would fill a HCC that used the MCQ format citing its ‘ease-of-use’ factor. The SQQS interviews revealed that there may be some guests who would complete a questionnaire if a request was made in person by a representative of the hotel and in this circumstance, the outward attributes of the questionnaire would not be so critical.

Conclusions

The SQQS demonstrated that perception of what could be considered a banal item could be perceived very differently because of circumstantiality and viewer idiosyncrasy. This study showed categorisation of the sample was divergent demonstrating varying spontaneous first impressions of HCCs by guests when encountering the HCC in the guestroom. This variability presents, on the one hand, opportunity for HCC design variety and design innovation but, on the other hand, a challenge to ensure that equilibrium in terms of message coherence is achieved. The method applied in this study was innovative in that the respondents used all their human senses in their sorting of actual items. This is significant departure from previous Q-sort methods: three respondents had used their tactile sense in the sorting process and smell could conceivably have been a factor as one of the HCCs was scented with perfume. The SQQS is a viable way of designing comprehensive typologies of items which would be useful in both academia and industry.

This study was conducted as a discrete part of a larger study involving focus group interviews, content analysis and in-depth interviews. The findings of the SQQS corroborated many of the findings of the other methods. The

limitation of this study is the predisposition of participants towards comment cards in general and HCCs in particular.

This is a novel approach which is cost effective and simple. It avails researchers in academia and business practice another exploratory avenue and confirmatory tool. Despite the adage “don’t judge a book by its cover”, visual appearance counts and in the case of a HCC comment card, if it does not gain attention, it would be unlikely motivate the guest’s interest. Furthermore, this research would suggest that guests may have preconceived beliefs of what a HCC should look and feel like and that being consistent with these norms will likely gain more attention and interest.

This innovative variant of Quasi-Q-sorting allows respondents to categorize tangible sample units in a spontaneous manner thereby avoiding any preconceptions or judgment. It however retains the ability to incorporate both graphic and textual means of investigation which takes into account how humans think, both visually and in words unlike most research tools that tend to favour the latter. SQQS is a valuable way of adding to the richness of qualitative research as it allows inclusion of a dimension previously ignored. As part of a mixed method approach, this is a simple cost effective, efficient and effective method to obtain valuable perspective on how objects are perceived visually. Such data can influence design and marketing concepts, and in this case inform the design parameters of future HCCs. If a HCC is more appealing, there would presumably be a higher chance of guest engagement and subsequent completion thereby optimising the efficacy of the HCC’s feedback elicitation function.

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Appendix 1

Quasi Q-sort Exercise (40 hotel guest questionnaires)

Participant:

Date:

Time:

Observations:

Final number of sorts:

Categories:

Focused Interview:

- 1) Could you please explain the rationale behind your sort? (sequence, number of sorts, etc., culture/background)
- 2) Describe your thoughts/feelings about this exercise.
- 3) Given another opportunity, would you have a different sort? Why?
- 4) Which of the categories/sorts of questionnaire would you be most likely to use?
 - a. Why?

Appendix 2



Expenditure	A	B	C	D	E	F
1	80% MCQ, 20% OEQ	50% MCQ, 50% OEQ ⁱ	100% OEQ	100% MCQ	Dimension (handy/compact)	
2	Youth Appeal: Aesthetics (colour, graphics, pictures [female], texture/paper weight)					
3	OEQ	MCQ	MCQ with ready to mail format	Dimension (handy) ⁱⁱ		
4	Appealing and quick to complete ⁱⁱⁱ	Tedious				
5	Dimension (A4 with all questions on one side)	Addressed to GM with ready to mail format and postage paid	Addressed to GM but not in ready to mail format	Dimension (A5) with monotone colour scheme	Glossy cards	
6	Dimension (A4)	Dimension (between A4 & A5)	Dimension (DL fold with flap)	Dimension (DL fold), glossy and extravagant	Dimension (DL fold) plain ^{iv}	
7	100% OEQ	50% MCQ, 50% OEQ	>50% MCQ but too involved with wide scales	>50% MCQ with simple scaling	Dimension (handy); >50% MCQ with simple scales ^v	
8	KL	PEN	SIN	SYD	Other city/ Geographic location	
9	AU	MAL	SIN			
10	AU	MAL	SIN	Other country/ location		
11	100% MCQ	>50% MCQ, <50% OEQ ^{vi}	100% OEQ	Dimension A4, >A4, <A4		
12	Dimension (DL fold) ^{vii}	Dimension (Irregular: A5)	Dimension (A4)			
13	Dimension (A4)	Dimension (DL fold)	Dimension (A5, unusual)	Presentation (texture, paper finish, illustration, color)	Dimension (postcard self stamped envelope) ^{viii}	Presentation (plain)
14	Texture (plain paper) + Perceived effort/time required	Dimension (Irregular)	Presentation (texture, coated/glossy, illustrations) ^{ix}	Dimension (DL) [regular hotel guest questionnaire]		
15	Dimension (A4)	Dimension (A5)	Dimension (DL, vertical)	Dimension (DL, horizontal)	Dimension (postcard)	Presentation (paper finish, illustration color) ^x

i Looks more professional

ii Attractiveness/Eye catching

iii Manageable/reasonable

iv Landscape orientation preferred. Would complete if personally invited

v Easy access, simplistic and visually evident

vi Not too much effort required

vii Short & sweet

viii Ease with option to elaborate/comment

ix Presentation/format appealing

x Familiarity

xi Implies more respect by effort put into design

xii Visually attractive & texture