



How Can We Best Interpret Effective Leadership? The Case For Q Method

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Abstract

There has been controversy surrounding the constituents of effective leadership behaviors in the leadership literature. Past leadership studies had focused on the leader presenting them as heroes who have something that they do to followers. However, with the recent ethical meltdowns and leadership challenges, questions have been raised regarding the appropriateness of past leadership theories in explaining effective leadership. Various researchers and practicing leaders therefore, have switched attention to follower-centric approaches to explaining leadership effectiveness. But the understanding and interpretation given to effectiveness by followers is largely subjective. It is from this point that this paper is presenting Q method as a rigorous alternative that can scientifically collate and analyze human subjectivities by structuring them for interpretation without the researcher putting his/her personal opinions into it. In this paper, I argue that Q methodology is an appropriate approach for leadership research, one that promises to chart a useful cause for the future.

Keywords: Effective leadership, follower centric approach, qualitative techniques, Q method.

Introduction

The leadership literature portrays the leadership concept as multidimensional and highly complex. For example, the exact makeup of effective leadership has brought several divisions amongst researchers and practicing leaders and with the recent leadership scandals and ethical meltdowns in top management (e.g., Enron, General Motors and Lehman Brothers), the relevance of the existing explanations of effectiveness in leadership have been questioned. The concentration of efforts into leader morality and authenticity in the last decade (Owusu-Bempah et al., 2011, Walumbwa et al., 2008, Walumbwa et al., 2009, Walumbwa et al., 2010, Kernis, 2003a, Kernis, 2003b, Luthans and Avolio, 2003, Gardner et al., 2005, May et al., 2003, Avolio et al., 2004, Avolio and Gardner, 2005) has still not resolved the controversies regarding the exact make-up of effective leadership.

One common shortfall identified with many of the explanations of effective leadership is over emphasizing the leader and their roles as the only key factors in determining effective leadership, while ignoring followers' contributions and roles. However, researchers (Meindl, 1995, Gerstner and Day, 1994, Foti and Luch, 1992, Popper and Sleman, 2001) have consistently argued in

favour of a “follower-centric” approach to the determining of effective leadership and even suggest that it is the followers’ that determine and define what and how effective leaders are and behave.

For instance, in certain cultures (e.g. Russia, USA), followers prefer leaders who demonstrate that they are in-charge by being assertive, and visible and therefore see leader-effectiveness in this regard whereas in other countries (e.g. Norway, Japan) leaders who are much less visible, relatively speaking and move behind the scenes to accomplish things are seen as effective. In other cultures, followers (e.g. Mexico, Spain) see effectiveness when a leader stands above the crowd and command respect while others (e.g. Malaysia, Laos) see leader effectiveness in a leader who is humble and remain part of the crowd (Aycan, 2008, Tsui et al., 2007).

It is in line with the above that proponents arguing in favor of the ‘follower centric’ approach in determining the effectiveness of a leader (Rao et al., 1997, Noorderhaven and Tidjani, 2001, Hoecklin, 1995, Li et al., 2001, Hofstede, 1980, Dorfman and Howell, 1988) have argued strongly in support for the consideration of follower expectations and preferences in a particular context when determining leadership effectiveness, because, what followers in one context prefer or see as effective may be regarded as ineffective in another. Therefore, to understand effectiveness of a leader is to understand follower expectations and preferences in given contexts from which it is being measured (Owusu-Bempah et al., 2011, Owusu-Bempah et al., Forthcoming). Meindl (1995) suggests that the impact of a leader is a function of how they are perceived by their followers and the contextual variables at play in that instance. That is why “managers derive their *raison d’être* from the people managed: culturally, they are the followers of the people they lead, and their effectiveness depends on the latter” (Hofstede, 1993) (p. 93). Den Hartog *et al.*, (1999) posit that different cultures may vary in their conception of the most important characteristics of effective leadership as leadership is seen more through social interactions.

The foregoing discussion suggests that the key to understanding specific facets of follower-centric approach lies in using appropriate methodology. How best can we measure followers’ subjective understanding of effective leadership in a given context? In an attempt to answer the above question, various suggestions have been made. For example, Denzin and Lincoln (2000) explain that leadership happens in a particular context which could be more fully explained by gaining a greater understanding of the subjective meanings followers and leaders give about their own experiences. Such subjective meanings, according to Denzin and Lincoln can only be unearthed using qualitative techniques applied in the subjects’ own natural settings. Conger (1998) also suggests that although most leadership studies have used quantitative analysis in studying leader-follower dynamics, this approach did not assess the multidimensional richness of the leader-follower relationship and, therefore, proposed the use of qualitative methods. Several researchers maintained that qualitative methods have the ability to unearth peoples’ constructed meanings regarding various complex social phenomena. Conger (1998) states that in examining a complex phenomenon such as leadership, the use of qualitative techniques allow researchers to go deeper and explore further on previously unexplored aspects while familiarizing themselves with the context of their subjects. Such understanding helps researchers to compare and contrast various meanings across specific contexts (Rauscher and Greenfield, 2009). Expanding on the suitability of qualitative research techniques in producing deeper understanding, Taylor and Bogdan (1998) explain that qualitative researchers collect descriptive data in the respondents’ own words, written or spoken, coupled with their observable behaviour, and make sense of, or interpret, the phenomena in terms of the meanings people give to them (Denzin and Lincoln, 2000). The manifest empathy and rapport researchers build with respondents allows them to

develop a deeper understanding of how and why people think and act in the way they do without prejudice. This sense of belonging achieved by qualitative researchers (Zikmund, 2003) brings a better understanding of complex and dynamic phenomena (like leadership), that is difficult or impossible to approach or capture when using quantitative methods. It is this interconnectedness, according to Yukl (1994), that quantitative techniques fail to recognize and study.

Ospina (2004) however believes that the small sample sizes used in qualitative research is the main factor that allows researchers to go in-depth to produce rich and textured revelations which, when analyzed, can generate or add to theory.

However, Sarantakos (1998) cautions that the small number of cases involved in qualitative research which, are also often chosen by non-probability sampling procedures, the findings cannot claim statistical representativeness for a given population. Matveev (2002) also pointed out another weakness regarding subjectivities in the data interpretations. Different interpretations may be given by different researchers to the same qualitative data depending on the characteristics of the researcher, the skill level and the objective of the study being conducted. Matveev further cautions about the consistency and reliability of qualitative methods by stating that as researchers adopt different probing strategies, respondents can also choose to give out what they (respondents) think is necessary, leaving or ignoring others, which could be vital to understanding of the phenomenon under study.

Some researchers (Saunders et al., 2007, Kelle, 2006, Johnson and Onwuegbuzie, 2005, Alexander, 2006) have therefore proposed the use of mixed methods in research. They argue that using both quantitative and qualitative techniques would allow for the compensation of mutual and overlapping weaknesses and will minimize the potential problems of each. They further explain that qualitative methods can help produce information that can reveal statistical associations and help to develop further explanations and even identify additional variables, which can then be tested quantitatively. Johnson and Onwuegbuzie (2005) however advised that before researchers can gain the full benefit from mixing methods, they (researchers) needed to be as more creative as possible.

One implication that can be drawn from the proponents of mixed methods approach to research is that combining different approaches to the same study has the tendency of producing invaluable findings for a particular study. However, this can be both time consuming and frustrating especially if the researcher is not experienced or has limited knowledge in the application of the mixed methods. Further, studying subjective understanding of concepts using combined methods could be tricky and there is the likelihood of the researcher imposing his/her own opinions on the data when such subjective explanations are to be channeled to quantitative analysis. This could invalidate the final results. In such cases the conclusions made would not represent the exact objective.

Thus, the preceding discussions suggests that to be able to ascertain leaders' and followers' subjective meanings and understanding of effective leadership in different contexts is to study self-reporting messages from the leaders' and followers' own points of view; as they describe the different 'stories' (Cross, 2005) they can tell about effective leadership from their own understanding without imposing any external ideas on it. To rigorously analyze such subjective data demands the use of research approaches that have the inherent capability to scientifically deal with subjectivity in a robust and systematic way. One such method is Q method. Therefore, this paper is proposing Q-method for leadership research as it specializes in studying human subjectivity in the respondents own contexts in a rigorous manner.

Q Method

The Q-method is an analytical technique introduced by Stephenson as a way of measuring subjectivity. The Q method rigorously examines self-referent views without compromising or confusing it with any external frame of reference. Brown (1996b) explained that the Q method measures life as lived from the standpoint of the person living it. That is, the Q method can help researchers understand “why and how people believe in what they do” particularly on topics over which there is much social debate and disagreement (such as leadership) (Addams and Proops, 2000). Therefore, using Q method according to Previte et al., (2007), will bring to light people’s own perspectives, meanings and opinions on the subject under study.

The main focus of the Q method is not to find out how prevalent a particular viewpoint is in a given sample but rather to bring an understanding of the contours and subjectivities existing in the views (Stephenson, 1994). These contours, according to Cross (2005), come to light because the Q method explores various accounts from finite diversities as constructed by people about the given subject.

By virtue of its uniqueness, various proponents belonging to either the quantitative or qualitative strand of researching are claiming ownership of Q method. By its heavy reliance on factor analysis, Q method has been claimed as a quantitative means of effectively analyzing subjectivity (McKeown and Thomas, 1988). But Brown insists on its qualitative nature, as he believes that the Q method’s main emphasis is on human subjectivity and nothing else (Brown, 1980, Brown, 1996b). Q method fundamentally measures the meanings individuals have constructed in their minds on given topics and this makes it qualitative (Brown, 1980, Brown, 1996b, Brown, 1996a, Fairweather, 2001, Fairweather and Rinne, 2012). Arguing in favor of the qualitative nature of Q method, Robbins and Krueger (2000), mention that using Q method provides researchers the opportunity to examine response patterns across individual participants, rather than variables. Thus, Q method is a robust qualitative technique for systematically identifying groups of people with common structures in their perspectives and this can only be done using qualitative means.

However, one strand of researchers (Stenner and Rogers, 2004, Sell and Brown, 1984, Watts and Stenner, 2005, Hutson and Montgomery, 2011), argues for the mixed nature of the Q method as it employs quantitative factor analysis to group qualitatively gathered responses. For example, Stenner and Rogers (2004), report that the Q method possesses quantitative and qualitative features which make it more robust and systematic. Hutson and Montgomery (2011) and Sell and Brown (1984) also echo the qualitative-quantitative nature of the Q method and add that this allows it to provide a helpful bridge between the natural and the social sciences and is an insightful and useful tool that can be used to provide a dialogue between the divergent research traditions. Previte *et al.*, (2007) believe that Q method is a stand-alone technique that does not necessarily belong to any of the existing research traditions and that if the Q methodology is well exploited it could successfully address various research questions that the existing methodologies fall short.

The next section of this paper provides some background on Q method and outlines the phases in its application.

Application of the Q method

The Q method consists of five key steps: Collecting relevant ideas, beliefs and opinions concerning the research object (concourse); selecting and formulating of a set of meaningful

statements (Q sample); selecting respondents and giving them the statements to sort out in their own way; and analysis and interpretation of data (Brown, 1980).

Concourse development

The first step is the collection of relevant ideas, beliefs, attitudes and opinions on the topic under study, a process known as concourse building. A concourse, according to Stephenson (1978), is normally expected to contain several distinct way(s) of seeing and talking about the subject under study. There can be several ways of building a concourse. The concourse according to Robbins and Krueger (2000) is developed using a “semi-naturalistic approach”, where opinion statements are gathered from a combination of literature reviews and semi-structured interviews with several or a few sections of people who are knowledgeable in the phenomena under study selected, followed by the compilation of the statements gathered. Apart from the above, the concourse could also be done either by content analysis of documents or previous research, drawing quotations from the relevant literature, art and/or photos, etc. (Brown, 1980, Sell and Brown, 1984, Brown, 1996b, Brown, 1996a). The aim of this approach is to reveal the diversity of opinions about the topic of authentic leadership.

One advantage of interviewing people knowledgeable in the phenomena under study is that they can be asked to clarify some of the issues they raise. However, it must be noted here that the issues that would emerge from such interviews would differ from one individual to another and should be the follow-up questions. Such interviews may be considered fully exhausted when the responses being given by later respondents are similar or same to those previously given by earlier respondents indicating that no new insights would be found. At this point the initial interviews may be stopped.

The Q sample

The second step involves the selection and formulation of a set of meaningful statements out of the number of already gathered statements. However, it must be noted here that the final concourse that would be assembled by the researcher might be numerous representing the range of views on the research topic. These statements need to be narrowed down to a final set of statements which will be taken back to the respondents for sorting. These final statements selected are referred to as the Q sample or Q set. It must be noted that there is no consensus amongst researchers regarding the number of statements in a particular Q set. Barry and Proops (1999) used 36 in an environmental management study, 33 by Owusu-Bempah (2012) in authentic leadership study Stephenson (1954/79) used 7 in psychoanalysis study while Hooker (2002) used 60 statements in a sustainable development study. There is no rule of thumb regarding the exact number of a Q sample but the researcher has to take into consideration the practicality of available time of when deciding the number of the Q set.

The second issue that follows from above is how to select the statements. It must be noted here that the main goal of choosing a set of statements out of the lot is to provide a miniature, which when compared with all the concourse statements captures the diversity and/or homogeneity of the larger group (Brown and Peterson, 1993, Brown, 1996b, Brown, 1996a). Some researchers (Stephenson, 1953, McKeown and Thomas, 1988) suggest taking a more structured approach which involves the use of a matrix in selecting the statements. For example, in studying authentic leadership (Owusu-Bempah, 2012, Owusu-Bempah et al., Forthcoming) used a 5 by 2 matrix derived from a pre-existing authentic leadership theory. Similarly other researchers (Hooker, 2002, Barry and Proops, 1999) had used this strategy. However, how to classify a statement on such matrix remains the sole judgment of the researcher (Eden et al., 2005). Eden and his

colleagues further advise that whatever the approach used in the statement selection lies in the subjective understanding and the objective of the researcher. In our experience, some statements must be reworded to make it simpler and straight forward while others must necessarily be put in the negative in order to engage the sorters. Further, it could be helpful if after settling on the final Q sets, it is pre-tested to identify and eliminate the ambiguities in the statements for the main study.

Selecting the participants and completing the Q sorts

The third step requires selecting a diverse sample of respondents to express their views on the topic under study. Brown (1980) points out that the respondents for Q studies are not randomly selected from a given population but are deliberately chosen for their relevance to the topic in question. Brown states that the most important feature of the sample is diversity of opinion and this is what matters most in a Q study. Therefore, the ideal sample is one that consists of a diversity of people who are well informed on the given topic.

The respondents selected for the sorting process could be asked to order the Q sets (statements) into three piles; the ones with which they most agreed, the ones they most disagreed with and those about which they are neutral.

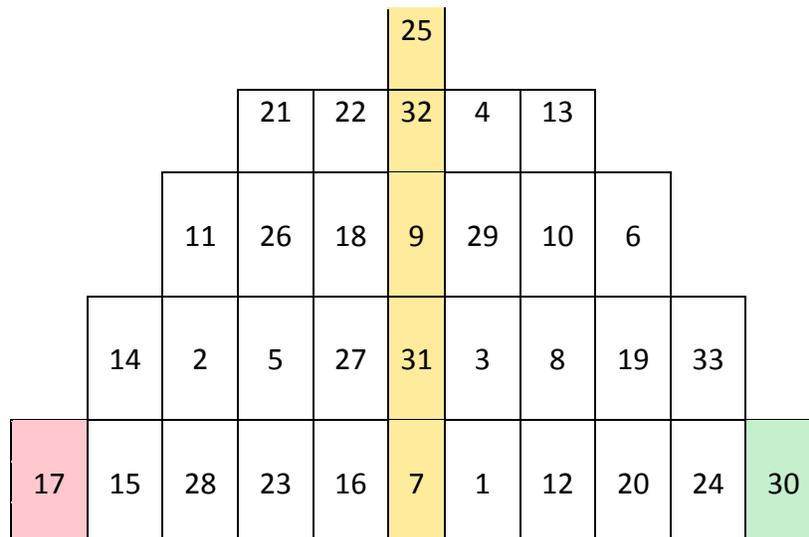


Fig. 1: An example of a completely filled Q sort

From experience, to fill out the Q sort, it is easier to ask your respondents to select the four most agreed with statements out their agreed pile after they are satisfied with their groups. Then you ask them to select one statement out of the four that they strongly agreed with, the number on the statement selected is inserted into the first pile in the Q sort distribution for the strongly agreed part. The remaining agreed statements are then used to fill other sections of the agreed part of the matrix until that part was completely filled. This same procedure can be followed on the loading of the ‘disagreed’ side of the matrix. The statements with which the respondents neither agreed nor disagreed (neutral) with were used to load the neutral portion of the matrix.

Then the respondents could be asked to review the completed matrix to make any changes to the arrangement if so desired. The matrix is deemed complete when a respondent is convinced that there was no need to make any further change to the arrangements in the matrix. As the respondents sort the statements, they are invited to comment on the statements, and then invited

to comment on why they ranked the statements on the matrix sheet in the way they did. All their comments must be recorded either by way of taking notes during the Q sort or tape recorded and transcribed.

On observing a Q sort matrix (see Fig 1), it is revealed that few statements are found at the extreme ends with the majority of the statements placed toward the centre, resulting in a normal distribution as shown by Figure 1. This makes the resultant distribution a 'forced' normal distribution on the grid. The advantage of this, is that, it allows respondents to consider their attitudes more carefully so as to bring out how they truly feel (Prasad, 2001). One interesting aspect of the Q samples is that the statements built out of the concourse itself do not have just one meaning with which the participants either agree or disagree; however, the pattern of agree and disagree arrangements they build on the continuum put meaning into the statements (Brown, 1996a). This meaning becomes evident as the respondents are encouraged to 'think out loud' by commenting on the statements and the rationale behind their arrangement and the positioning of particular statements. With regard to most respondents, this process will emerge spontaneously once they read the statements and start commenting on them.

Data analysis and number of factors

The fourth step is the analyses and interpretation of the Q sort data. The process begins by entering completely filled out Q sort matrices into the PQ software, a free online software package used for analyzing Q data (Schmolck, 2002). The software produces a correlation matrix of all Q sorts. That is, each person's responses are statistically correlated with the others. The correlation coefficient produced is based on the rank ordering of statements in a continuum so that any pair of respondents with similar orders will have a high correlation. The magnitude of the correlation coefficients generated by the software indicates the degree of similarity among the various perspectives (ten-Klooster et al., 2008).

The data generated from the sorting out process could be analyzed with Principal Component Analysis on a 30 x 30 matrix with a varimax rotation. This approach has been followed in recent Q sort studies. However, both Stephenson (1953) and Brown (1980) preferred using a centroid plus hand rotation instead which, in their view could produce better insights than the varimax rotation.

An important decision in a Q study is determining the number of factors to be selected for interpretation. One approach is, an interpretable factor must ordinarily have at least two Q sorts that load significantly on it alone in the unrotated factor matrix (Brown, 1980, Fairweather, 2001). However, on observing the number of significant loadings on the unrotated factor matrix, a researcher may decide to choose the number of factors that in his/her view is deemed suitable for the final analysis. However, other factors could be brought to bear on the decision. In a study with potentially many factors to interpret choosing a modest number will make the analysis easier to manage, although Stephenson's choice of factors was usually rooted more in a theoretical stance than statistical considerations.

In order to appraise the factor results different factor solutions may be generated and the results compared. The number of factors with the numbers of loadings higher is preferred. However, it must be noted that in some Q studies, two significant loadings are sufficient, especially where the goal is to search for particular or unusual components that are of theoretical significance.

Meta-analysis

One unique characteristic of the analysed Q data is that, results from a Q study can be subjected to further meta-analysis. For this all the factors are taken as single units and re-analyzed using

the PQ software, following the same procedure used for the two organizations (as explained in earlier sections). For instance, if a researcher used say a Q set of 33 statements, he/she will re-loaded them back into the PQ software and the factor arrays for each of the factors in the study generated initially (and used for the interpretation) are re-entered as individual sorts and analysed. In addition to the above, a Pearson's rank correlation can also be conducted on the analysed Q data to find out the extent of correlation between the factors.

Examples of Q method used in leadership studies

There is the growing use of Q method in leadership studies, for example, Souba and Day (2006) used the method to study the leadership values in academic medicine in the United States of America and Souba *et al.*, (2007) used it to find out whether the agreement on institutional values and leadership issues between deans and surgery chairs predicted their institutions' performance in the United States of America. Brown, (1978) also used Q methods to find out Nixon's perceived image, as against his real image through the eyes of students in the United States. Militeello and Benham (2010) used the Q method to study collective leadership and how to evaluate leadership development, also in the United States of America. Several other leadership studies adopting Q methods conducted in the United States worth mentioning include: Lipgar (1997); Rilling and Jordan (2007); Wagner (2011); Woods (2011) and Zacko-Smith (2007). Outside the United States, Yeung (2000) used the Q method to study the role of educational leaders in Hong Kong, and Tolymbek, (2007) used Q methods to identify different political leadership styles within the political cycles in Kazakhstan. Further, Q method has been used to compare and contrast the meaning of authentic leadership in Ghana and New Zealand (Owusu-Bempah, 2012, Owusu-Bempah *et al.*, Forthcoming). These examples of the Q method applied to leadership research were successful and produced informative results that contributed to leadership theory and policy.

Conclusion

In this paper I have suggested that Q method can be a valuable tool for leadership studies especially in resolving the controversy surrounding the constituents of effective leadership. The paper maintains that the dissenting opinions held by researchers, practising leaders and other stakeholders regarding the follower-centric approach to effective leadership can easily be resolved by the use of Q method. The argument is that effective leadership as seen by followers is subjective as it is based on their own understanding of what constitutes effectiveness. It is from this point that Q method is vital as it rigorously collates and analyse such subjectivities. In so doing it can scientifically structure the different perspectives in a particular group by providing areas of agreement and disagreement apart from creating insights which can be used for detailed interpretation and other set of actions preferred by researchers.

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