COMPREHENSIVE STRATEGY TO CONDUCT A MAIL SURVEY: TECHNIQUES TO IMPROVE RESPONSE RATES

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ABSTRACT—A mail survey has been widely known by many scholars and is very important in data collection; however, it has a real disadvantage of its lower response rate. This is possibly due to incomplete comprehension on how this mail survey can be made to work effectively. Therefore, this study aims to provide comprehensive strategies that should be conducted to improve response rates. Meeting this aim, this study reviewed studies focusing on strategies to prepare a mail survey to increase its response rate. Based on an extensive research in the Google Scholar, the authors found articles considered appropriate to be included in this synthesis. Two strategies were found to improve response rate using a mail survey: designing questionnaire and practical strategies. Designing questionnaire strategy has prominent factors in the beginning steps before sending a questionnaire. The latter is a critical step to get respondents feel that they like to fill a questionnaire. This study contributes to academic literature about how to improve response rate using comprehensive strategies where the previous studies have explained those findings partly.

1. INTRODUCTION

Mail survey is the most common way for collecting data in social science study (Kelley, Clark, Brown, & Sitzia, 2003). Some scholars compare response rates of the study using different ways in collecting data. Furthermore, lower response rates will have an effect on biased results. Improving mail survey can be conducted in two concurrent ways: questionnaire design and practical strategies. It could be summarized as follows: Some researchers believe that cover letter may enhance response rates (Dillman et al., 2007; Larson & Chow, 2003; Jones Osasuyi and Mwakipsile, 2017, Le et.al. 2018;Ali and Anis, 2018; Hakim and Kasenda, 2018; Musah, 2018).

2. QUESTIONNAIRE DESIGN STRATEGIES

Cover letter should not be too short and too long. The objective of cover letter is to introduce respondents about a surveyor’s aims and reasons of his/her current activity. Short words can cause important messages addressed to respondents to be lost. Therefore, cover letter should be written to explain the information that covers all aspects that enable to improve response rates. Identifying Salutation. First, when receiving a personalized cover letter, a respondent would feel socially obliged to respond the letter by participating in the survey to appreciate the researcher’s extra effort for the personalization of mail survey. Second, “proper name is neuropsychological, and proper name and common nouns are anatomically processed differently”. Third, using proper name tends to indicate that respondents feel that important information is related to them. Mail questionnaire recipients may question any assurance of anonymity when they are personally addressed in cover letter (Kerin & Peterson, 1977, p. 88). Explaining the study and the place of the respondents within it: it is important that cover letter explains the study, place, and respondents’ position to involve in the study. Thus, when a researcher prepares to write a cover letter, explaining the study and the place of the respondents within it is suggested. Explaining time: A research should
inform time consumed for respondents to fill the questionnaire. It is important to explain time lasting to complete questionnaire because respondents will prepare their time to response a mail survey. One version is that respondents were informed that times would last 8 to 10 minutes to complete and another version is that 20 minutes late to respond the questionnaire. The results is that time 8-10 minutes is greater respond rate than 20 minute last of filling out a questionnaire.

**Appeal:** Appeal of the wording requested for to complete questionnaire has an influence to maximize response rate, More interesting concerning those appeals, Diamantopoulos & Schlegelmilch (1996) recommended that combination of appeals might create "a positive pre-disposition towards the survey concerned. Explaining anonymity: Anonymity is important to be told to respondents to guarantee them that their opinion or answer is under protected in term of identity. Empirical study showed that keeping respondents confidential freely complete the questionnaire will impact on greater response rate (Childers et al., 1980; Tyagi, 1989; Danbaba, et al. 2016; Malimi, 2017; Khan & Ali, 2017; Mazzaro, 2018; Mokgari & Pwaka, 2018). Using individual signature: Researcher’s signature can impress respondents that the researcher carries out a survey seriously. The effect of individual signature on the expected rate of return has been proved by Linsky (1965) who found that handwritten individual signature had a significant influence on response rate.

**Sender title:** Linsky (1965) that “response rates were higher when a title (e.g., “Director of Rehabilitation”) was placed under the sender’s name. Additionally, Brennan (1992) contended that ‘a cover letter signed by a higher status researcher may be more effective than one signed by a lower ranking researcher’. 

**Handwritten postscript:** Postscripts enable to enhance response rate (Kerin & Peterson, 1977). In the way of sending postscripts, the researchers may consider whether he/she uses written or typed postscripts. In addition, handwritten postscripts has a positive impact on response return (Frazier & Bird, 1958). There are several factors should be considered not to be included or written in cover letter. These are: Prefer not to put deadline data: In the cover letter did not stimulate a heavier, more immediate response, but did seem to decrease the rate of returns following the deadline date. The results also showed that the recipients of the no-deadline cover letter might be implicitly assuming a 7-day deadline as an acceptable response period” (Nevin & Ford, 1976, 118). Briefly, people will be more interested to respond questionnaire if they feel that questionnaire is interesting. Uninterested, sensitive/confidential as well as difficult and/or objectionable questions may cause respondents reluctant to complete a questionnaire (Diamantopoulos & Schlegelmilch, 1996). Moreover, they answer the question, the quality data of answered respondents was questionable. Questionnaire should start from the easier questions. The reason for this impact that ‘it is relatively undemanding to provide personal and practice information into the more challenging topic-specific questions.’ Length of questionnaires is divided in three concepts: number of questions, number of pages and time estimation in completing the questionnaires (Heberlein & Baumgartner, 1978). It is argued that the length of questionnaire affects the response rate: with shorter questionnaires respondents can complete the questionnaire with less effort and energy, and vice versa (Greer, Chuchinprakarn, & Seshadri, 2000).

In term of number of pages, a large number of pages of questionnaire, and wording will influence response rate (Blumberg et al., 1974; ). In terms of time estimation, the length of questionnaire related to time consuming in completing questionnaire has also attracted attention from researchers. ‘it is plausible that some recipients of the long version questionnaire would have completed it except that the opportunity cost was too high because the questionnaire looked lengthy (unfavorable time perception) and pressure of other work was great’ (Jobber, 1989, p. 89). Thus, many authors argued that short time completing questionnaire has a positive effect on response rate. Marcus, and Bosnjak, Lindner, (2007) found that announced 10-20 minutes to complete questionnaire have a greater respond to 30.6% than explaining longer time 30-60 minutes to complete questionnaire with only 18.6%. Format and layout of questionnaire should be considered, particularly in terms of length of question, level of reading, and level
of abstraction. Length of the question is another important factor to decrease/increase response rate. That is to say that longer question results in lower response rate and vice versa. It is argued that longer sentences need more respondents’ “energy” and time to memorize. This can cause the respondents to be reluctant to respond, thus resulting in lower response rate. (Holbrook, Young Ik, & Johnson, 2006). Being reluctant for respondents to answer longer questions makes sense because responding to the survey questions is voluntary. There is evidence that the length of questions has an impact on comprehension difficulties (Burns et al., 2008; Holbrook et al., 2006, p. 570). According to Burns et al.’s (2008) study that the length of question should not exceed 20 words. Therefore, researchers should design short mail survey questions to get higher response rates. In terms of level of reading, perhaps a better measure of question difficulty would assess the complexity of the sentences and words in a question, rather than simply the length of the questions. Question with higher reading levels seems likely to result in greater comprehension difficulties because the individual words and sentences structures are more difficult and could result in greater confusion. In terms of level of abstraction, the extent to which the key concepts in a question are concrete or abstract may also be influenced by question difficulty. Abstract constructs are those that are unrelated to any context or specific instance (e.g. enjoying life) and can be distinguished from more concrete or specific constructs. As a result, questions about more abstract concepts may result in more comprehension difficulty than those that reference more concrete concepts. Level of abstraction seems unlikely to be associated with mapping difficulties, (Holbrook et al., 2006, p. 572). The evidence is that ‘more comprehension difficulties were found for the most abstract questions’. In general, respondents are preferred to answer close-ended question than open-ended questions (76.69 % vs 6.26%). Close-ended question gains significantly favorable because it requires less time to retrieve information and form a judgment because the response options are provided (Griffith, Cook, Guyatt, & Charles, 1999). By using open-ended questions, respondents are forced to explain the question that sometimes the answer is not based on the surveyor expected (inaccurate). In addition, missing data happen not only respondents may lack of information to answer the questions but also respondents require more time to complete questions. Measurement scale enables to stimulate response rate. Greer et al.(2000) investigated the effect of comparative scale and non-comparative scale of questionnaire to enhance response rate. Utilizing sixty-five responses of the executives of the companies, the result showed that comparative scale is preferred than non-comparative scale (45.31 vs. 15.63 %) among executives of the companies. Respondents are younger people and have good vision, using 10 or 11 font size is considerable in two reasons. One version is using 12 font size and another using 10 font size. We ask them to choose which questionnaire they will answer with four options: 12-point size, 10-scale point size, both or neither. All of them response quickly to prefer choose 10 point size. There have same opinion that 12 point size is more crowded. Other reason of color of questionnaire paper that enables to improve response rate is that “using colored questionnaire paper is that such a questionnaire will be more conspicuous on a businessman’s desk that white paper, which may be mislaid among other white paper on this desk”. Questionnaire color has a significant factor to reduce non response rate. The evidences of the size of questionnaire paper have been investigated by numerous authors (Ali & Haseeb, 2019; Haseeb, Abidin, Hye, & Hartani, 2018; Haseeb., 2019; Suryanto, Haseeb, & Hartani, 2018).

3. PRACTICAL STRATEGIES

Although empirical findings of pre-notification methods in collecting data demonstrates mixed results, numerous authors still believed that pre-notification enable to generate significant response rates (Chiu & Brennan, 1990; Dillman, 1991; Fox et al., 1988; Greer et al., 2000; Groves & Peytcheva, 2008; Jobber, Allen, & Oakland, 1985; Kanuk & Berenson, 1975; Mitchell & Brown, 1997; Yammarino et al., 1991; Yu & Cooper, 1983). The reasons of pre-notification enable to effort response rate
as that 'pre-notification alerts people that the survey is coming, thus reducing the likelihood of an interested recipient inadvertently discarding it. Follow-can substantially improve mail survey of the expected rate of return.

Many authors suggested that sponsorship, is recommended to improve response rate (Groves & Peytcheva, 2008; Jabarullah and Hussain, 2019). Heberlein and Baumgartner (1978) found that government sponsored can increase an additional 12.4% responses compared to similar studies with the same numbers of respondents and similar salience to the respondents. Mail out of questionnaire expedition also influences response rate. Using high-class mail vehicle has a lower non-response rate (Hager et al., 2003). One of the most important of improvement of response rate is return envelope and stamps were an important predictor of response rate. On the other hand, non-monetary incentive has also attractive factors to enhance response rate. Inclusion incentive may boost rate of return quickly. With inclusion token incentives or $1-10 may be justified for more cost-effectiveness, but not for respondents in higher management level.

The day respondents received questionnaire is likely increase response rates. Sending of mail questionnaire should also consider the months that seem the low activities during the years of the works. According to the above discussions of some findings techniques improving response rate, we summary several points enhance response rate: 1) questionnaire design and 2) practical strategies. Questionnaire design is the first way for researchers to attract an attention from respondents to fill in each question within sheets of questions. Furthermore, in order to attract respondents’ attention, researchers should consider how to write cover letter; design and layout questionnaire; choose type of questions, font size, layout of questionnaire and cover letter, color of questionnaire paper, size of paper, and reproduction methods.

4. CONCLUSION
Although this paper has comprehensively explained the ways to improve response rate that we compile from several sources and different countries through long-time periods, this paper may need to be improved by conducting further research to clarify the judgment from previous findings through survey study. Further study can use indicators compiled in this paper to test which one(s) from above indicators support the previous literature in enhancing response rate.

5. REFERENCES
Kerin, R. A., and Harvey, M. G. (1976) 'Methodological considerations in corporate mail surveys: A research note',

