

2007

# Influence of Questionnaire Format on the Response Rate of Training Session Evaluations

Yumiao Zhu  
*Old Dominion University*

Follow this and additional works at: [https://digitalcommons.odu.edu/ots\\_masters\\_projects](https://digitalcommons.odu.edu/ots_masters_projects)

 Part of the [Education Commons](#)

---

## Recommended Citation

Zhu, Yumiao, "Influence of Questionnaire Format on the Response Rate of Training Session Evaluations" (2007). *OTS Master's Level Projects & Papers*. 105.

[https://digitalcommons.odu.edu/ots\\_masters\\_projects/105](https://digitalcommons.odu.edu/ots_masters_projects/105)

This Master's Project is brought to you for free and open access by the STEM Education & Professional Studies at ODU Digital Commons. It has been accepted for inclusion in OTS Master's Level Projects & Papers by an authorized administrator of ODU Digital Commons. For more information, please contact [digitalcommons@odu.edu](mailto:digitalcommons@odu.edu).

**INFLUENCE OF QUESTIONNAIRE FORMAT ON THE RESPONSE RATE OF  
TRAINING SESSION EVALUATIONS**

**A RESEARCH PAPER PRESENTED TO  
THE GRADUATE FACULTY OF THE DEPARTMENT OF  
OCCUPATIONAL AND TECHNICAL STUDIES  
OLD DOMINION UNIVERSITY**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE MASTERS OF SCIENCE**

**By  
YUMIAO ZHU  
October 2007**

## **SIGNATURE PAGE**

This research project was prepared by Yumiao Zhu under the direction of Dr. John M. Ritz in OTED 636, Problems in Occupational and Technical Studies. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Master of Science degree.

APPROVED BY:

---

Dr. John M. Ritz  
Graduate Program Director

---

Date

# TABLE OF CONTENTS

	Page
SIGNATURE PAGE.....	ii
TABLE OF CONTENTS .....	iii
TABLE OF TABLES.....	v
CHAPTER I—INTRODUCTION .....	1
STATEMENT OF PROBLEM.....	2
RESEARCH GOALS .....	2
BACKGROUND AND SIGNIFICANCE .....	2
LIMITATIONS .....	4
ASSUMPTIONS .....	4
PROCEDURES .....	5
DEFINITION OF TERMS .....	5
CHAPTER II—REVIEW OF THE LITERATURE.....	7
GENERALIZATIONS ABOUT SURVEY QUESTIONS.....	7
OPEN-ENDED VS. CLOSE-ENDED QUESTIONS .....	8
QUESTIONNAIRE LENGTH.....	10
ASKING QUESTIONS ABOUT ATTITUDES AND BEHAVIORAL INTENTIONS .....	11
ASKING QUESTIONS THAT MEASURE KNOWLEDGE .....	13
ASKING QUESTIONS THAT EVALUATE PERFORMANCE .....	14
CHAPTER III—METHODS AND PROCEDURES .....	17
POPULATION .....	17
INSTRUMENT DESIGN.....	18
METHODS OF DATA COLLECTION.....	18
STATISTICAL ANALYSIS.....	18
SUMMARY.....	19
CHAPTER IV—FINDINGS .....	20
PARTICIPANT RESPONSE RATE .....	20
QUESTION RESPONSES .....	20
SUMMARY.....	26
CHAPTER V—SUMMARY, CONCLUSIONS, AND RECONMMENDATIONS .....	28
SUMMARY.....	28
CONCLUSIONS .....	29

**TABLE OF CONTENT (CONTINUED)**

	Page
RECOMMENDATION .....	30
REFERENCES .....	32
APPENDICES A. QUESTIONNAIRE .....	33
APPENDICES B. COVER-LETTER .....	34

## TABLE OF TABLES

	Page
TABLE 1. QUESTIONS 1—3.....	21
TABLE 2. QUESTION 4 .....	22
TABLE 3. QUESTIONS 5—8.....	23
TABLE 4. QUESTIONS 9—12.....	25
TABLE 5. QUESTIONS 13—16.....	26

## **CHAPTER I**

### **INTRODUCTION**

The format of questionnaire design plays an essential role in determining respondent return rates to a survey. However, this fact has not been studied as fully as it should be. Researchers have witnessed the flourishing of measurement and evaluation (M&E) in Human Resource Development (HRD) since the 1990s. Today, there seems to be more questions than answers to the challenges and opportunities concerning measurement and evaluation in the field of HRD (Wang & Spitzer, 2005). As one of the most frequently used methods for data collection, training evaluation surveys should be studied to improve the effectiveness of training.

Companies are using surveys to determine what their employees, customers, and suppliers ideals and desires are. Advantages of such surveys are that they can provide accurate, measurable data to organizations. But this rarely occurs because of lack of evaluations, poorly designed instruments, or lack of significant data. Not only are these instruments excellent to keep up with the needs, problems, and current state of companies, but the results can be vital when making plans for future operation strategies.

Low response rate is a continuing problem for survey feedback. People simply refuse to participate in completing surveys. However, a well-designed survey, coupled with incentives and techniques to elicit responses, can help guarantee a more effective response rate.

Should HRD specialists be concerned about low response rates? Low response rates are usually not random and may bias survey results. Conclusions drawn from

unrepresentative responses may be erroneous and cause serious problems when used in the planning process.

According to Pearson Education (2007), the most frequently asked question is what kind of response rate can they expect from their survey. This is really not easy to estimate since there are a number of variables that can potentially affect the response rates. However, following a set of guidelines or tools can maximize response rates. This research is designed to determine which factors can influence the response rate to training session evaluations for different organizations.

### **STATEMENT OF PROBLEM**

The problem of this study was to evaluate the influence of questionnaire format on the response rate of training session evaluations.

### **RESEARCH GOALS**

To answer this problem, the following research questions were established:

1. What were respondents' concerns when they completed questionnaires after training?

2. What were the participants' preferences regarding format when responding to a training evaluation questionnaire?

### **BACKGROUND AND SIGNIFICANCE**

Studies about training evaluation have presented findings in both questionnaire design and low-response rates. However, few researchers have reported the area of



designing good questionnaires in order to be more appealing to the audience and to increase response rates. In this study, the researcher will analyze factors relevant to questionnaire design.

Low respondent rates have been a concern for researchers. However, questionnaires provide an efficient way to collect data compared with telephone interviews and personal interviews, which are usually considerably less efficient since both alternatives require one-on-one data collection. Also, surveys yield responses that usually are easy to tabulate or score, and the resulting data are easy to analyze--especially if the questionnaires contain items with choices to be checked. According to Patten (2001), response rate is often low--especially if the questionnaires are mailed to potential respondents who do not personally know the researcher. This is the very problem that will be dealt with in this research.

Studies on questionnaire design by Schuman and Presser (1996) provide useful information on constructing meaningful and effective questions. These studies looked at question order and response order as well as close-ended or open-ended questions, yet, they only looked at the perspective of the designers and administrators. The perspectives of the respondents should also be addressed since a questionnaire that is appealing to its audience can encourage them to complete it. As high response rates and more valid and reliable data are expected, the concerns and preferences of the respondents should be sought for action.

This research study will fill the gap of designing good questionnaires from the perspective of the designers and the respondents. In this way, the surveys can better address the needs, concerns, and preferences of the respondents. Meanwhile, higher

response rates and better quality of data collection are expected.

### **LIMITATIONS**

Several limitations are necessary to proceed with this study. It is limited to:

1. Factors provided in the literature concerning the influence of response rates.
2. Individuals who were enrolled in OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University in Spring 2007.
3. Participants who were teachers, community college professors, or business and industry trainers.

### **ASSUMPTIONS**

When conducting research, certain circumstances must be assumed. This study used the following assumptions:

1. Questionnaire format does influence the respondent when they decide to complete a survey or not.
2. Respondents are familiar with the survey formats used in questionnaire construction.
3. If the questions are appropriate to the training, more trainees will respond.
4. Some people do not like questionnaire formats, and therefore choose not to respond to them.

## **PROCEDURES**

A survey was sent via email to the participants who enrolled in OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University in Spring 2007. An explanation of the study, including how to answer the questions and why the study is important, was included. After one week of sending the survey, another e-mail was made to follow-up to non-respondents. After the data were collected, the percentage and mean of respondent answers were calculated. The results were then compared and discussed.

## **DEFINITION OF TERMS**

The following are terms as defined for this research project.

**Survey:** “Surveys are the most widely-used technique in education and the behavioral sciences for the collection of data. They are a means of gathering information that describes the nature and extent of a specified set of data ranging from physical counts and frequencies to attitudes and opinions” (Michael, 1997, p. 1).

**Population:** “All individuals or entities belonging to the group that is being studied.

Examples of populations are all elementary school teachers in the United States, all school in the Midwest” (Lauer, 2006, p. 124).

**Response rate:** “The proportion of participants in a study who respond to a data-collection instrument; typically refers to the number of persons who complete and return a mailed (e-mailed) questionnaire” (Lauer, 2006, p. 130).

**Research problem:** “The purpose of the research study, usually described in more general terms than research questions” (Lauer, 2006, p. 129).

## OVERVIEW OF CHAPTERS

Chapter I explained why this study was undertaken. It addressed the need for training evaluations and presented a statement of the problem. The problem was to evaluate the influence of questionnaire format on the response rates of training session evaluations. The research questions were concerned with the preferences of the respondents when they completed questionnaires after training. The background and significance of this study was that it will fill the gap of designing good questionnaires from the perspective of the designers and the participants.

In Chapter II, Review of Literature, the researcher will provide the readers with general information of previous research on this subject. The topics of close-ended vs. open-ended questions, questionnaire length, asking questions about attitudes and intentions, asking questions measuring knowledge, and asking questions that evaluate performances will be discussed.

In Chapter III, the data collection methods will be described. The procedures for collecting the research data will be discussed.

Chapter IV will report the factors in questionnaire design that have been found to influence the response rate of training session evaluations. Mean and percentages will be reported from the survey.

In Chapter V, the research findings will be summarized and conclusions will be drawn about the influence of questionnaire format design on the response rate of training session evaluation surveys. Based on the data presented, recommendations will be made concerning future questionnaire design in evaluation surveys.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

This chapter will present what work has been done on questionnaire design and response rates in training evaluation surveys. Further, topics discussed in the literature including close-ended vs. open-ended questions, questionnaire length, asking questions about attitudes and intentions, asking questions measuring knowledge, and asking questions that evaluate performances will be discussed. Close-ended vs. open-ended questions and questionnaire length are two of the most widely discussed factors in questionnaire design since they involve not only attitudes and preferences of the subjects. The other factors, which are asking questions about attitudes, measuring knowledge, and evaluating performances will be discussed. If designers can work well with all three types of learning, they can design a good questionnaire.

### **GENERALIZATIONS ABOUT SURVEY QUESTIONS**

Can the response rate be improved by reformatting survey questions? The literature suggests that it can. According to Groves (2001, p. 72), "Features of the questions themselves can influence whether respondents choose to answer. The clarity of the question and complexity of the response task can determine the degree of the cognitive challenge posed by the question and affect motivation to respond."

During the past half-century, both academic and commercial survey researchers have carried out a series of experiments on attitude-question wording and form, seeking to determine whether asking the same item in different ways will lead to different results. When the factors in questionnaire format design were considered, they were simply

added together to form a reliable summary index. According to Bradburn (2004), perhaps the main obstacle here lies in the assumption that a series of attitude items is like a series of words in the sense that a series of words can be thought of as a list of more or less interchangeable elements.

In this chapter, the researcher will explore five broad classes of problems, most of which involve two or more different ways of asking questions. Beyond these five factors, there are other useful ways to consider questionnaires, for instance, difficulty of vocabulary, tone of wording and types of subject matter, which were treated only partially or tangentially. According to Schuman and Presser (1996), “Our own classification was intended mainly to identify research problems in a way that connected them with actual decisions survey practitioners confront, and for this purpose the classification should continue to provide a useful guide” (p. 298 ).

### **OPEN-ENDED VS. CLOSE-ENDED QUESTIONS**

Open-ended questions are those questions that will solicit additional information from the respondent. Sometimes open-ended questions are called “infinite response” or “unsaturated type questions”. By definition, they are broad in scope and require more than one or two word responses. It is worth noting that “neutral questions” are merely a subset of open questions. A neutral question develops trust, seems less threatening, and allows an unrestrained or free response. In addition, it may be more useful with articulate users.

An open-ended question is designed to encourage a full, meaningful answer using the subject's own knowledge and/or feelings. It is the opposite of a close-ended question,

which encourages a short or single-word answer, and also tends to be less objective and more leading than the open-ended question. Open-ended questions typically begin with words such as "Why" and "How," or phrases such as "what do you think about."

Technically, they are not often real "questions", but rather a statement that implicitly asks for a response or evokes some ideas and thoughts. The ability to ask open-ended questions is very important in many areas including education, counseling, mediation, sales, investigative work, and journalism (Schuman & Presser, 1996).

The major disadvantage of open-ended questions are that they are time-consuming, may result in unnecessary information, and may require more effort on the part of the user—and that is usually the very reason for a decrease in response rate. Thus, to some degree, more respondents would prefer the "close-ended" questions.

Close-ended questions are those questions that can be answered finitely by either "yes" or "no", or a choice among several given answers. Also, they are known as "dichotomous" or "saturated" type questions (Schuman & Presser, 1996). Close-ended questions can include presuming, probing, or leading questions.

For this category, closed form questions are appealing by their advantages of answers, are quick to answer, and require little time investment. While these questions may result in incomplete responses, they take more time with inarticulate users. It can cause misleading assumptions or conclusions about the user's information need and discourages disclosure.

## QUESTIONNAIRE LENGTH

When designing a mail questionnaire, the researcher must always keep in mind the trade-off between data quantity and data quality. Which one does the researcher value more? If a researcher attempts to obtain too much information in one e-mailed survey, the responding rate will drop. This has two undesirable effects:

- The responses obtained in the survey will be less representative of the "population" being measured.
- Survey costs will increase, since more questionnaires or follow-up letters will have to be mailed to obtain an adequate number of responses (The Business Research Lab, 2005).

The appropriate questionnaire length depends upon the importance (to the respondent) of the questionnaire's subject. For certain important transactions, a longer questionnaire is reasonable, for instance, the purchase of a home or a car. Some questionnaires may reach four pages in length; while some other purchases are just routine work, like the purchase of gasoline and perhaps a full page of questionnaire is too much already. In this way, it is not easy to simply define how long a questionnaire should be or whether a comparatively long or short questionnaire is good or bad. One suggestion to solve this problem is to keep questionnaire length as short as possible. According to The Business Research Lab (2005), most issues addressed by mail questionnaires can be handled in one or two pages, and there are very few circumstances that can justify questionnaire lengths of more than four pages.



In self-completion questionnaires, it is necessary to consider the quality of layout and the length of the questionnaire. If the questionnaire is poor in layout or too long, then the respondent may lose interest and skip questions or fail to complete the questionnaire at all. As a general rule, longer questionnaires get a lower response rate than shorter questionnaires. However, some studies have shown that the length of a questionnaire does not necessarily affect response rate and cause conflicting data. Some researchers state that more important than length is the question content. Subjects are more likely to respond if they are involved and interested in the research topic and in such cases the length of the questionnaire is of low concern (The Business Research Lab, 2005). Therefore, it is reasonable to say that questions should be meaningful and interesting to the respondent, and that the level of interest makes up the core of concerns about questionnaire length.

### **ASKING QUESTIONS ABOUT ATTITUDES AND BEHAVIORAL INTENTIONS**

Figuring out what questions to ask is probably one of the most vital and difficult tasks in designing an evaluation questionnaire. It is easier to build standards for constructing behavioral questions than for questions about attitudes. This is because questions about attitudes have no “correct” or “true” answer. However, the attitudes and behavioral intentions are core factors that influence response rates.

What can a researcher do to design a good question to ask about attitudes and behavior intentions? First, he or she has to identify the objective for the attitude to be measured. Attitudes do not exist abstractly. They are about or toward something. According to Bradburn (2004), something is often called the “attitude object”. With

“attitude object,” however, it is often difficult to clearly indicate what you want to know because the attitude object is often ambiguous or ill-defined. The context in which questions are asked has a greater impact on attitude measurement than on behavior questions because the meaning of the questions may be strongly influenced by the context in which they appear. Then, what should we do is determine and clearly specify the attitude object. This is the first priority in formulating attitude questions, because ambiguity always creates a problematic questionnaire. In this way, the researcher can resolve some of the ambiguity by helping the respondents to understand the questions through experiments with question wording. But they can do so only if the designer does have a very clear notion of what they are trying to find out. Otherwise, respondents will be unable to help (Bradburn, 2004).

When asked questions about attitude and behavioral intentions, sometimes, the researchers argue that attitudes and subjective norms are not enough for intentions and those intentions are not enough for action. As stated by Bagozzim, to further such attitude theory, we may “address the role of cognitive and emotional self-regulatory mechanisms” (Bagozzim, 1992, p. 178). The attitude-intention link is assumed to rely on cognitive processes and on certain coping responses regarding the emotional significance of evaluation. “The subjective norm-intention relationship is hypothesized to be governed by certain cognitive activities inherent in perspective taking and by positive and negative emotional reactions associated with appraisals of the deviation and conformance of both the self and others to expectations concerning the shared social meaning of a focal act” (Bagozzim, 1992, p. 178).

## **ASKING QUESTIONS THAT MEASURE KNOWLEDGE**

Besides the questions that ask about attitudes and behavioral intentions, knowledge-related questions also have many uses in survey research, although they are not as common as behavioral question. They can be used for designing and implementing information programs or advertising campaigns on general knowledge issues (Bradburn, 2004). In this research, most of the participants come from business and academic fields. Also researchers would like to know their attitudes toward measuring knowledge of the instructor and the content relevancy. But how can researchers design good questions to measure knowledge? Bradburn (2004) has provided a useful and helpful checklist for the design process. He suggests:

1. Consider whether the level of difficulty of the knowledge question is appropriate for the purposes of the study.
2. When possible, reduce the threat of knowledge questions by asking them as opinions or by using such phrases as “Do you happen to know”.
3. When identifying persons or organizations, avoid overestimates of knowledge by asking for additional information or including fictitious names on the list.
4. If yes-no questions are appropriate, ask several on the same topics to reduce the likelihood of successful guessing.
5. For knowledge questions requiring numerical answers, use open-ended questions to avoid either giving away the answer or misleading the respondent.
6. To increase reliability when obtaining information about an

organization or geographical area, use multiple key informants or individual respondents (Bradburn, 2004, p. 179).

Basically, there are three objectives that the researchers want to achieve. First, determine if people have enough knowledge about a topic so that they are the right people to be asked for the opinions about it. Second, identify gaps in knowledge of different kinds of information campaigns, for example, the knowledge that warrant education, advertising, or publicity. The last but not the least is to help explain attitudes and behavior.

Sometimes, knowledge questions are disguised to reduce their threatening appearance. This can be done with phrases like “in your opinion,” “using your best guess,” and “have you heard or have you read that...?” Knowledge questions can vary widely in difficulty. According to Fink (2003), “The easiest questions are relatively general and ask for recall of current or significant information. The most difficult questions ask the respondent to recall, understand, interpret, and apply information in innovative ways” (p. 78).

Generally, most surveys of knowledge are not achievement tests in classic sense. They are not designed to evaluate or grade the respondents. Perhaps you are more interested in how many respondents do not know something than how much they have learnt (Fink, 2003).

### **ASKING QUESTIONS THAT EVALUATE PERFORMANCE**

Although such questions as “How well are the instructors doing?” do appear to be simple, the resulting questions would be complex and essential for individuals and

organizations and also for trainers and trainees. Therefore, it should be a concern for the questionnaire designer to see that whether this point should be addressed or not; if it should, how much would it be?

In some cases, researchers would like to evaluate the performance of the employees. They want to assess employee performance. Both work as indicators of corporative performance and as a basis to determine rewards. Surveys need to be not only fair and accurate, but also to take into account perception by employees. Also, because employees' perception is crucial, it is imperative that the analysis of questions be fair (Bradburn, 2004).

All questions about evaluating performance are concerned with time, duration, and frequency. Each of these preceding questions specifies a time period or frequency. When developing such survey questions, the right time periods that meet the researcher's needs should be chosen and made to be logical to the respondents. The researchers can also quote reliable information about the specific events and activities if necessary. In this way, the performance of a person can be evaluated in a more encompassing way.

Moreover, since questions that evaluate performance have a time element, the answers are sometimes dependent on the respondents' ability to recall. One suggestion provided by Fink (2003) is to use lists to prime the respondents' memories. "The advantage of using; lists is that they can be maximally helpful; lists should be as inclusive as possible without being too long; lists that go on for many pages can be confusing and boring for respondents" (Fink, 2003, p. 73). One way to solve this problem is to divide a question into component parts. The other concern is that by presenting lists to respondents, the researchers can encourage the respondent to use only the categories

named in the lists, however, this may result in a loss of information (Fink, 2003).

Therefore, when design questions that evaluate performance, the researcher should consider different choices in various settings.

### **SUMMARY**

Why is survey formatting important? The format of a questionnaire determines how easy it is for researchers, respondents, and data processing personnel to read and understand and the kind of answers required. Therefore, the quality of the data becomes heavily influenced by the questionnaire format (Sanchez, 1992). A general principle to follow in formatting is that the respondent's needs must receive top priority, the interviewer's needs are next in high priority, and the data processing staff's needs are the lowest priority. Ideally, the questionnaire format should be designed to meet all of these needs simultaneously (Bradburn, 2004). In the next chapter, methods and procedures of this research will be discussed.

## **CHAPTER III**

### **METHODS AND PROCEDURES**

In this chapter, Methods and Procedures, the researcher will introduce the background information about the population used in this study. This chapter will describe the research methods and statistical procedures used to collect and analyze the data. In addition, research variables, instrument design, methods of data collection, and the statistical analysis will be discussed.

### **POPULATION**

The population of this research was the graduate students who completed OTS (Occupational and Technical Studies) 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) in Spring 2007. All of the students had some adult learning experiences either conducting educational programs or had future plans to work in the training field. They came from various organizations, which include universities and colleges, high schools, military training departments, business and industry training, and other organizations.

According to the course roll, there were a total of sixty-four students: nineteen came from a business environment, which covered 29.69% of the population, twenty-two came from the secondary education setting, which was 34.38% and fifteen were college faculties, including some teaching assistants or research assistants of Old Dominion University, while eight had military backgrounds such as curriculum developers for various branches of the military services.

## **INSTRUMENT DESIGN**

The questionnaire for this research was designed based on the research goals and literature. It was targeted to evaluate the influence of questionnaire format on the response rates of training session evaluations. A sample of the questionnaire can be found in Appendix A.

## **METHODS OF DATA COLLECTION**

A cover letter was e-mailed to all the students who attended OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University, Norfolk, Virginia on May 30, 2007, asking about the influence of format on the response rate to training session evaluations. See Appendix B. One week later, on June 12, a follow-up letter was e-mailed to all the students who have not replied. Then, on June 22, the third follow-up letter was sent to those students who had not responded. Some phone calls and face-to-face interviews were conducted to increase the response rate.

## **STATISTICAL ANALYSIS**

The number of responses and the frequency of answers will be tabulated to show the influence of format on the response rate of training session evaluation surveys. Percentages of categorical answers will report. For Question 1-4, the statistical analysis will report number and frequency. For the Likert questions, the researcher will report number, frequency, and mean. For the mean, the values of 5 will be strongly agree, 4 will be agree, 3 will be neutral, 2 will be disagree, and 1 will be strongly disagree.



## **SUMMARY**

Chapter III discussed the population that participated in this research as the students that enrolled in OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University, in Spring, 2007. Next, the instrument design was explored to analyze how the information will be collected. Following the instrument design section, the researcher presented and explained the methods of data collection. Also, how that data would be analyzed was reported in the statistical analysis section. Each question will have the mean calculated. In the next chapter, Chapter IV, the data collected from the surveys will be presented. It will report the preferences of the respondents when they filled out training evaluation questionnaires.

## **CHAPTER IV**

### **FINDINGS**

This study was designed to evaluate the influence of questionnaire format on the response rate of training session evaluations. In this chapter, the researcher will discuss the findings concerning and preferences of respondents regarding questionnaire format when responding to a training evaluation survey.

#### **PARTICIPANT RESPONSE RATE**

Sixty-four surveys with cover letters were sent to the participants who attended OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University, Norfolk, VA, during Spring, 2007. Of the total sixty-four students, thirty-six participated and voluntarily completed the questionnaire, which was a fifty-six percent (56%) response rate.

#### **QUESTION RESPONSES**

Question 1 asked how likely the respondent was to complete training assessments. Twenty-nine respondents (82%) selected answer D, which indicated that they answer surveys more than 75% of the time. Three respondents (8%) selected answer B, which indicated that the frequency that they answered a survey was between 25%-50% of the time. Two respondents (3%) selected answer C and two respondents (3%) selected answer A, which indicated that they answer the survey between 0%-25% and 50%-75% of the time respectfully. As the findings indicated most respondents were willing to complete training surveys.

Question 2 addressed the place where the respondents preferred to complete a training questionnaire. Twenty-one respondents (59%) selected “at the training session”, followed by eight people (22%) who selected “on-site”. Five respondents (14%) preferred to take the survey back home to complete, while two respondents (5%) wanted to complete it in their office. In conclusion, most respondents selected to answer surveys during the training session.

Question 3, indicated sixteen respondents (45%) preferred to answer close-ended questions, followed by eleven people (30%) who selected the combination of both open-ended and close-ended question. Nine respondents (25%) preferred open-ended questions. According to the analyze of advantages and disadvantages of both formats in the literature review, close-ended questions were preferred if approvable. See Table 1.

Table 1. Questions 1—3

Item	A		B		C		D	
	No.	%	No.	%	No.	%	No.	%
Q.1. After a training session, how likely are you to complete the training assessment? _____ A.0-25% _____ B.25%-50% _____ C.50%-75% _____ D.75%-100% _____	2	5	3	8	2	5	29	82
Q.2. Where do you want to complete your questionnaire? A. On-site _____ B. Office _____ C. Take-home _____ D. At the training session _____	8	22	2	5	5	14	21	59
Q. 3. Do you prefer more close-ended or open-ended questions? A. Close-ended questions ____ B. Open-ended questions ____ C. Both close-ended and open-ended questions ____	16	45	9	25	11	30		

Question 4 was designed to determine the content of surveys that interested the respondents, and to what degree, it could also increase the response rate. From the data collected, fifteen respondents (42%) were concerned with content-relevancy, followed by eleven people (31%) who selected the instructor’s knowledge as their concern. Five respondents (14%) cared about the learning technology applied, while three respondents (8%) selected instructors’ facilitation role, and two people (5%) chose physical conditions as their concern. This will not only help the questionnaire designers, but may also give some hints to the training project managers on how to conduct favorable and effective training programs. See Table 2.

Table 2. Question 4

Item	Content Relevancy		Learning Technology		Physical Conditions		Instructor’s Knowledge		Instructor’s Facilitation	
	No.	%	No.	%	No.	%	No.	%	No.	%
4. What do you usually expect to see in a questionnaire for after-the-session training evaluation (Check each that you prefer)?	15	42	5	14	2	5	11	31	3	8

Question 5, which stated “Question format is not important to me when I evaluate training,” found that two respondents (5%) selected strongly disagree, seven respondents (20%) selected disagree, eleven respondents (31%) selected neutral, eleven respondents (31%) selected agree, five respondents (13%) selected strongly agree. A mean of 3.27 indicated that respondents were neutral regarding this question.

Question 6, which stated “Length of a questionnaire determines if I am going to complete it,” found that seven respondents (20%) selected strongly disagree, four respondents (11%) selected disagree, five respondents (13%) selected neutral, eleven

respondents (31%) selected agree, and nine respondents (25%) selected strongly agree. A mean of 3.31 indicated that respondents were neutral regarding this question.

Question 7, which stated “I do not mind who administers the survey,” found that no respondents (0%) selected strongly disagree, three respondents (8%) selected disagree, six respondents (16%) selected neutral, twelve respondents (33%) selected agree, fifteen respondents (43%) selected strongly agree. A mean of 4.08 indicated that respondents agreed with this question.

Question 8, which stated “I prefer to respond to a questionnaire anonymously,” found that no respondents (0%) selected strongly disagree, no respondents (0%) selected disagree, ten respondents (27%) selected neutral, ten respondents (27%) selected agree, sixteen respondents (46%) selected strongly agree. A mean of 4.16 indicated that respondents agreed with this question.

Table 3. Questions 5—8

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean
	No.	%	No.	%	No.	%	No.	%	No.	%	
5. Question format is not important to me when I evaluate training.	2	5	7	20	11	31	11	31	5	13	3.27
6. Length of a questionnaire determines if I am going to complete it.	7	20	4	11	5	13	11	31	9	25	3.31
7. I do not mind who administers the survey.	0	0	3	8	6	16	12	33	15	43	4.08
8. I prefer to respond to a questionnaire anonymously.	0	0	0	0	10	27	10	27	16	46	4.16

Question 9, which stated “I prefer to respond to a questionnaire that is concerned

more with my impressions and feelings,” found that three respondents (8%) selected strongly disagree, seven respondents (20%) selected disagree, fourteen respondents (37%) selected neutral, eight respondents (23%) selected agree, four respondents (12%) selected strongly agree. A mean of 3.08 indicated that respondents were neutral regarding this question. See Table 4.

Question 10, which stated “I prefer to respond to a questionnaire that covers the application of the knowledge or skills that I have learned in the training session,” found that no respondents (0%) selected strongly disagree, no respondents (0%) selected disagree, seven respondents (20%) selected neutral, fourteen respondents (37%) selected agree, fifteen respondents (43%) selected strongly agree. A mean of 4.22 indicated that respondents agreed with regarding this question.

Question 11, which stated “I prefer to respond to a questionnaire anonymously,” found that no respondents (0%) selected strongly disagree, five respondents (14%) selected disagree, eighteen respondents (50%) selected neutral, eight respondents (23%) selected agree, five respondents (13%) selected strongly agree. A mean of 3.36 indicated that respondents were neutral regarding this question.

Question 12, which stated “I prefer to respond to a questionnaire with more close-ended questions,” found that three respondents (8%) selected strongly disagree, four respondents (12%) selected disagree, nine respondents (25%) selected neutral, eight respondents (23%) selected agree, twelve respondents (32%) selected strongly agree. A mean of 3.61 indicated that respondents agreed with this question.

Table 4. Questions 9—12

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean
	No.	%	No.	%	No.	%	No.	%	No.	%	
9. I prefer to respond to a questionnaire that is concerned more with my impressions and feelings.	3	8	7	20	14	37	8	23	4	12	3.08
10. I prefer to respond to a questionnaire that covers the application of the knowledge or skills that I have learned in the training session.	0	0	0	0	7	20	14	37	15	43	4.22
11. I prefer to respond to a questionnaire that allows me access to the final results.	0	0	5	14	18	50	8	23	5	13	3.36
12. I prefer to respond to a questionnaire with more close-ended questions.	3	8	4	12	9	25	8	23	12	32	3.61

Question 13, which stated “I want to be aware of the objectives of the questionnaire upon reading the instructions,” found that no respondents (0%) selected strongly disagree, no respondents (0%) selected disagree, seven respondents (20%) selected neutral, twenty-three respondents (64%) selected agree, six respondents (16%) selected strongly agree. A mean of 3.97 indicated that respondents agreed with this question. See Table 5.

Question 14, which stated “I prefer to respond to a questionnaire with fewer questions”, found that no respondents (0%) selected strongly disagree, three respondents (8%) selected disagree, eight respondents (22%) selected neutral, eighteen respondents (50%) selected agree, seven respondents (20%) selected strongly agree. A mean of 3.81 indicated that respondents agreed with this question.

Question 15, which stated “I prefer to respond to a questionnaire on-line through the internet or intranet”, found that two respondents (5%) selected strongly disagree, four

respondents (10%) selected disagree, thirteen respondents (37%) selected neutral, eight respondents (23%) selected agree, nine respondents (25%) selected strongly agree. A mean of 3.50 indicated that respondents were neutral regarding this question.

Question 16, which stated “I prefer to respond to a questionnaire directly after the training session”, found that no respondents (0%) selected strongly disagree, two respondents (5%) selected disagree, four respondents (10%) selected neutral, nine respondents (25%) selected agree, twenty-one respondents (60%) selected strongly agree. A mean of 4.36 indicated that respondents agreed with this question.

Table 5. Questions13—16

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean
	No.	%	No	%	No	%	No	%	No.	%	
13. I want to be aware of the objectives of the questionnaire upon reading the instructions.	0	0	0	0	7	20	23	64	6	16	3.97
14. I prefer to respond to a questionnaire with fewer questions.	0	0	3	8	8	22	18	50	7	20	3.81
15. I prefer to respond to a questionnaire on-line through the internet or intranet.	2	5	4	10	13	37	8	23	9	25	3.50
16. I prefer to respond to a questionnaire directly after the training session.	0	0	2	5	4	10	9	25	21	60	4.36

## SUMMARY

This chapter discussed the findings of the influence of questionnaire format on the response rate of training session evaluations. The population of this research was the



participants who attended OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University, Norfolk, VA in Spring, 2007. This research was accomplished by e-mailed questionnaires.

The next chapter will summarize the first four chapters of this study including the introduction, background, review of literature, methods and procedures of data collection, calculations and findings. It will draw conclusions from the findings based on the data examined. Lastly, it will make recommendations on questionnaire design and other aspects regarding training evaluations in order to make good suggestions on survey design to achieve a better response rate.

## **CHAPTER V**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

In this chapter, the researcher will offer a summary, conclusions, and recommendations of this study. In the summary, this research project will be reviewed and conclusions will be drawn in terms of the research goals. Lastly, based upon the results of this study, recommendations for future research and future questionnaire design will be provided.

#### **SUMMARY**

This research was conducted to evaluate the influence of questionnaire format on the response rate of training session evaluations. In order to examine this influence, surveys were e-mailed to the participants who attended OTED 788/888 (Instructional Strategies and Innovations in Training and Occupational Education) at Old Dominion University, Norfolk, VA in Spring 2007. Of the total sixty-four students, thirty-six participated and voluntarily completed the questionnaire, which was a fifty-six percent (56%) response rate.

To determine the concerns and preferences of the respondents, the following aspects of questionnaire design in training evaluation were addressed:

- 1) What were respondents' concerns when they completed questionnaires after training?
- 2) What were the participants' preferences regarding format when responding to a training evaluation questionnaire.

Data were collected from the students who had training experiences. Based on this

research, conclusions can be made to design a questionnaire that is more appealing to the respondents and thus increasing the response rate.

## **CONCLUSIONS**

The following conclusions were based on the research goals.

Goal 1. What were respondents' concerns when they completed questionnaires after training?

From the data collected respondents indicated that they expected content relevancy (42%), instructors' knowledge (31%), the use of learning technology (14%), the length of a questionnaire (8%), and questionnaire format (5%). Therefore, it can be concluded that respondents' major concerns when completing a survey was content relevancy, followed by instructors' knowledge, learning technology, length of a questionnaire, while questionnaire format was of their least concern.

Goal 2. What were the participants' preferences regarding format when responding to a training evaluation questionnaire.

Their preference included:

- 1) I prefer to respond to a questionnaire directly after the training session (Mean=4.36).
- 2) I prefer to respond to a questionnaire anonymously (Mean=4.16).
- 3) I do not mind who administers the survey (Mean=4.08).
- 4) I want to be aware of the objectives of the questionnaire upon reading the purpose (Mean=3.97).
- 5) I prefer to respond to a questionnaire with fewer questions. (Mean=

3.86).

6) I prefer to respond to a questionnaire with more close-ended questions (45%).

7) I prefer to complete the questionnaire at the training session (59%).

Answers that showed no preference or concern included:

1) I prefer to respond to a questionnaire on-line through the internet or intranet (Mean=3.50).

2) I prefer to respond to a questionnaire that I have access to the final results (Mean=3.36).

3) I prefer to respond to shorter questionnaire (Mean=3.31).

4) Which type of questions should be asked in the survey (Mean=3.27).

5) I prefer to respond to a questionnaire that is concerned more with my impressions and feelings (Mean=3.08).

### **RECOMMENDATION**

The response rate of this study reached fifty-six percent (56%), which was adequate compared with voluntary surveys. There are two reasons that the respondents replied:

1. The respondents were in a training graduate class and had interests of related research.
2. The respondents knew each other and the researcher, since they took the same classes in graduate school. Therefore, this study recommends that designers choose a topic that can be of interest to the participants and target the interests of familiar audiences.

To design a good questionnaire, which is effective in answering the research goals, previous research has provided useful suggestions. However, in order to design a good

questionnaire that is appealing to the targeted audiences, their concerns and preferences should be addressed. In this way, one of the difficulties in conducting questionnaire design, low response rates, can be improved. In this research paper, factors relevant to questionnaire design were presented through the literature review. Also, based on the data collected and the analysis of the results, future questionnaire designers can take both of these two aspects into consideration in order to make the survey more effective.

Lastly, more research is needed in training evaluation. For example, the balance and imbalance of questions, the assessment of no opinion, and tone of wording can be studied to determine factors that influence survey response rates and also contribute to the design of more effective questionnaires.

## REFERENCES

- Bagozzi, R.P. (1992). The Self-Regulation of Attitudes, Intentions, and Behavior. *Social Psychology Quarterly*. 55, 178-204.
- Bradburn, N., Sudman, S., & Wansink, B. (2004). *Asking Questions*. San Francisco: John Wiley & Sons, Inc.
- Dillman, D.A., Sinclair, M.D., & Clark, J.R. (1993). Effects of Questionnaire Length, Respondent-Friendly Design, and a Difficult Question on Response Rates for Occupant-Addressed Census Mail Surveys. *The Public Opinion Quarterly*. 57, 289-304.
- Fink, A. (2003). *How to ask survey questions*. London: Sage publications.
- Groves, R., Dillman, D., Eltinge, J., & Little, R. (2001). *Survey Nonresponse*. New York: John Wiley & Sons, Inc.
- Lauer, P. (2006). *An Education Research Primer*. San Francisco, CA: The Jossey-Bass Education Series.
- Michael, W. (1997). *Handbook in Research and Evaluation*. San Diego, CA: Educational and Industrial Testing Services.
- Pearson Education, Inc., (1995-2007). Survey tool kit. Retrieved April 11, 2007, from survey tool kit Web site: <http://survey.pearsonassessments.com/resources/implementation/rates.htm>
- Sanchez, M.E. "Effects of Questionnaire Design on the Quality of Survey Data." *Public Opinion Quarterly*, 1992, 56, 206-217
- Schuman, H., & Presser, S. (1996). *Questions and answers in attitude surveys*. London: Sage publications.
- The Business Research Lab, (2005). Retrieved April 12, 2007, from The Business Research Lab Web site: <http://www.busreslab.com/tips/tip5.htm>
- Wang, G. G., & Spitzer, D.R. (2005). Human Resource Development Measurement and Evaluation: Looking Back and Moving Forward. *Advances in Developing Human Resources*. 7.

## APPENDICES A. QUESTIONNAIRE

### The Influence of Format on the Response Rate to Training Session Evaluations

Purpose: The purpose of the research is to evaluate the influence of questionnaire format on the response rate of training session evaluations.

Directions: Please read and answer each question, i.e., X, circle or highlight your responses.

1. After a training session, how likely are you to complete the training assessment?

A. 0-25% \_\_\_\_\_ B. 25%-50% \_\_\_\_\_ C. 50%-75% \_\_\_\_\_ D. 75%-100% \_\_\_\_\_

2. Where do you want to complete your questionnaire?

A. On-site \_\_\_\_\_ B. Office \_\_\_\_\_ C. Take-home \_\_\_\_\_ D. At the training session \_\_\_\_\_

3. Do you prefer more close-ended or open-ended questions?

A. close-ended questions \_\_ B. open-ended questions\_\_ C. Both close-ended and open-ended questions \_\_

4. What do you usually expect to see in a questionnaire for after-the-session training evaluation (Check each that you prefer)?

Learning Content: Relevancy \_\_\_ Learning Environment: Technology \_\_\_ Physical Conditions \_\_\_

Instructor: Knowledge/Skills \_\_\_ Facilitation \_\_\_

Circle each of your feelings from strongly disagree(1) to strongly agree(5)

<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
5. Question format is not important to me when I evaluate training.				1 2 3 4 5
6. Length of a questionnaire determines if I am going to complete it.				1 2 3 4 5
7. I do not mind who administers the survey.				1 2 3 4 5
8. I prefer to respond to a questionnaire anonymously.				1 2 3 4 5
9. I prefer to respond to a questionnaire that is concerned more with my impressions and feelings.				1 2 3 4 5
10. I prefer to respond to a questionnaire that covers the application of the knowledge or skills that I have learned in the training session.				1 2 3 4 5
11. I prefer to respond to a questionnaire that I have access to the final results.				1 2 3 4 5
12. I prefer to respond to a questionnaire with more close-ended questions.				1 2 3 4 5
13. I want to be aware of the objectives of the questionnaire upon reading the purpose.				1 2 3 4 5
14. I prefer to respond to a questionnaire with fewer questions.				1 2 3 4 5
15. I prefer to respond to a questionnaire on-line through the internet or intranet.				1 2 3 4 5
16. I prefer to respond to a questionnaire directly after the training session.				1 2 3 4 5

Thank you for your assistance!

## APPENDICES B. COVER-LETTER

Dear (Name):

Old Dominion University is conducting research to evaluate the influence of format on the response rates of training session evaluation surveys. We invite you to volunteer in this research project. Along with this letter is a short survey that asks you a variety of questions about questionnaire format. We are asking you to complete the survey, and email or send it back to us.

It is risk-free if you decide to participate in this survey and we guarantee that your responses will be kept confidential. We promise not to share any information that identifies you with anyone outside a research group.

The survey should take about five minutes to complete. We hope you will take the time to complete it and return it to us. Your participation will contribute to the success of the research on the quality of training evaluation and we sincerely appreciate your help. If you have any questions or concerns about completing the questionnaire or about being in this study, you may contact Florence at [yzhu@odu.edu](mailto:yzhu@odu.edu).

Thank you.

Sincerely,

Florence Y. Zhu  
Graduate Student

John M. Ritz  
Program Director

Department of Occupational &  
Technical Studies