

TOOLS FOR DATA COLLECTION

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SPECIFIC LEARNING OBJECTIVES

- To recall the definition of data collection
- To comprehend the significance of tools for data collection
- To highlight their merits and demerits

TOOLS FOR DATA COLLECTION

- **Questionnaire**
- • A questionnaire is a data collection instrument consists of a series of questions and other prompts for the purpose of gathering information from respondents.
- The questionnaire was invented by **Sir Francis Galton.**

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- Steps required to design and administer a questionnaire
- 1. Defining the Objectives of the Study
- 2. Define the target respondents and methods to reach them.
- 3. Questionnaire Design
- 4. Pilot Testing
- 5. Questionnaire Administration
- 6. Results Interpretation

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- **1. Defining the Objectives of the Study**
- • A questionnaire should allow us to collect the most complete and accurate data in a logical flow.
- – This is done in order to reach reliable conclusions from what we are planning to observe.
- • A well-designed questionnaire should meet the research goal and objectives and minimize unanswered questions—a common problem bound to many surveys.

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- **2. Define the target respondents and methods to reach them**
- • The researcher should clearly define the target, study populations from which she/ he collects data and information.
- • Main methods of reaching the respondents are
 - personal contact,
 - group of focus interview,
 - mail-based questionnaires
 - telephone interview.

• **3. Writing the Questionnaire**

- • Before writing the questionnaire researcher should decide on the questionnaire content.
- • Each question should contribute to testing one or more hypothesis/ research question established in the research design.
- Questions could be:
 - • Open format questions that are without a predetermined set of responses.
 - • Closed format questions that take the form of a multiple-choice question.

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- **3. Writing the Questionnaire (Cont)**
- **Points to be considered when writing and interpreting questionnaires:**
 - Clarity (question has the same meaning for all respondents)
 - Phrasing (short and simple sentences, only one piece of information at a time, avoid negatives if possible, ask precise questions, in line with respondent level of knowledge...)
 - Sensitive question: keen attention to approaches in formulating questions that could be embarrassing to respondents.
 - Hypothetical Questions should be avoided if possible.

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- **4. Questionnaire pilot testing**
- A pilot study, pilot project or pilot experiment is a small scale preliminary study conducted in order to evaluate feasibility, time, cost, adverse events, and effect size (
- • The major challenge in questionnaire design is to make it clear to all respondents.
- • In-order to identify and solve the confusing points, we need to pre-test the questionnaire.
- • During the pilot trial: the questionnaire participants should be randomly selected from the study population.

Workshop Questionnaire

Kindly fill in the given questions.

Workshop Questions	Response
Is this your first time at the workshop?	
Have you participated in all the activities concerned?	
Were there any areas which you would want to redo?	
If yes to the above question, please specify.	
Were the conductors of the workshop particularly helpful?	
Are there any doubts or queries you might have regarding the workshop?	
If yes, please state query 1:	
Query 2:	
Are there any complaints that you might be having regarding the workshop?	
Complaint 1:	
Complaint 2:	
Are you overall satisfied with the workshop?	
If the answer is no to the above, please specify your area of concern?	

Thank you for your feedback. We appreciate your taking the time. We ensure that we will try and strive towards improvement.

QUESTIONNAIRE

Researcher-Made Questionnaire On Factors Affecting Mathematics Performance of Laboratory High School Students at Laguna State Polytechnic University A.Y. 2009-2010

NAME: _____
(optional)

I. Student-related Factors

Direction: Please check (✓) and rate yourself honestly based on what you actually do given the statements using the following scales:

5 – always 4 – often 3 – sometimes 2 – rarely 1 – never

A. Interest	5	4	3	2	1
1. I make myself prepared for the math subject					
2. I listen attentively to the lecture of my math teacher.					
3. I actively participate in the discussion, answering exercises and/or clarifying things I did not understand.					
4. I want to get good grades on tests, quizzes, assignments and projects.					
5. I get frustrated when the discussion is interrupted or the teacher is absent.					
B. Study Habits					
1. I do my assignments regularly.					
2. I exert more effort when I do difficult assignments.					
3. I spend my vacant time in doing assignments or studying my lessons.					
4. I study the lessons I missed if I was absent from the class					
5. I study and prepared for quizzes and tests.					
6. I study harder to improve my performance when I get low grades.					
7. I spend less time with my friends during school days to concentrate more on my studies.					
8. I prefer finishing my studying and my assignments first before watching any television program.					
9. I see to it that extracurricular activities do not hamper my studies.					
10. I have a specific place of study at home which I keep clean and orderly.					

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- **Conclusion**
- • Questionnaire design is a multi-step process.
- • Questionnaires allow collection of both subjective and objective data in a large sample of the study population in order to obtain results that are statistically significant. . – Specially when resources are limited.
- • It is a good tool for the protection of the privacy of the participants..

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- • It is a good tool for the protection of the privacy of the participants. • The validity of data and information depends on the honesty of the respondent.
- • The questionnaires can measure both qualitative and quantitative data, but is it more appropriate for quantitative data collection

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- **2... Interview**
- Interviews consist of collecting data by asking questions.
- Data can be collected by listening to individuals, recording, filming their responses, or a combination of methods.



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- **There are four types of interview:**
- • Structured interview
- • Semi-structured interview
- • In-depth interview
- • Focused group discussion

- **Structured interview**

- • In structured interviews the questions as well as their order is already scheduled.
- • Your additional intervention consists of giving more explanation to clarify your question (if needed), and to ask your respondent to provide more explanation if the answer they provide is vague (probing).

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- **Semi-structured and in-depth interviews**
- • Semi-structured interviews include a number of planned questions, but the interviewer has more freedom to modify the wording and order of questions.
- • In-depth interview is less formal and the least structured, in which the wording and questions are not predetermined. This type of interview is more appropriate to collect complex information with a higher proportion of opinion-based information.

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- **Advantages and disadvantages of interview Advantages:**
- •Collect complete information with greater understanding.
- •It is more personal, as compared to questionnaires, allowing us to have higher response rates.
- •It allows for more control over the order and flow of questions.
- •We can introduce necessary changes in the interview schedule based on initial results (which is not possible in the case of a questionnaire study/ survey)

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- Disadvantages:
 - Data analysis—especially when there is a lot of qualitative data.
 - Interviewing can be tiresome for large numbers of participants.
 - Risk of bias is high due to fatigue and to becoming too involved with interviewees.

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- **Focus group discussion**
- • Focus group is a structured discussion with the purpose of stimulating conversation around a specific topic.
- • Focus group discussion is led by a facilitator who poses questions and the participants give their thoughts and opinions.
- • Focus group discussion gives us the possibility to cross check one individual's opinion with other opinions gathered.
- • A well organized and facilitated FGD is more than a question and answer session.
- • In a group situation, members tend to be more open and the dynamics within the group and interaction can enrich the quality and quantity of information needed.

Focus Group Interview



Continued

- Focus group discussion, some practical issues
- The ideal size of the Focus groups:
 - 8-10 participants
 - 1 Facilitator
 - 1 Note-taker

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- • Preparation for the Focus Group
- • Identifying the purpose of the discussion
- • Identifying the participants
- • Develop the questions
- • Running the Focus Group
- • 1) Opening the Discussion
- • 2) Managing the discussion
- • 3) Closing the focus group
- • 4) Follow-up after the focus group