HOW TO COLLECT AND USE DATA

TRAINER MANUAL

INTRODUCTION TO THE TOOLKIT

“This Trainer Manual on How to Collect and Use Data is developed in the frames of “ProDeCoR: Professional Development as a COVID-19 Response” project funded by International Visegrad Fund in 2020. The project is implemented by Armenian Regional Youth NGO in partnership with Youth Development and Integration Association STRIM (Poland), ReCreativity Social Enterprise (Hungary), and Vice Versa Association (Czech Republic). Toolkit is designed for trainers, youth workers, teachers, employment sector practitioners and other educators that work with young people. It provides objectives and detailed guidelines on how to work with young people in order to build their competences in the post-COVID 19 labour market. The manual covers 6-8 hours of learning activities and additional learning materials provided for follow up/self- learning.

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Session: Introduction to Data Collection Procedures

Themes	qualitative data, quantitative data, data collecting methods
Goal	Introduction to the methods of data collection
Objectives	After the session participants will be able to: ▸ differentiate between distinct aspects of data collection ▸ recognize the difference between qualitative and quantitative data identifying their purposes ▸ name and apply a number of methods to collect data
Group size	20-24
Time required	90 min
Overview / short description	During this session, participants will be introduced to the topic of data collection. They will get familiarized with the methods of data collection, and pick up related basic vocabulary and concepts.
Materials needed	Flip chart, markers, A4 papers, post-its, pens, 4-5 copies of Collecting data/Evaluation Vocabulary handout, 4-5 envelopes
Complexity	Beginners
References	T-Kit 10 on Educational evaluation in youth work, Link Participatory evaluation with young people, Link

Session: Introduction to Data Collection Procedures

Introduction and implementation

Time	Steps
5 min	**a.** Introduce the objectives of the module.
20 min	**b.** Prepare three distinct flip-charts on the following themes: expectations, contributions and learning blockers. Provide the participants with post-its in three different colours. Ask them to write down their expectations towards this learning activity (workshop, module), things that they could contribute with during the session and fears that might impede their learning process (each one on a separate post-it of a colour designated to the topic). Allocate enough time to the thinking process. Once they are ready, ask them to stick their post-its onto the flipcharts. Discuss the expectations, fears and contributions linking them to the plan of the sessions in this module. Tell participants that the activity regarding expectations and learning blockers is a great tool for a needs analysis in specific, particular groups. There are many ways to run this activity in a catchy way. For example, flipcharts might be painted with different symbols, e.g. weather phenomena or a tree that can metaphorically represent expectations, contributions and blockers. Or statements like "What do you want to take home", "What do you want to avoid?" and "What can I contribute" might be written on the flipcharts. which will stay till the end of the module so that they can be used during the final evaluation.
20 min	**c.** Ask participants, "Why do we need to collect data?" Discuss some answers in plenary. Before the session print out the "Collecting data/Evaluation Vocabulary" handout (one handout per 4-5 participants). Cut out the terms and their explanations separately, mix up all the pieces of papers and place them in an envelope (one envelope per group). Divide participants into the groups of 4 or 5. Give one envelope to each of the groups and ask to match terms with its explanations. In plenary, ask each group to reveal one of the concepts with their answers. The rest of the teams provide a feedback. Then ask the next group to do the same. Continue till all the concepts are covered. Address any doubts or challenges.
15 min	**d.** Show a short video: https://www.youtube.com/watch?v=4iws9XCyTEk. Discuss what the main differences between qualitative and quantitative data are writing them down on a flipchart. Summarize with the graph on page 6.
20 min	**e.** Brainstorm methods of data collection in the context of evaluating a learning activity. Integrate them into a flipchart with a division between those that work well with collecting quantitative data and those that work better with collecting qualitative data. Note that some of the methods might serve both perspectives. Write down the context when a method works best next to it. Discuss the following classic methods: Observation, Focus groups, In-depth interview, Diary, Video/Photo, Desk research/Literature review, Case studies, Structured interviews, Observation with guidelines, Spot checks, Surveys, Questionnaires, Enography. You can also add methods used in non-formal learning projects, such as: Reflection groups, Letters, Visual methods: pizza, weather forecast, a thermometer, a tree, a speedometer, puppets in a tree, boats on the sea, the river, etc, One word/Three words/One sentence review, Final round (More methods with descriptions can be found in. T-Kit 10 on Educational evaluation in youth work and in Participatory evaluation with young people). Use as many as suitable to your group. Link Ask participants which of these methods are useful in needs analysis?
10 min	**f.** Closing (explained below)

Session: Introduction to Data Collection Procedures

Debriefing and evaluation

d. After watching the video ask participants the following questions:
What are your thoughts after watching this video?
Did you find out anything new?

f. Evaluation of the workshop. Ask participants the following questions:
What did you learn?
Was there anything surprising for you?

Tips for facilitator

Make sure that all the concepts in the vocabulary sections are well-understood as this is necessary for the next sessions. You can adjust the listed methods of data collection to your target group. Encourage everyone to participate.

Additional materials for participants and trainers

Participatory evaluation with young people Link
Essentials. Evaluation tried and tested. Creative evaluation activities. Link

Handouts

Collecting data/Evaluation Vocabulary

Quantitative and Qualitative Evaluation: Basic differences

QUANTITATIVE	QUALITATIVE
Measurement	Explanation
Conclusions are based on the analysis of data	Conclusions from observations are dependent on interpretation
Replication of the process is possible	The process is difficult to replicate
Structured	Unstructured

T-Kit on Evaluation page 34

Session: Evaluation of Youth Activities

Themes	evaluation, assessment, data collection
Goal	Introduction to the process of evaluating a learning activity
Objectives	After the session participants will be able to: ▸ understand the benefits of various evaluation strategies ▸ outline an evaluation process for their learning activity ▸ evaluate their projects
Group size	20-24
Time required	90 min
Overview / short description	Evaluation is a process that should be planned and carefully implemented for each project or learning activity. This session aims at educating the participants about the importance of evaluation, familiarizing them with various evaluation methods assisting them in preparing their own evaluation strategy.
Materials needed	Flip chart, markers, A4 papers, post-its, pen, pencils, a copy of MAIN QUESTIONS TO PLAN THE EVALUATION per each working group
Complexity	Beginners - Intermediate
References	T-Kit 10 on Educational evaluation in youth work Link PAJP - Ewaluacja w pracy metodą projektu Link

Session: Evaluation of Youth Activities

Introduction and implementation

Time	Steps
10 min	**a.** Divide participants into three groups. Give each group a flipchart and markers. Ask participants to brainstorm associations with the word "evaluation" and write all of them on a flipchart hanging on the wall and discuss the results with everybody.
20 min	**b.** Features of the evaluation. Separately prepare five-seven statements defining evaluation on A4 papers and place them in different spots on the floor. The statements could be the following: a. Evaluation is a systematic process of collecting data. b. Evaluation aims at improving practices. c. Evaluation is a procedure to check if expectations and aims of the activity reflect reality. d. Evaluation is about planning activities. e. Evaluation is an art of asking questions. f. Evaluation judges gathered data based on the set criteria. g. Evaluation is a tool for introducing and measuring quality standards. All the participants read the statements in silence and once they are done, they stand next to the statement they agree with most. Start discussing their choices. The discussion should lead to the conclusion that all the statements describe evaluation and are its necessary elements. Underline that evaluation is a process that should last for the whole period of planning, implementing and reporting the activity/project, it should be planned in advance and refer to indicators. Discuss why we conduct evaluations and write the results down on a flipchart. Some examples are as follows: - to learn - to motivate - to participate - to change and improve - to plan better - to recognize and capture the achievements - to consolidate the results - to check if interests of all parties are met - to strengthen cooperation with partners, etc. Highlight the detail that evaluation is not for judging or giving numerical assessments like at school. It is a natural process of searching for good parts and those that might be improved.
30 min	**c.** Present the process of the evaluation in relation to a project (Handout from T-Kit on Evaluation page 52) and discuss its elements. Divide participants into groups of five and ask them to prepare an evaluation plan for the training module that they are taking part in at the moment. Give them the "Steps of planning the evaluation" handout. Discuss the results and compare the strategies.
20 min	**d.** Closing (explained below)

Debriefing and evaluation

a. Was it easy or difficult to come up with associations related to evaluation?
b. Was there anything that surprised participants in this activity?
c. Discuss all the difficulties that participants could have had during this exercise.
d. Ask participants to write on a post-it what they have learnt during this session and to stick it on a flipchart (the flipchart might be decorated with a drawing, e.g. a tree, a cloud, etc.). Let participants get familiar with all the answers in silence.

Tips for facilitator

Encourage all the participants to take part in the activities, however don't force anyone.

Additional materials for participants and trainers

Monitoring and evaluation by Civicus Link
A mini-evaluation pack for youth groups and organisations Link
Participatory evaluation with young people Link
Essentials. Evaluation tried and tested. Creative evaluation activities. Link

Handouts

MAIN QUESTIONS TO PLAN THE EVALUATION

Session: Data Collecting Methods, Part 1

Themes	collecting data, types of questions, questionnaires, surveys
Goal	Learning about questionnaire as a tool of collecting data
Objectives	After the session participants will be able to: ▸ distinguish different types of questions and their purposes ▸ have a better understanding of the logic behind formulating questions ▸ select appropriate questions for their questionnaires ▸ identify mistakes in questionnaires and propose correct variants for the questions
Group size	20-24
Time required	90 min
Overview / short description	Questionnaires are one of the main methods of collecting data these days. They can be easily prepared online. During this session, participants will consider different types of questions that can be in questionnaires, learn about a number of scales to measure data and view questionnaire examples.
Materials needed	Flip chart, markers, A4 papers, post-its, pen, pencils Handout "DO's and DON'Ts while constructing questions".
Complexity	Intermediate
References	T-Kit 10 on Educational evaluation in youth work Link

Session: Data Collecting Methods, Part 1

Introduction and implementation

Time	Steps
5 min	**a.** Energizer - A quick question. Tell participants that you will ask them a few questions and they will have to answer as fast as they can. The question is: What colour are the clouds? (they will answer white). What do cows drink? Probably at least some of them will answer “milk”. Discuss with participants what they think the reason for the wrong answer is. Is it because of the way the questions are constructed Or rather how our brain works? Present the objectives of the session. Tell participants that the focus will be put on the surveys and questionnaires. You will also talk about how to prepare and formulate questions.
15 min	**b.** Discuss the differences between a survey and a questionnaire. A questionnaire is a set of questions given to participants. It may be part of a wider survey. A survey is a process of using questionnaires and other data collection methods to find out more about a specific group. It is a combination of questions, processes and methodologies. A survey always involves questionnaires. But a single questionnaire is only one small part of a survey. Surveys are a method for collecting qualitative and quantitative data. Comparable information is gathered by using standardized methods, such as questionnaires. Tell participants that traditionally questionnaires were distributed on paper, however these days more and more often they are developed online using, e.g. Survey Monkey, Google Forms (participants will learn more about these instruments on IT Tools sessions). Collecting data through online questionnaires is easier and less time consuming as data is entered in the computer since the very beginning of the process. Additionally, IT Tools can be highly effective with basic (and more complicated) statistics and data analysis. Present the types of questions: **Close-ended questions:** Nominal: the responses are categories (variables) that differ in name. Example: questions about nationality, gender, profession, education, place of living, etc. Multiple choice. Ordinal: the responses are categories (variables) that can be put in order, on a scale. This popular form of survey question offers respondents an ordered range of answers from one extreme to another. For example: - Likert- type scale: Strongly disagree - Disagree - Neither Agree or Disagree- Agree - Strongly Agree - Measuring frequency: Very often - Often - Not often - Not at all Interval: the responses are categories (variables) in which you can measure the degree of difference between items. Distance between categories is meaningful. These questions enable to analyze more data like finding averages, testing correlations. Rating scale, rank ordering. For example: “Rate your experience from 1 to 10”. **Open-ended questions** They leave it to the respondent to answer the question according to his or her own logic and with their own words. They result in collecting qualitative data. Underline that both of the above-mentioned options have pros and cons. Open-ended questions give the possibility of obtaining more accurate, diverse answers and provide a freedom of response, however they might discourage people from filling in the entire questionnaire, require more effort on the part of the respondent and might be answered in a short way. Close-ended questions make it easier to compare the answers, the answers require less effort and they can be checked faster, however they might cause a cursory attitude towards the topic. Closed-ended questions are also more difficult to prepare.

Session: Data Collecting Methods, Part 1

Introduction and implementation

30 min	**c.** Before the session cut statements from the "DO'S AND DON'TS WHILE CONSTRUCTING QUESTIONS" handout, mix and put all the pieces into a box or pouch. Ask participants to draw one of the statements. Divide the flipchart into two parts:on one side you will be placing the DO's and on the other – the DON'Ts. While each participant reads his or her statement out aloud, ask the other participants to raise their hands (or stand up) if they think it is a DO! Discuss why, get an example (or bring your own example) and place the statement on the relevant part of the flipchart.
30 min	**d.** Bad questionnaire exercise (T-Kit page 60). In a group of four, analyze the questionnaire and spot mistakes. Discuss the mistakes and the possible correct solutions in the plenary.
10 min	**e.** Closing of the session (see below).

Debriefing and evaluation

e. Having concluded all the exercises divide all the participants into smaller groups to create so-called "Reflection groups". Tell them that it will be a great introduction for the next session. Each group is provided with a set of questions and asked to write down their answers on the paper after they finish discussing them:

How do you feel after this session?

What did you learn?

What was surprising for you?

What would require more focus from you in the future?

Tips for facilitator

If participants get frustrated with reacting to the statements in task 3, you can just discuss the DO's and DON'Ts. Moving around just ensures more involvement and helps with keeping participants active, however not everyone might appreciate it.

Session: Data Collecting Methods, Part 2

	Themes	In-depth interviews, structured interviews, semi-structured interviews, focus groups, conducting an interview
	Goal	Learning about interviews as a tool of collecting data
	Objectives	After the session participants will be able to: ▸ understand the importance of interviewing in the context of qualitative data collection ▸ reflect on different types of interviews and their usage ▸ practice preparing an interview guide ▸ conduct and maintain interviews
	Group size	20-24
	Time required	90 min
	Materials needed	Flip chart, markers, A4 papers, pen, pencils, research scenario - different for each working group
	Complexity	Intermediate
	References	T-Kit 10 on Educational evaluation in youth work Link

Session: Data Collecting Methods, Part 2

Introduction and implementation

Time	Steps
5 min	**a.** Tell participants that during this session they will practice constructing questions and learn how to conduct interviews - one of the most effective methods of data collection. Ask participants about their experience of the reflection groups from the previous session. Did they feel that it was "kind of an interview"? Why? If yes, what kind of an interview was it?
15 min	**b.** How to conduct an interview? Present an input about the structured and in-depth interviews. Introduce the main features of focus groups. You can use the knowledge from T-Kit on Educational evaluation in youth work, page 62-64. Discuss cases when qualitative research interviews are appropriate for collecting data and when to choose a specific interview type. Underline that through interviews we seek for opinions, attitudes, experiences. Brainstorm with the tips for preparing and conducting interviews. Possible tips could be the following: - Get prepared as an interviewer (planning the research questions, background literature, choosing appropriate time and space); - Design an interview guide/scenario and test your questions; - Make sure that your participant feels comfortable. Introduce yourself, present the purpose of this interview, list topics that you will cover, set ground rules for the interview, etc. - Consider cultural issues/gaps; - You should remain neutral, however remember that you will co-create the data! - You might adjust your interview guide/scenario during the interview. Some questions might be misunderstood or irrelevant, some will be missing; - Avoid closed or dichotomous (YES/NO) questions. Questions should stimulate thinking. - Record your interview, equally important, seek for a consent to do it;
35 min	**c.** Tell participants that they will practice constructing a qualitative interview guide. Divide them into groups of 4. Give each group a different scenario prepared in advance (ideally prepare scenario for needs analysis, evaluation and explanatory research) and the task to set off aims and research issues and prepare an interview guide. Ideally, participants should be familiar with the topic as they will be interviewed in the second part of this exercise as well. Some examples of the scenarios that might be used in this activity: - You are planning to prepare an online activity on creativity for teachers/youth workers. You want to identify their needs and expectations, preferable forms of activities, and whether they have previous experience in this kind of activities to collect some case studies. - You want to develop a training course on the ways of conflict resolution. You aim to find out what kind of conflicts your respondents face every day and how they deal with them so you can identify gaps and prepare workshops. - You want to find out whether participants are satisfied with the current training course, what they like most and what their proposals for improvements would be. - You want to find out what respondents think about relevant issues in your group (pick one topic, think why it is relevant and what would be the reason to collect this data for?). - You want to find out the needs in your respondents' local community and ways of fulfilling them. - You want to learn about environmental awareness of your respondents and possible actions that they take in their daily lives. You can also come up with your own ideas. Give the groups 10 minutes to prepare a short interview guide. Make sure that every participant has a copy of the scenario they have developed (they can take a picture with their phones at the end of this part). After scenarios are ready, match participants in pairs (each participant should be paired up with someone from another group from the previous exercise). Allocate 15 minutes to conducting an interview according to the prepared guide. After the first interview, ask them to swap roles and conduct a second interview. In this way everyone has a chance to act both as an interviewer and an interviewee discussing two different topics.

Session: Data Collecting Methods, Part 2

Debriefing and evaluation

Time	Steps
	d. After conducting both interviews, participants shall discuss the following: - How did they feel as interviewers/interviewees? - What kind of guides had they prepared and what kind of interviews did they conduct? Were they structured? Semi-structured? In details? - Did the interviews go according to the plan? If not, why? How did they deal with it? - What were the challenges of preparing an interview guide? - After conducting the first interview, would they adjust the interview guide? Or should it remain the same? - What were the most common difficulties during conducting an interview? - What are the results of the interviews. How can they use the collected data? **e.** Evaluation of the module. Go back to the expectations, contributions and learning blockers. Ask participants to take their post-its back from: 1. The expectations flipchart if their expectations were fulfilled. 2. The contributions flipchart if they managed to contribute 3. The learning blockers flipchart if these fears didn't affect the learning process during the course. The participants can read and share their post-its if they are willing to. Read aloud the post-its that were left on the flipchart. In case you have prepared an evaluation questionnaire, hand it in to the participants to complete it or ask them to do it online using Google Forms or Survey Monkey. Thank everybody for their participation and involvement.

Tips for facilitator

Encourage participants to act as an interviewer and an interviewee telling them that it can be a really nice and fun experience. However, in case one role is too much for any of the participant who won't be ready to take one of them, he or she might act as an interviewer or interviewee twice if this works better.

Handouts

Collecting Data/ Evaluation Vocabulary

SURVEY
Is a method to conduct research to collect data from a predefined group of respondents in order to gain information and insights into various topics of interest.

IN-DEPTH INTERVIEWS
Is a method to run qualitative research. It involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on the given topic.

IMPACT
Is the indicator of changes that can be linked to the implementation of the activity. It determines and measures the level of achieving the goals and objectives

OBJECTIVE
Is the possible, expected outcome of the activity. It should be Specific, Measurable, Achievable, Realistic, set in Time.

QUESTIONNAIRE
Is the main instrument for collecting data in a survey. It is a set of standardized questions, which follow a fixed pattern in order to collect individual data about one or more specific topics.

NEEDS ANALYSIS
Is a process of identifying gaps or revealing individual expectations.Needs analysis is often considered as a first step in project/activity planning.

FOCUS GROUP
Is another method to conduct research, it consists of a group interview, planned discussion led by a moderator to gather opinions on particular topics.

QUALITATIVE DATA
Aims to explain different phenomena. Conclusions are drawn based on the observations.

QUANTITATIVE DATA
Aims to count or measure different phenomena. Conclusions are drawn based on the analysis of data.

STRUCTURED INTERVIEWS
Is a research method that consists of gathering data by asking the same questions from a specifically prepared questionnaire to selected respondents (research sample). It can be quantitative or qualitative.

SECONDARY DATA
Is a piece of information that already exists, and has been collected by other people, organisations. It can be used within the framework of needs analysis.

INDICATOR
Is an observed value of a variable, a measurable or tangible sign that something has been done

VARIABLE
Refers to a person, place, thing, or phenomenon that you are trying to measure in some way. Can be dependent and idependent.

Handouts

MAIN QUESTIONS TO PLAN THE EVALUATION

Why evaluate? (What are the reasons for evaluating this training module?)	What for? (What are the objectives of evaluating this training module?)	What should be evaluated? (What are the evaluation fields and elements?)	What are the evaluation objectives? Are they SMART (Specific, Measurable, Achievable Realistic, set in Time)?

How and when should the evaluation be carried out?(What are the methods and sources for the evaluation?)	Who will carry it out and for whom will it be done? (Who are the actors of the evaluation?)	Are there any additional resources required for the evaluation? Are there any limitations or barriers in collecting or evaluating data?	How will you use the collected data?

Handouts

DO'S AND DON'TS WHILE CONSTRUCTING QUESTIONS

(based on T-Kit on Evaluation and https://ergonomicsblog.uk/questionnaire-design/)

DO'S	DON'Ts
Use clear, short questions	Use double negatives
Put your questions in a logical order	Use technical jargon and abbreviations
Consider the respondents' skills and capacities in terms of the language, literacy and written expression	Use emotionally loaded words (i.e. frustrating, exciting, annoying, fantastic)
Give clear instructions (i.e. tick, circle a number, check the box, etc.)	Use leading questions (i.e. “Name the innovative elements of this course”)
Be consistent: clear, direct, precise	Use long complex questionsUse biased questions (i.e. “How did the group process contribute to your learning?”)
Give the questionnaire a title (i.e. Participant Evaluation Questionnaire of Activity X?)	Present two questions in one broader question (i.e. “How would you assess food and accommodation?”)
Include a short introduction in the questionnaire explaining what you will use the information for (i.e.: the information collected will be used to compile the evaluation section of the final report to the funding institutions)	Put important questions at the end of the questionnaire
Present it in a user-friendly manner and give it an attractive layout and appearance	Use idioms or culture specific expressions (i.e.: “it's a piece of cake”, “green light”, “fire brigade”, “cup of tea”; burning issues”)
Provide an adequate variety of options for answering closed-ended questions	Use excessively lengthy questionnaires
Leave enough space for the answers to the open-ended questions	Use repetitive questions
Use filter questions (to help the respondents avoid answering questions that do not pertain to them)	Provide insufficient opportunity for the respondents to have their say
Grade the difficulty of the questions (from simple to complicated)	
Use a neutral answer to the questions asked on scales	
Use more interval questions	
Break down broader ideas into multiple questions	