

*Analysing Data Collected from the
Community Capacity Building Tool:
A Manual for Users*

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SECTION I

Purpose of the Community Capacity Building Tool

Capacity building has emerged as a key strategy for enabling communities to address priority health issues across many PHAC funding programs. However community capacity has proven difficult to measure (Ebbesen et al., 2004). With calls coming from within the government to evaluate the effectiveness of community-based funding programs (Auditor General of Canada, 2001), and requests from funded organizations (Jamieson and Simces, 2002) for instruments that help them track this elusive but important work, it became apparent that an instrument designed to measure capacity and the results of capacity building suitable to the PHAC context was needed. PHAC required the ability to look at collective results (not to compare individual projects but to examine the combined results of projects). Projects required a method to track their progress. The development of an instrument was believed to have the potential to meet both needs. The purpose of the community capacity building tool (CCBT) is to track changes in community capacity to address health issues during the course of funded projects. To view a copy of the Tool go to: <http://www.phac-aspc.gc.ca/canada/regions/ab-nwt/download.html>

SECTION II

Purpose and organization of the user's manual

This manual has been developed to support and guide users to administer, collect and analyse data. The table of contents is a good place to find things in the manual. If you do not have a copy of the CCBT, you may wish to download it and review it prior to reading this manual (<http://www.phac-aspc.gc.ca/canada/regions/ab-nwt/download.html>). Next you should go to section three which discusses the content of the instrument and the underlying theoretical framework that guided the development of the tool. This section will help you to better understand what is in the tool and why it is in the tool.

Sections IV to V guide you through the steps of administering the tool, entering and verifying data; provides information on how to analyse the data, and examples as to how you can present the results. Appendix A provides an example of a coding manual listing some of the variables and values in the tool.

SECTION III

Content of the tool

The theoretical underpinnings of the community capacity building tool include: Population Health¹, Health Promotion², community development theories, and community capacity development theories described in the literature³⁻¹⁶. Of the existing theories, nine capacity domains that appear consistently in the literature were identified as important areas to include in the community capacity assessment tool. Inclusion of these domains was validated at a national think tank. These nine domains include: 1) participation, 2) leadership, 3) community structures, 4) role of external supports, 5) asking why, 6) resource mobilization, 7) skills, knowledge and learning, 8) links with others, and 9) sense of community. See <http://www.phac-aspc.gc.ca/canada/regions/ab-nwt/download.html> for the complete tool.

Capacity domains and items

The next paragraphs will define each of the nine domains and list the items that make up each domain scale. Definitions have been extracted directly from the community assessment tool. An effort has been made to keep definitions in a language that is simple and familiar to community groups.

Participation

Participation is the active involvement of people in improving their own and their community's health and well-being. Participating in a project means the target population, community members, and other stakeholders are involved in project activities, such as making decisions and evaluation.

The following items make up the participation scale.

- a) Actively involving community organizations in the project
- b) Actively involving a representative range of target population members in the project
- c) Overcoming barriers to participation of the target population in the project
- d) Using different methods to inform target population, community members, and other stakeholders about the project

Leadership

Leadership includes developing and nurturing both formal and informal local leaders during a project. Effective leaders support, direct, deal with conflict, acknowledge and encourage community members' voices, share leadership, and facilitate networks to build on community resources. Leaders bring people with diverse skill sets together and may have both interpersonal and technical skills. Finally, an effective leader has a strategic vision for the future.

- a) Defining key roles and responsibilities of project and community leaders
- b) Having reporting guidelines to ensure project leader(s) are accountability to the project team and the target population
- c) Encouraging and supporting the involvement of informal leaders in the community in the project

Community structures

Community structures refers to smaller or less formal community groups and committees that foster belonging and give the community a chance to express views and exchange information. Examples of community structures include church groups, youth groups, and self-help groups.

- a) Developing links with pre-existing community structures
- b) Identifying areas for improvement in community structures that the project could work on
- c) Creating new community structures that help community members.

Role of external supports

External supports (funding bodies) such as government departments, foundations, and regional health authorities can link communities and external resources. At the beginning of a project, early external support may nurture community momentum.

- a) Providing project related information
- b) Asking for project-related technical expertise from external supports
- c) Asking external supports for financial support for organizational operations and projects
- d) External supports having policies that support communities taking action on priority issues

Asking why

Asking why refers to a community process that uncovers the root causes of community health issues and promotes solutions. The community comes together to critically assess the social, political, and economic influences that result in differing health standards and conditions. Exploration through “asking-why” helps refine a project to reflect the community needs.

- a) Exploring the root causes of the issue(s) targeted by the project
- b) Involving the target population in the process of “asking why”
- c) Involving the target population in finding solutions to root causes of issues

Obtaining Resources

Obtaining resources includes finding time, money (other than from funding bodies), leadership, volunteers, information and facilities both from inside and outside the community.

- a) Accessing internal resources needed for project success
- b) Accessing external resources needed for project success

Skills, knowledge, and learning

Skills, knowledge, and learning are qualities in the project team, the target population, and the community that the project team uses and develops.

- a) Developing project team's skills and knowledge, or accessing the skills and knowledge, needed for the project's success
- b) Providing the target population community members with opportunities for learning.

Linking with others

Linking with others refers to linking your project with individuals and organizations. These project links help the community deal with its issues. Examples include creating partnerships or linking with networks and coalitions.

- a) Networking with diverse sectors to gain support for the project
- b) Providing information to project links
- c) Receiving information from project links
- d) Working with project links to take action on community issues

Sense of community

Sense of community, within the context of a project, is fostered through building trust with others. Community projects can strengthen a sense of community when people come together to work on shared community problems. Collaborations give community members confidence to act and courage to feel hopeful about change.

- a) Contributing to a sense of community among community members.

SECTION IV

Administering the tool

The community capacity tool was developed to help project members think about how their work is helping to build capacity within the project's sphere of influence. This tool can be used at the beginning, in the middle and at the end of a project.

The community capacity tool was developed to be completed by a number of members from the same project in a group setting. These members typically include the project coordinator and committee members.

Before you send out the tool to a project send a cover letter or organize a conference call with projects to provide some background about the tool, its purpose and why they are encouraged to complete it, what they need to do as project coordinator, etc.

SECTION V

Data entry

A coding manual is a document containing a list of all your variables and their corresponding properties including: the type of variable (numeric or string (words)), variable name, and number values and what they mean (response choices). This manual is very useful to the person who will enter the tool data as well as for the person who will analyse the data. SPSS (Statistical Package for Social Sciences) has an option that allows you to print out a copy of the variables and their corresponding characteristics; this can be printed and used as your coding manual (see Appendix A for an example of the SPSS coding manual used for this tool). You will also want to have a tool with variables written beside corresponding questions, and number values beside response choices, this will also be very useful to the person responsible for data entry. An example of some coded tool questions is provided in Appendix A.

Data should be entered into a spreadsheet (Excel or SPSS). In the spreadsheet the columns represent the variables and the rows represent the respondents. In the rows you enter each respondent's answers to each question (a variable).

If you ever transform or change any variables, these transformations or changes should be added to the coding manual. In SPSS you have the option to save any statistical equations used to transform or change variables in syntax. Within the syntax you can write notes explaining what you did, why you did it and when you performed the transformations or changes. The syntax can then be printed out and added to your coding manual. You can also save the syntax so you have an electronic copy.

Data analyses

Qualitative Data

Answers to open ended questions can be viewed by asking SPSS to conduct a frequency distribution of each of the string variables. This data can then be exported to a word processing program or qualitative analysis software for qualitative analysis.

There are several options for applying content analysis to open ended questions:

- Responses to individual questions for one time period can be analysed (look at all project responses to a question in their first report to look for patterns, themes or interesting unique cases)
- Responses to individual questions at time one and time two can be analysed
- Responses to all questions for each project can be analysed to see the complete picture at an individual project level

Triangulation of qualitative and quantitative results is important for providing a complete story. The qualitative information will help explain why, in some areas, projects selected higher rankings, stayed the same, or lowered their rankings as the projects evolved.

Descriptive statistics

Descriptive analysis is the most common method used to examine and summarize large amounts of data. Descriptive statistics usually include means, standard deviations, and frequencies.

Frequencies are commonly performed to count how many people answered each question with each response (frequency distribution). Frequencies also provide the percentages or proportions for each frequency distribution.

You should run frequencies for all the numeric response questions in the tool. This will allow you to find errors in your data. For example the frequency distribution may show a value that is not a response choice. Errors should be corrected before analysis begins. You may want to ask the program to provide an indication of minimum and maximum values; this allows you to quickly identify any values that may not be a response choice.

Making comparisons or analyzing change over time

The CCBT uses a quasi-behavioural four point ordinal scale. To measure whether there is a statistically significant difference in responses from time 1 to time 2, the most appropriate test to use is the Wilcoxon signed-rank test. (This test is the non-parametric equivalent as the paired *t* test.) The Wilcoxon signed-rank test is available in SPSS (select Analyze, then Nonparametric tests, then Two related samples tests, and select Wilcoxon signed-rank test).

Data presentation

The tool can be used to provide valuable feedback to both community organizations as well as Public Health Agency of Canada staff. However the data will only be valuable to each of these audiences if the information presented caters to each of these groups. You may also want to prepare people for the fact that the report is coming in an attempt to create an interest in the findings ahead of time.

Identifying audiences

The first step in planning your presentation is to identify the audience you are presenting to. Potential audiences include: community members, senior administrators, and front line staff of community organizations. The make-up of the audience will help determine what, how much, and how you will present your findings. You will not use the same methods of presenting your findings to a group that is knowledgeable about research as you do for a group with little knowledge of research.

What should you present?

If you are presenting to senior executives your presentation should be brief and provide an overview of the findings. Often senior executives only have time to read executive summaries. So investing time in producing a well-written executive summary is well worth it. Presentations for front line staff and or community members should be detailed as they may want to know all the specifics of their capacity so they can use the information to plan, or report of organizational capacity progress.

Methods of presentation

There are typically two methods of presenting the data: in a written report or an oral presentation (typically power point, or overheads with handouts). Each method must fit the audience. Typically large reports get put on a shelf and put aside to read at a later date (often never). Only the most committed and interested are likely to read anything lengthy. Another interesting means to presenting results is in a newsletter. Newsletters can be distributed on paper or on a website or emailed.

Making it graphic

Data that is presented in a visually appealing matter will help you reach and interest a larger audience. This is true for written reports, newsletters as well as in person power point presentations. Reports and presentations should include a mix of text and graphs. Graphic presentation of tool results is much more appealing than tables with numbers.

The data lends itself to presenting the results of each domain in the form of a histogram (figure 1 and figure 2). This type of presentation would be of most interest to the community groups. If you really want to get into detail you can present each of the sub components for each of the nine domains in the form of a pie chart (figure 3). However, this can become quite lengthy and should probably only be done upon request. Executives would probably be more interested in a histogram displaying the mean¹ scale scores for each of the nine domains (figure 4).

¹ Using the mean for this type of data can provide a quick picture summarizing the information but has limited value from an analytical perspective because the data is collected using an ordinal scale (e.g., projects can't select a 3.25). If you want to measure change over time the Wilcoxon signed-rank test is the correct way to do this versus comparing the mean at time one and the mean at time two.

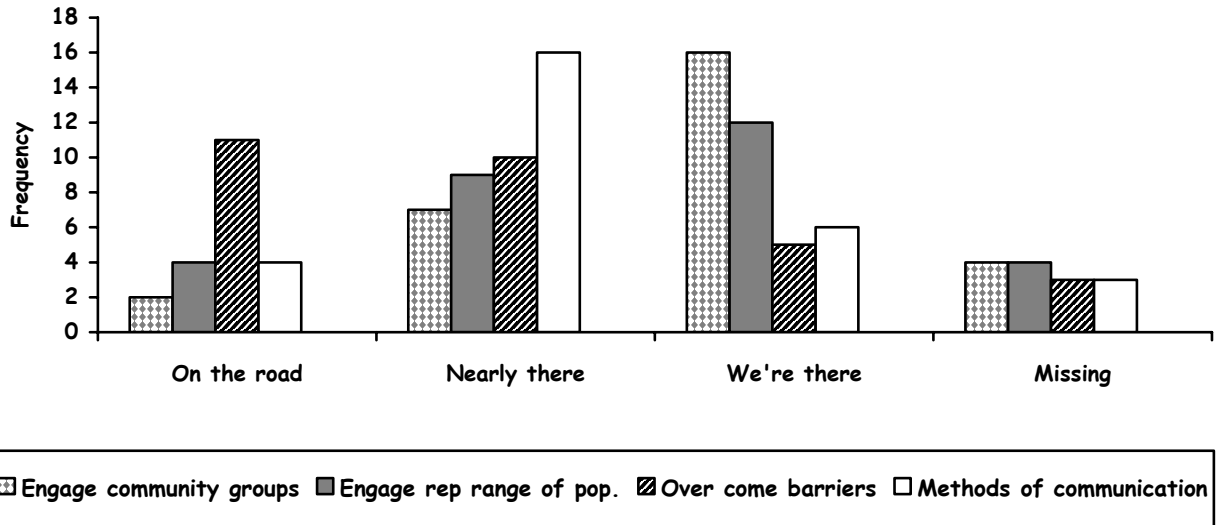


Figure 1. Community groups participation capacity for each scale item , expressed by frequency of response (N=29)

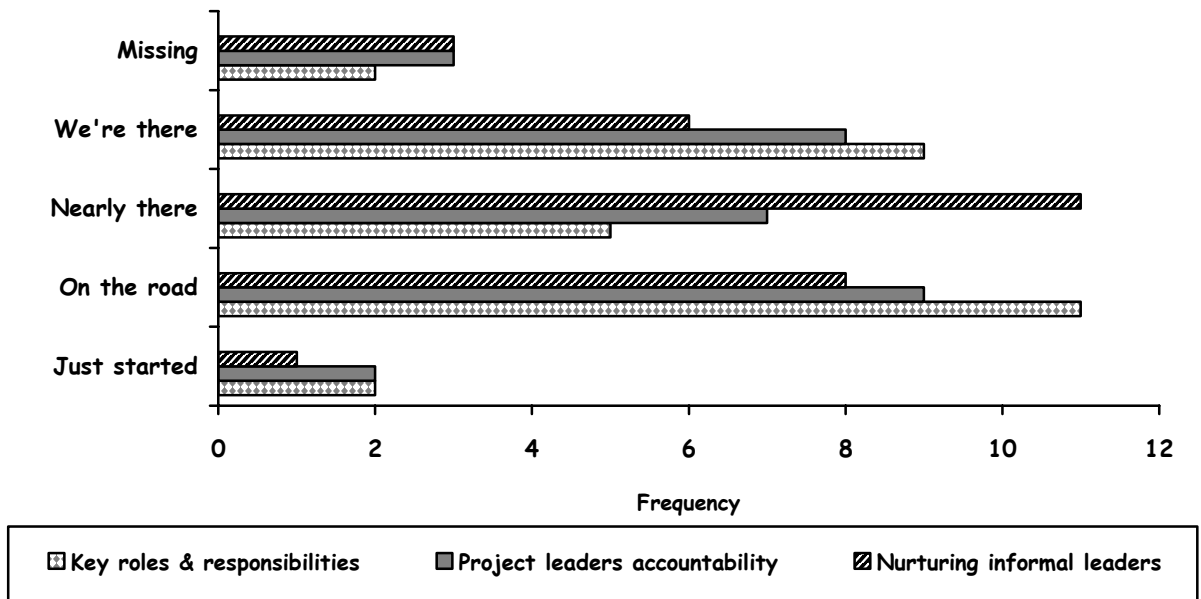


Figure 2. Community groups leadership capacity for each scale item, expressed by frequency of response (N=29)

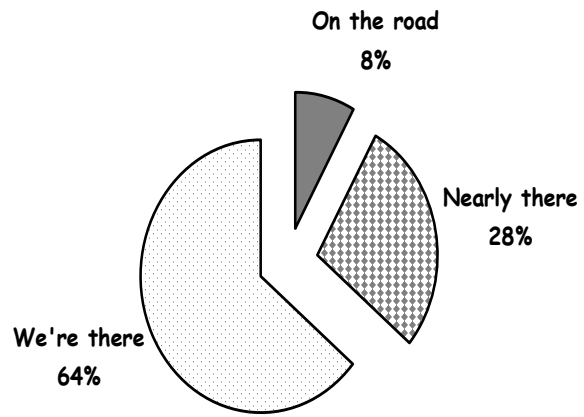


Figure 3. Engage community groups in project (N=29)

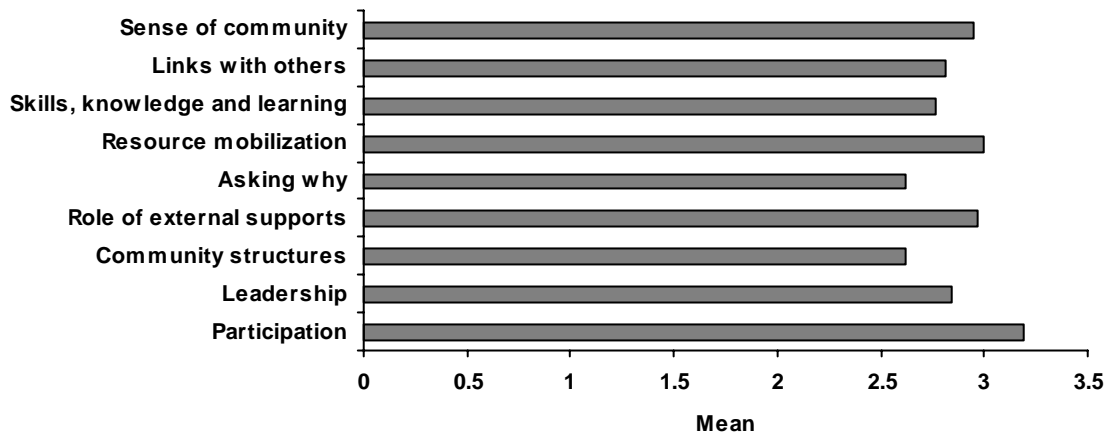


Figure 4. Mean scale scores for each of the nine capacity domains (N=29)

Open-ended questions can be presented in table format. For example for each sub component of each domain, respondents were asked to provide an example in support of their response choice. The comments on engaging community groups in the project are presented in Table 1. Other open-ended questions may be presented in a similar fashion to that shown in Table 1.

Level of participation	Comments
On the road	<ul style="list-style-type: none"> *we have schools, health - need a site champion for XXX to branch out for sustainability *women in provincial and federal prisons
Nearly there	<ul style="list-style-type: none"> *have contacted the ones identified initially - some engaged, some not yet - we have identified some additional ones *many have been contacted in pilot year, however many need to be approached *we would like to involve more health community stakeholders...hesitating as our implementation advisory committee is already very large *wide spread surveying of target audiences nearly complete
We're there	<ul style="list-style-type: none"> * ~20 groups are engaged in the coordinating committee *5 community groups are currently involved *an ethnic community is actively involved in all aspects of our project *capital health and the multicultural health brokers *church groups

Table 1. Comments about engaging in community groups by participation level

Data that have been collected over time can also be presented graphically. Figure 5 provides a graphical representation of mean scale scores for the nine domains for two different data collection times.

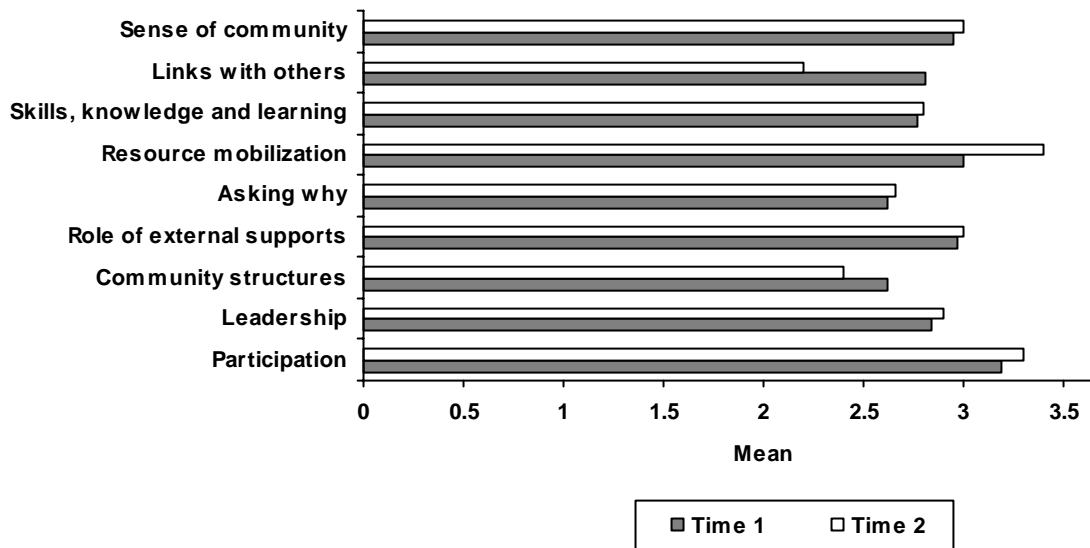


Figure 5. Sample figure of mean scale scores for the nine capacity domains at two different times of data collection

Feature	Questions	Significant Change $p \leq .05$
External Supports: Funding Bodies	Seeking project-related information from external supports	x
	Seeking project-related technical expertise from external supports	✓
	Seeking financial support for org operations/ project	x
	Do policies of external support support project work...	✓
Asking Why	Exploring root causes of issues targeted by project	✓
	Involving target pop in process of asking why	✓
	Involving target pop in finding solutions to root causes	x
Obtaining Resources	Accessing internal resources needed for project's success	x
	Accessing external resources needed for project's success	x

Table 2 A snap-shot of results according to whether there was statistically significant change from time one to time two.

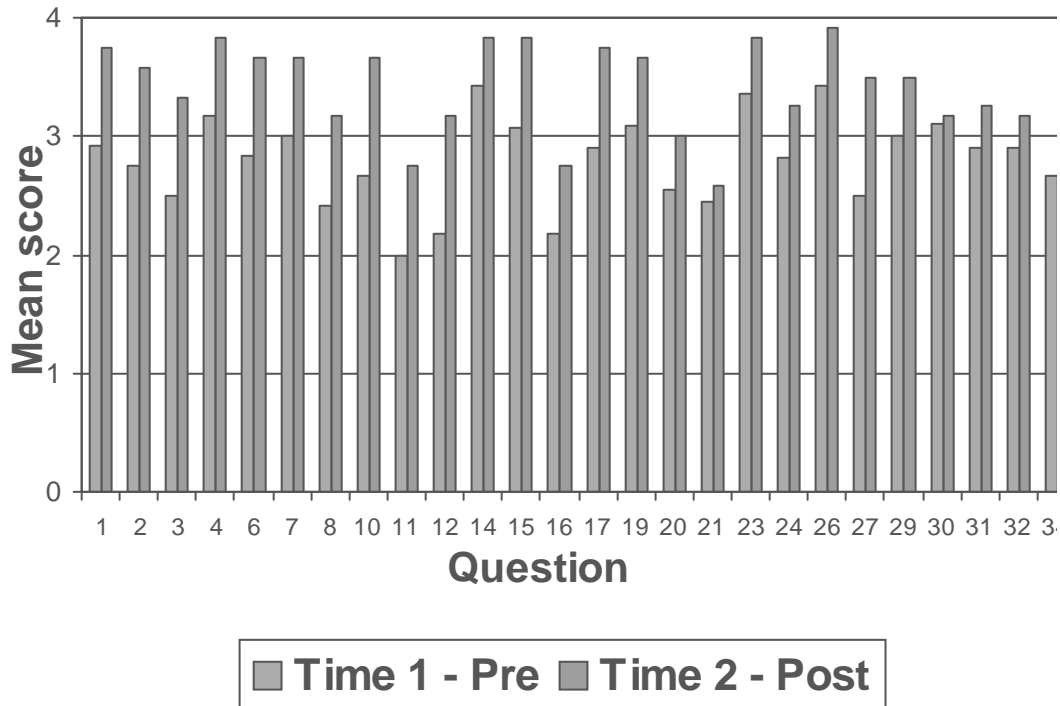


Figure 6: Mean Scores for each question for time one and time two

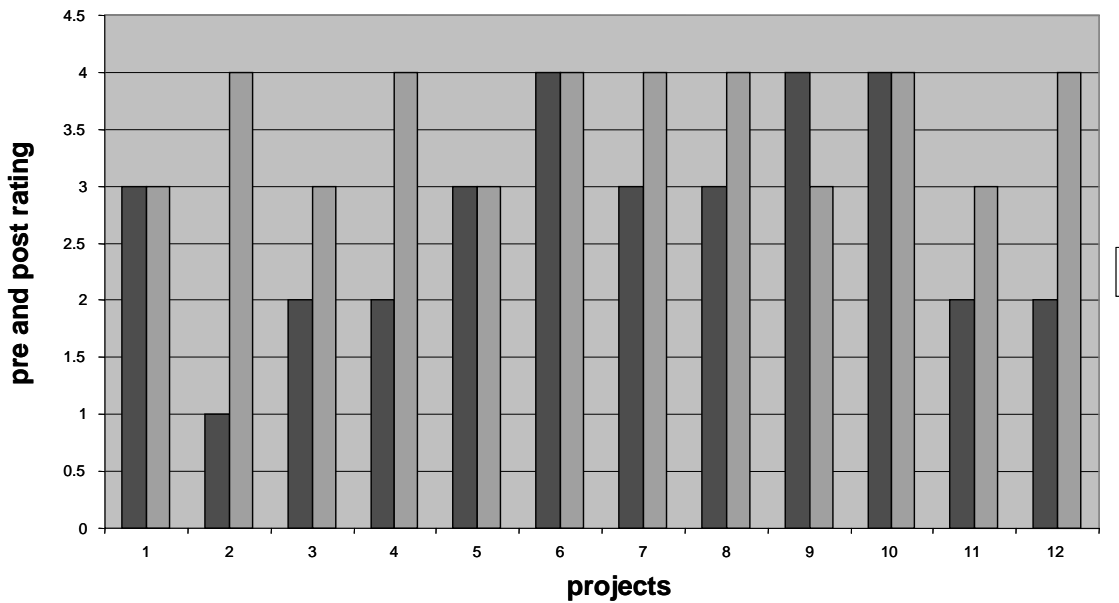
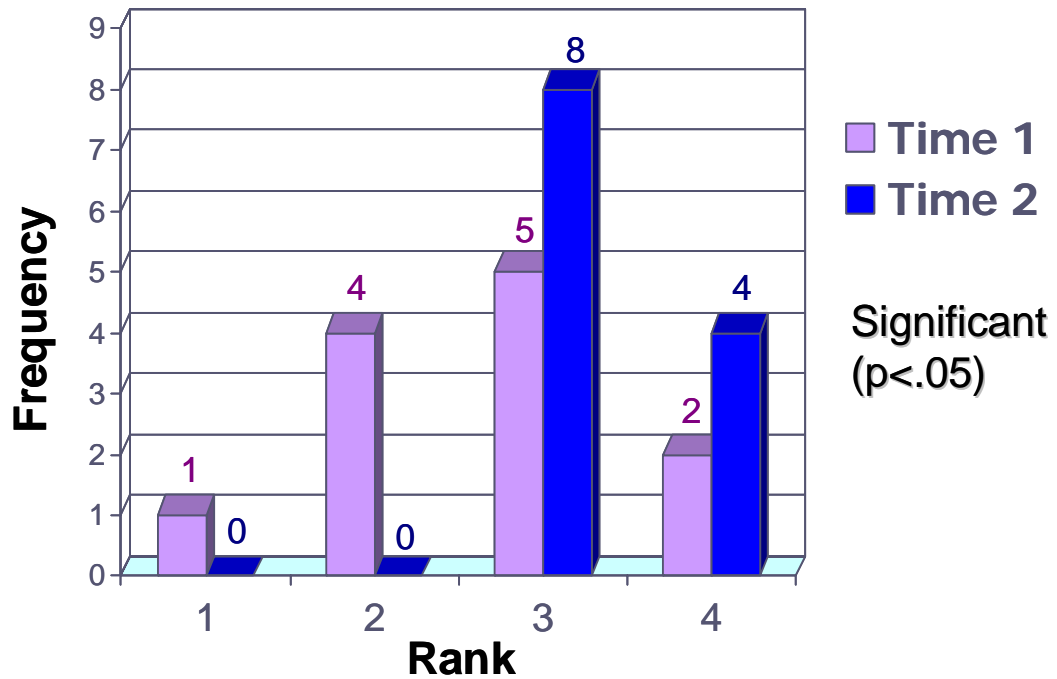


Figure 7. Target Population Involvement – responses from each project at time one and time two (N=12). This view may be useful to the program consultant, for identifying areas for nurturing individual projects.



Time 1: Pre
 Mean: 2.67
 Median: 3.00

Time 2: Post
 Mean: 3.33
 Median: 3.00

Figure 8. Target Population Involvement – responses to same information presented in Figure 7, however the information is summarized by frequency (N=12).

CONCLUSION

Hopefully the information in this manual will help in administering the tool, analysing the data, and presenting the findings in an appealing and interesting fashion.

APPENDIX A

Example of coding manual for participation scale and questions

Variable Name

PARTA engaging comm groups in the project
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 just started
2.00 on the road
3.00 nearly there
4.00 we're there

PARTACOM engaging comm groups comments
Measurement level: Nominal
Format: A200 Column Width: 8 Alignment: Left

PARTB engage range of target pop
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 just started
2.00 on the road
3.00 nearly there
4.00 we're there

PARTBCOM engage range of target pop comments
Measurement level: Nominal
Format: A200 Column Width: 8 Alignment: Left

PARTC overcome barriers to participation
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 just started
2.00 on the road

3.00 nearly there
4.00 we're there

PARTCCOM overcome barriers to participation comments
Measurement level: Nominal
Format: A200 Column Width: 8 Alignment: Left

PARTD effective methods of communication with target pop
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 just started
2.00 on the road
3.00 nearly there
4.00 we're there

PARTDCOM effective methods of communication comments
Measurement level: Nominal
Format: A200 Column Width: 8 Alignment: Left

PARTE other acts to increase participation
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 just started
2.00 on the road
3.00 nearly there
4.00 we're there

PARTEOTH comments other acts to increase part
Measurement level: Nominal
Format: A200 Column Width: 8 Alignment: Left

PART1 Question 1: how close to participation
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 just started
2.00 on the road
3.00 nearly there

4.00 we're there

PART1COM how close to participation comments

Measurement level: Nominal

Format: A255 Column Width: 8 Alignment: Left

PART2A want to strengthen participation in component A

Measurement level: Scale

Format: F8.2 Column Width: 8 Alignment: Right

Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 yes

2.00 no

PARTAWHY reason want to strengthen participation in component A

Measurement level: Nominal

Format: A255 Column Width: 8 Alignment: Left

PART2B want to strengthen participation component B

Measurement level: Scale

Format: F8.2 Column Width: 8 Alignment: Right

Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 yes

2.00 no

PARTBWHY reason want to strengthen participation component B

Measurement level: Nominal

Format: A200 Column Width: 8 Alignment: Left

PART2C want to strengthen participation component C

Measurement level: Scale

Format: F8.2 Column Width: 8 Alignment: Right

Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 yes

2.00 no

PARTCWHY reason want to strengthen participation component C

Measurement level: Nominal

Format: A200 Column Width: 8 Alignment: Left

PART2D want to strengthen participation component D

Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

—

Value Label

1.00 yes
2.00 no

PARTDWHY reason want to strengthen participation component D
Measurement level: Nominal
Format: A255 Column Width: 8 Alignment: Left

PART2E want to strengthen participation component E
Measurement level: Scale
Format: F8.2 Column Width: 8 Alignment: Right
Missing Values: 97.00, 98.00, 99.00

Value Label

1.00 yes
2.00 no

PARTEWHY reason want to strengthen participation component E
Measurement level: Nominal
Format: A200 Column Width: 8 Alignment: Left

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