

CHAPTER FOUR- Methodology

Introduction

This chapter outlines the details of the research undertaken to address the questions posed in Chapter One. It describes the processes of setting up the research, selecting the case study locations, the data collection process including the tools and methodologies used and finally, data analysis. This research was designed to generate qualitative data by exploring people's perceptions of communication, the way they worked with others and the changes they had seen in themselves, others and the community as a whole through WUSC's strengthening municipal capacity in water and sanitation project.

The roots of this research were in a presentation that my advisor attended at the University of Guelph given by WUSC Peru engineers who had collaborated with the university. They mentioned many aspects of their project that seemed positive from a communication and capacity development perspective, yet due to their field of specialization, they lacked the conceptual frameworks and terminology to explain the social processes they had facilitated. I began to speak with WUSC's Latin America officer in Ottawa and wrote a research proposal for him and the Peru director. After a couple of revisions, we signed a MOU for me to carry out research in the context of WUSC's "Strengthening of Municipal Capacity in Water and Sanitation Services in Peru" project.

This research is an exploratory case study of WUSC's capacity development program for water and sanitation. According to Yin, "the distinctive need for case studies arises out of the desire to understand complex social phenomena" and a case study investigates a "contemporary phenomenon within some real-life context" (2003: 1).

Selection of Case Study Communities

Two case study locations were selected in consultation with the management of the project in Lima. The locations are not named in this thesis to protect the confidentiality of the research participants. The sites were chosen to present both urban and rural contexts, work with water companies, municipalities and water user groups, as well as locations where WUSC had had significant engagement over a length of time. They were not selected to be representative of WUSC's work in Peru in general. The project's 2005 work plan showed that they planned to work in four provinces of Peru, with four municipal water companies and five municipal or regional governments (WUSC 2005).

Prior to my arrival in Peru in June 2005, I sent a one-page sheet to the main WUSC office in Lima and subsequently to WUSC staff in the two study locations to explain the nature of my research and ask for the participation and support of the teams (see Appendix 6 for an example in English). I was in Peru from June until September 2005, and during this period I visited each of the two study locations twice as well as spending some time at the main WUSC office in Lima. The first visit was focused on data collection through workshops and interviews, while the second was aimed at collecting any missing information that was identified during the reflection and learning that took place during the break from the research context at the other location. Both the workshops and the interviews are explained in detail in the data collection section of this chapter.

The first case study site was a municipal water company in an urban location (see Chapter Three for a complete description). It was selected partly because WUSC felt they had had some impact there, and also because of the proximity of two distinct towns that WUSC had worked with- one where the water company was located and another smaller satellite town

served by the same company. While I spent most of my time in the main town, and most of the data collection took place there, WUSC team members from one of the smaller town did participate in semi-structured interviews and two of the workshops. While there were many similarities in the experiences between the team members located in the two towns, a few differences are highlighted in Chapter Five. This first study location only had two WUSC teams, engineering and social, working there at the time of the research.

The second location was a rural municipality in which WUSC had worked in both the small district capital and the surrounding rural communities (see Chapter Three for a complete description). The site was selected because WUSC was in the process of supporting the creation of a water user association to manage the water system in the district capital. They had also supported the transition from informal water user groups to more formal associations in fourteen smaller surrounding rural communities. This was a unique experience for WUSC as they generally worked with municipal water companies in urban areas or water user groups in peri-urban areas. Another contributing reason was that four teams in the areas of engineering, urban water management, rural water management and sanitary training were working there, so I could observe all of WUSC's work in action.

Selection of Methodological Approach

As described in Chapter Two communication, capacity development and learning process are often based on implicit mental models and can therefore be difficult to express and capture. This research employs a participatory qualitative and phenomenological case study approach that is grounded in the constructivist worldview described in Chapter Two. It seeks to explore stakeholders' every day experience with WUSC's water and sanitation project by understanding the many truths of each person's point of view and their relationships with

other perspectives. According to Palys, “Qualitative researchers view the data-gathering process itself as informative, maintaining that one must be open to any new directions that emerge in the context of the [research] because of the unique perspective of the participant(s)” (2003; 160). Additionally, Jarvis (1999) points out that the practice of development is subjective, personal and transitory so qualitative research is the most appropriate way to take a snapshot of the events that are occurring at the time of the research.

The selected approach was also draws on *conceptual* elements from participatory evaluation methodologies (such as Davies & Dart 2005; Earl *et al.* 2001; Jackson 1997). These evaluation approaches are designed to empower the participants with critical thinking and reflection skills that will help them to gain more from the projects that they participate in as well as taking ownership over their own development processes.

Data Collection

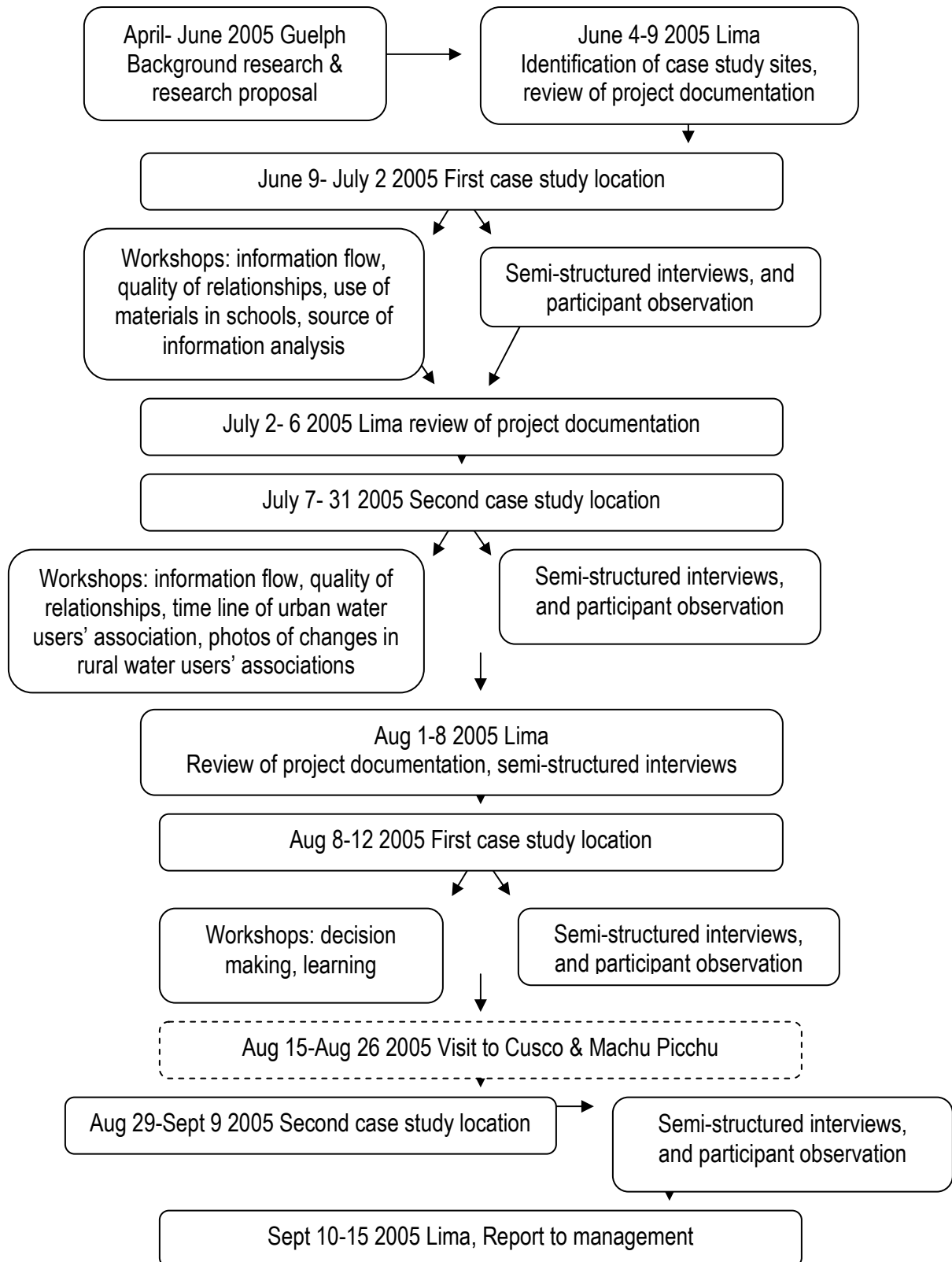
The data collection methods for this research included participatory social mapping workshops, individual and group semi-structured interviews, participant observation in everyday work activities and a review of related secondary data. The field component of this research was conducted in Spanish except for two interviews with Canadian project staff in Lima, which were in English and one workshop, and several interviews in the second study site, which were conducted in Quechua with the assistance of local project staff who translated conversations into Spanish for me. These research activities taken together aimed to build up a composite picture of the existing context and content of WUSC’s capacity development activities that no one individual narrative would hold.

Table 4.1 provides a summary of the research objectives, guiding questions and data collection activities and sources. Each of the data collection tools is explained in detail in the following sections. Figure 4.1 summarizes the research activities in chronological order.

Table 4.1 Overview of Research Objectives and Methodologies

Objective	Guiding Questions	Activity/ Method	Data Source
To describe the communication and collaboration between and among WUSC and municipal governments, water companies, rural water user groups, and end users that have been used to strengthen the capacity to plan, carry out and administer water and sanitation services.	How have the relationships built during the project developed? What is the quality of those relationships? How has the quality affected collaboration?	Semi-structured interviews Workshop themes: Quality of relationships Timeline	All stakeholders WUSC teams Urban water user association
	What has been the pattern of information flows and what communication functions characterize them? How has this affected collaboration?	Semi-structured interviews Workshop themes: Information flow	All stakeholders WUSC teams
	How have WUSC's educational campaigns for end users and schools been understood? What have been their perceived effects?	Semi-structured interviews Workshop themes: Source of information analysis Use of materials on schools	All stakeholders End users Schools WUSC materials
To identify perceived changes in individual and organizational capacity since participation in the project began.	What changes have occurred at the organizational level in terms of autonomy, leadership, and systems of learning and problem solving?	Semi-structured interviews Workshop themes: Decision making Learning Photography of perceived changes	All stakeholders Water company managers Managers and WUSC teams Rural water associations
	What changes have occurred at the individual level in terms of involvement in decision-making, knowledge and skills, and confidence and self-concept?	Semi-structured interviews Workshop themes: Learning	All stakeholders Water company managers and WUSC teams
To identify the principles of Communication for Social Change that may be applicable in the design of other water and sanitation projects in Peru.	Which principles of Communication for Social Change have been used and how have they been applied?	Literature review Participant observation	Research data and existing literature

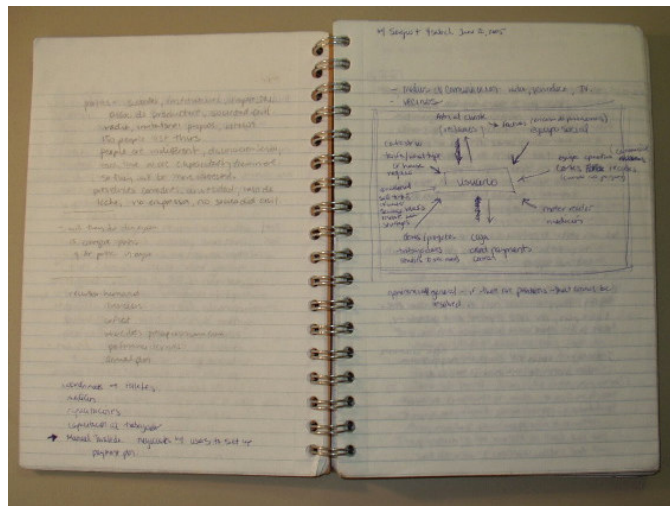
Figure 4.1 Flow Chart of Research Process



Participant Observation

During the research I kept notes on my personal impressions of each interview and how my overall thoughts were evolving. The notebook also included thoughts generated while planning for workshops and from readings that seemed relevant.

Figure 4.2 Field Notebook



In the first study location I was able to participate in the everyday day activities of the project's Social Team which at this time mostly involved organizing talks at the schools and preparing materials to begin the door-to-door work with water users in the second sector of the city. In addition, several significant events took place during my stay. I was able to participate in the design and editing of a video socio-drama about water meters and water conservation. A local youth theater group was collaborating with the Social Team to create this video for the parents' groups who met monthly with the schools. I observed an educational presentation that the Social Team gave to a school in the second sector of the city. Additionally, a new head of the board of directors of the water company was selected in this time period, causing significant worry on the parts of some employees about their job security. Finally, the employment contract of one counterpart member of the Social Team

was not renewed and she was no longer working for the water company during my second site visit. However, since I had already completed the bulk of the research and had conducted two workshops with the WUSC teams during my first visit, these changes did not unduly affect my data collection.

In the second location, significant events included a trip to several communities with the WUSC communication specialist from Lima, who was conducting interviews and collecting data for two articles he was writing on the project. I also traveled with the Rural Management Team to a remote community where they helped the board of directors of the local water association to balance their books after a recent fundraising event (see Figure 3.5). The Sanitary Team facilitated a workshop in a rural community where they presented the results of an evaluation they had done on behavior change in that community. I also accompanied them on home visits to follow up on how people were using the water storage containers they had been given (see Figure 3.4). Finally, during my second visit all four WUSC teams convened a workshop for the community authorities, urban and rural water association members and other key stakeholders to present the legal basis for the creation of a Municipal Unit water office and the role that it would play.

Workshops & Social Mapping

The data collection workshops that I conducted were adapted from two main sources: the book *From the Roots Up* (Gubbels & Koss 2000) and the *Rapid Appraisal of Agricultural Knowledge Systems* (RAAKS) kit (Engel & Salomon 1994 1997). The workshop with the rural water associations in the second study site was based on the PhotoVoice technique (Wang 1999) outlined in *Picturing Impact* (FIELD Foundation 2001). All of the workshops

had groups of participants discussing and collectively mapping out social processes with the intent of making their implicit knowledge explicit by talking about themes I provided and displaying the results of their inquiries onto large sheets of paper. Each group then presented their map to the other participants in order to jointly discuss their findings. In most cases I kept the maps that were created and tape-recorded the discussions.

I planned the workshop themes and activities during the research proposal writing process based on my research questions before I went to Peru. Originally, I had planned to do more workshop activities than what turned out to be feasible for the time frame. I therefore adapted and redesigned the workshops during the research process as a clearer picture of the situation emerged from talking with people.

Prior to holding each workshop, I ran the content by a WUSC team member to obtain their feedback and to verify my translations. This was a useful process for me to explain to the team member why I wanted to do the workshop, the reasons for the approach, and to explore and make explicit why I had phrased things the way I had. During the workshop itself I checked how the groups had understood the tasks, listened to their conversations and considered and if the next section needed adjustments. Although I did tape record the workshops, it would have been useful to have someone who was not participating in the workshop taking notes and recording themes that emerged from the workshop for later reflection.

One and half hours were allotted for each workshop and they were all conducted on different days. Tables 4.2 and 4.3 outline the six workshops that I conducted in the first study location

and the five from the second study site, so that they can be discussed in more detail in the next section.

Table 4.2 Data Collection Workshops in First Study Site

Workshop number	Workshop Name	Participants	Location	Tools & Focus
1	Information flow	11 members of WUSC's engineering and social teams + counterparts	Classroom in school next door to water company	Social map of information flow and the use of communication functions
2	Quality of relationships	10 members of WUSC's engineering and social teams + counterparts	Classroom in school next door to water company	Ranking of qualities that affect working relationships and assigning scores to relationships based on qualities
3	Use of materials in schools	5 teachers, 1 school director	Their school	Discussion of use of social team materials
4	Source of information analysis	7 end users	Local restaurant in neighborhood	Discussion of sources and reliability of information
5	Decision making	10 water company managers	Classroom in school next door to water company	Ranking of important decisions and discussion of how they had been made
6	Learning	6 water company managers and 3 members of WUSC's engineering and social teams + counterparts	Classroom in school next door to water company	Ranking of changes they had seen since they started working with WUSC, discussion of change and lessons

Table 4.3 Data Collection Workshops in Second Study Site

Workshop number	Workshop Name	Participants	Location	Tools & Focus
1	Information flow	13 WUSC team members + counterparts	Open-air room behind WUSC office	Social map of information flow and the use of communication functions
2	Quality of relationships	14 WUSC team members + counterparts	Open-air room behind WUSC office	Ranking of qualities that affect working relationships and assigning scores to relationships based on qualities
3	Time line	6 Board of directors of urban water users' association	Open-air room behind WUSC office	Social map of key events, successes and challenges in creation of association
4	Changes in rural communities	9 Board of directors of rural water users' associations	Community center in rural community	Identification and ranking of changes in rural communities, practice taking photographs
5	Analysis of photos	7 Board of directors of rural water users' associations	Open-air room behind WUSC office	Analysis of own photographs of changes

This following section describes in detail the workshops that were used to generate data about the communication, collaboration and capacity development that participants perceived as a result of their participation in WUSC's project.

Descriptions of Workshops in First Study Site

During the first workshop in the first study location, participants were presented with the following list of communication functions adapted and expanded from those presented in Table 2.2. I provided examples for each one and they brainstormed others.

- 1- Reinforce group identity
- 2- Establish rules, norms, policies
- 3- Share information, knowledge
- 4- Get feedback, learn
- 5- Influence others or control self
- 6- Gain advantages over others, compete
- 7- Exchange ideas, explore diversity
- 8- Share talents, enjoy life
- 9- Transmit time-sensitive information

The participants were divided into two groups that mixed Social and Engineering Team members together based on the idea that a richer discussion would emerge during the groups' work. I asked them to brainstorm the main people or groups they communicated with on sheets of colored paper. These sheets were then taped to flip chart paper showing the WUSC teams in the middle and those with the closest relationships placed nearest to them on the page. Group members then drew lines between the different actors and coded them with the number of the communication function(s) that best corresponded to the reasons behind the information flow (see Figure 4.3). When the groups had finished, they presented their maps to each other.

Figure 4.3 Mapping Communication Flows and Functions in First Study Site



While the participants seemed to enjoy the workshop, at the end some of them were unclear as to what it meant and one person asked me if I had obtained what I had wanted out of it. Another person said that no one had ever asked these questions before and that he was now able to see some of the areas in which communication could be improved. Someone else said that he had had many thoughts about things like this but had never been able to put them into words and that the workshop had been helpful in that respect.

In the second workshop, we started as a whole group by brainstorming the qualities that make for good working relationships onto colored paper. The group selected the five most important factors and as a group they ranked them in order of importance. Two or three people shifted the pieces of paper around while the others commented and gave their opinions on which order they should be placed in. The same process was repeated to get the five factors that make for poor working relationships. The participants were again divided into two groups, each with a mix of both Engineering and Social Team members. Those who had been with WUSC longer were asked to form a group that could look at the quality of the relationships in 2003 while the other group focused on the current quality of relationships in 2005.

Participants were provided with a grid that included the two WUSC teams across the top and the other stakeholders they had identified in the first workshop along the side. Each relationship was then given a score between one and five for each of the “good relationship” and “poor relationship” indicators (see Figure 4.4). One meant very little of this quality was present in the relationship while five indicated that a lot of the quality was present. The points were added up and the “poor relationship” score was subtracted from the “good relationship” score to come up with a total between +20 indicating a relationship with many “good relationship” qualities and few “poor relationship” qualities and -20, which indicated the reverse.

Figure 4.4 Mapping the Quality of Relationships in First Study Site



The group that focused on 2003 presented their map to the group as a whole first and then the 2005 group presented. I provided some questions for reflecting on the scores that were given as well as the communication maps from the first workshop, including: how could the changes in the quality of relationships between 2003 and 2005 be explained? Was there a link between the type of communication that was used and the quality of the communication? How could the communication and the relationships between the different areas be improved? And, what were some of the barriers to improving work relationships?

At this time people started to see the link between the first and second workshops and there was a lot of discussion, some defensiveness and a growing recognition that everyone needs to help support the relationships that received low scores. One participant said, “we knew there were problems but did not know how much or what to do about them, so this was really useful.”

When I attended an educational presentation that the Social Team did with a school in the second sector, I observed that they use a powerpoint-based lecture style and many of the professors who were present fell asleep as the sun went down and the room got darker. The Social Team provided a lot of material on the global state of the fresh water supply and information about the water supply in the city, but did not present the teachers with any ideas for how to use the materials in the classroom. So when I designed the workshop for the teachers at a different school, who had been given the same presentation and materials by the Social Team at earlier date, I was wondering what they had done with the materials they had been given, how they had been used with the students, and if they had seen an evidence that the students had learned from them.

The teachers sat around a table with a pile of colored paper in the middle. They were asked to respond to a series of questions, they wrote their responses on the paper and we posted it on a sheet of flipchart paper where everyone could see it for the discussion. The questions used to generate discussion included where they kept the materials, how many times they had looked at them since they had received them, who they had shared them with and in what format, how they knew if the students had learned from them, and how much impact the learning had had on the students beliefs and behaviors around water. I then divided them into groups, with the primary school teachers in one group and the secondary school teacher and the director in another group, to design a curriculum based on the materials they had been given (see Figure 4.5).

Figure 4.5 Use of Educational Materials in Schools



The workshop with the neighborhood group was done as one large group throughout. It started with a discussion of all of the ways in which they receive information and the similarities and differences between them. They then selected the five that they used most often and we discussed each one in turn. They named the different sources, when they used each one, what they liked and disliked about it, and how trustworthy the information it provided was on a scale of one to five, with five being the most trustworthy.

At the suggestion of the neighborhood group leader, this workshop was conducted on a Sunday afternoon when people would have time off from work. However, the majority of the people who attended worked as roaming street vendors and they were exhausted during their one day off so the energy level was very low. Also, many of the people who attended this workshop were confused about its purpose and several of them had come to bring their complaints about the water company to the meeting. Additionally, several of the attendees were illiterate and a couple belonged to an evangelical religion that did not allow them to watch TV or listen to the radio at all, which combined to make this a challenging meeting. This is the only workshop in which I did not take photos of the process.

The first workshop with the water company managers was based on the four-part decision making chart in presented in Table 4.4 and a list of potential areas of decision-making to consider. The managers were divided into groups to brainstorm important decisions that had been made in the past five years; the five most important decisions were selected and ranked by each group. They then analyzed each decision in terms of who had made the decision and why it was made in that manner (see Figure 4.6). Each group then presented their flip chart to the rest of the participants. At the end, each group was asked to brainstorm about the meaning of teamwork and to present their thoughts to the group as a whole.

Table 4.4 Types of Decision Making Processes

A- Single person or group Decision maker(s) act alone and inform others of the decisions taken	B- Consent Decision maker(s) ask for approval after taking the decision
C- Consultation Decision maker(s) ask for information and opinions of other before making decision	D- Consensus The decision is analyzed and taken by the group(s) that will be affected by it

Adapted from: Gubbels & Koss (2000).

Figure 4.6 Describing Decision Making Processes



During this workshop the cell phones of several managers rang multiple times and there were personal interruptions from staff as well. I requested part way through that people turn off

their cell phones but they continued to take calls. Consequently, there were lots of disruptions and the managers' full attention was not on the workshop process.

During the final workshop in the first study location, the WUSC team was in one group and the managers were divided into two additional groups. Each group was asked to review two pages of WUSC project documentation describing the work they had done in the city and to select the most important changes they had seen in different areas as a result of the water company and WUSC working together (see Figure 4.7). They were given a list of reasons that changes could occur and were asked to identify why the change had happened. The most important change was selected and the group drew out lessons for the future from it.

Possible reasons for changes:

1. To imitate
2. To benefit the company
3. New information that was not know before
4. Changes in the situation or conditions
5. Political reasons
6. Presence or example of others
7. To improve the company
8. To improve working relationships
9. Based on reflection on past experiences
10. What was done before did not work
11. There were resources available to do so

Figure 4.7 Identifying Changes in First Study Site



Descriptions of Workshops in Second Study Site

The first workshop on communication functions mostly took place as described in the first study site except that the number of participants warranted three working groups.

Additionally, three codes were added to indicate the timeliness and quantity of the information received. “A” indicated that there was not very much information flow and that it often arrived too late, “B” indicated that it was a normal quantity of information that it usually arrived when it was needed, while “C” indicated that it was a lot of information and that it arrived early or when it was needed (see Figure 4.8). Each group presented the map they had made to the others.

Figure 4.8 Mapping Communication Flows and Functions in Second Study Site



During the workshop on the quality of relationships, as in the first study site, the whole group selected and ranked qualities of “good relationships” and “poor relationships.” One group assessed the relationships from 2002 to 2003, while the other two groups focused on 2005 (see Figure 4.9). As in the first study location, there was some defensiveness on the part of the teams who received low scores but overall people commented that it was good to have the scores out in the open where they could be talked about.

Figure 4.9 Mapping the Quality of Relationships in Second Study Site



During the workshop with the newly elected urban water association, participants were presented with a list of potential key events. They were divided into two groups and asked to draw a time-line of the formation of their association listing both the positive and negative occurrences that had affected them. Participants were also asked to write down the other actors they interacted with and tape them in order of importance to the wall (see Figure 4.10).

Figure 4.10 Creating Time Line of Formation of Urban Water Association



The members of the board of directors realized during this process, that they had not been as transparent and communicative with the general public during the process of forming the association as they could have been, which was beginning to fuel some gossip around town, and so they took one of the timelines with the plan to tell the public about their experiences over the municipal radio station.

The workshop with the two rural water users associations began with each of the groups listing changes they had seen in water and sanitation in their communities over the past five years. They were then asked to select the five most important changes and place them on flipchart paper in order of importance (see Figure 4.11). For each change, they gave it a number between zero and ten (ten being perfect) for the state of the item in question five

years ago and another number for its state at the present time. They were then asked to explain the reason for each change.

Figure 4.11 Identifying Change in Water and Sanitation in Rural Communities



The second part of the workshop focused around how to take photographs of these changes (see Figure 4.12). Participants were divided into three groups, and each was given a digital camera and instructions to experiment with taking photos under various conditions- outside, inside a building, with the sun behind the camera, from far away, with the subject moving, etc.

Figure 4.12 Practicing Taking Photographs



The groups then brought their cameras back inside and we looked at each photo on my laptop and evaluated them based on the following technical criteria:

- Can the main subject of the photo be easily determined?
- Is the subject of the photo towards the center?
- Is there minimal empty space?
- Is the entire main subject in the photo?
- Is the main subject close enough, but not so close to be blurry?
- Is the position of the camera appropriate- photo taken from above or below?
- Was the camera held still so that the photo is crisp and clear?

We reviewed the possible content of the photos they would take and the types of changes that could be documented (see below) and each participant was then sent home with a disposable camera to take photos in their communities.

- Illustrating the importance of water
- Changes in yourself
- Changes in water distribution
- Changes in water management
- Changes in the water users association
- Changes in sanitary habits
- Other changes in the community

The second half of this workshop was held the following week after I had taken the photos to be developed. Participants went through their photos and selected the five that were the best

photos according to the criteria above and that best represented the changes they had seen in their communities (see Figure 4.13). The selected photos were made into booklets with one photo on each page and a caption explaining the significance of the photo underneath. The last page of the booklet was used for each participant to reflect on what they had learned from the process of taking photos. Each participant took their booklets and the remaining photos home with them.

Figure 4.13 Selecting Photographs of Change



Semi-structured Interviews

Semi-structured interviews were conducted to gain a more in-depth understanding of how the project worked and to explore things that I became aware of during the workshops. People were selected based on their past or present involvement with the project as well as the recommendations of the WUSC teams as to whom they had worked with most closely. The interview questions were mostly open-ended and conversational in style (see Appendix 7 for an example of the interview guide I loosely followed). They lasted from fifteen minutes to an hour and a half depending on how much the interviewee had to say and how much time they

had. In almost all cases, the interviews were tape-recorded. Four interviews were conducted in Lima, fourteen in the first study location, and twenty-seven in the second study location (see Table 4.5), although the ten interviews with the water users were shorter and more informal than the others.

Table 4.5 Categories and Number of People Interviewed

Semi-structured interviews conducted in Lima

Category	Number of People Interviewed
Lima office team	4

Semi-structured interviews conducted in first study site

Category	Number of People Interviewed
WUSC teams + counterparts	4
Water company managers + directors	8
Municipal and community institutions	2

Semi-structured interviews conducted in second study site

Category	Number of People Interviewed
WUSC teams + counterparts	8
Government and municipal representatives	5
Community institutions	4
Water users from 4 neighborhoods	10

In all cases interviews were requested in person before hand, sometimes up to a week in advance, and took they took place in the office of the person being interviewed. The only exception to this were the water user interviews in the second location, which were conducted by informally asking people who were working or talking with neighbors outside on the street if they would spend a few minutes speaking with me.

In the first study location I was not accompanied by a WUSC team member during the majority of the interviews except for one with a municipal official and one with a member of the water company’s board of directors. In the second location, five members of the Management Team were interviewed together in a focus group format, and two members of the Sanitary Training Team were also interviewed together. A team member accompanied

me on four of the interviews with community institutions and government and municipal representatives. This unexpectedly served to begin to open up communication channels with some groups that had previously been collaborating only to a limited extent with the project. Additionally, a counterpart team member who served as a translator from Quechua to Spanish accompanied me to speak with the water users.

Secondary Data

The secondary data used to supplement my research included WUSC project documentation in the form of yearly work plans, annual reports, articles written for the water sector journals, commissioned publications, and educational materials intended for water companies, user groups, schools and the general public. Additionally, a thorough review of relevant literature on the role of communication in individual learning and capacity development within organizations was conducted.

Reflections on my Role

Prior to doing my thesis research, I had spent about four years at different points in my life studying and working in several Latin American countries including those surrounding Peru-Ecuador, Bolivia and Chile. When I arrived in Peru I felt very much at home and was able to start my research almost with out an adjustment period. Additionally, WUSC regularly receives Canadian interns and professional engineers for semester-long or two-year placements, so the people who I spoke with during my research process were more or less used to working with foreigners. I was, however, the first person who had interacted with them regarding social and communication processes and in some cases it took a little while for them to understand what I was doing there. By the end of the research period most people

had stopped referring to me by the title of engineer and since I was not easily definable by a career title, they just called me “Señorita” instead.

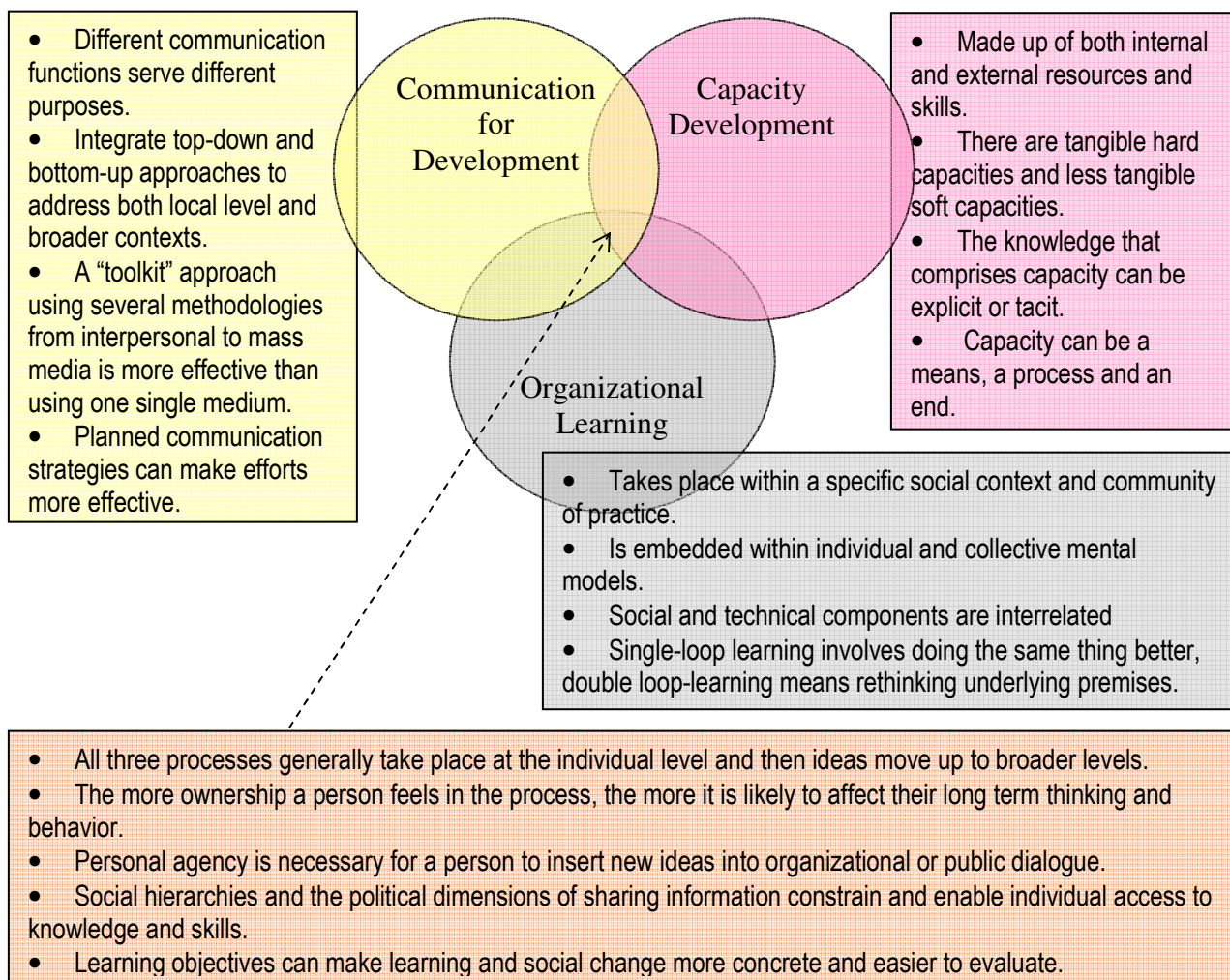
Data Analysis

Since so many of the data were collected during workshops that employed methods to engage the participants in analysis, my role in the data analysis was to compare and contrast the social maps produced by each group with what was said during the workshop activity, the semi-structured interviews and what I observed in daily interactions. The semi-structured interviews were analyzed using a concept mapping approach; I listened to each interview and mapped it out onto a large sheet of flip chart paper. I then grouped relevant quotes from all of the interviews into themes. I selected quotes for Chapter Five that best responded to the research objectives in the areas of communication, collaboration, and changes in capacity from as many diverse stakeholders as possible.

Conceptual Approach

The following chapters of this thesis, especially the data analysis in Chapter Six will draw on key ideas from themes that were explored in the literature review in Chapter Two (see Figure 4.14).

Figure 4.14 Conceptual Approach



Chapter Summary

This chapter reviewed the methodologies used to collect and analyze data in order to describe the communication and collaboration between WUSC and water and sanitation stakeholders, to identify perceived changes in individual and organizational capacity and to identify principles of Communication for Social Change that may be applicable in the design of similar projects. Data was collected through participant observation; semi-structured interviews with key stakeholders and workshops based on PRA, RAAKS, and Photovoice

methodologies. It was analyzed by comparing and contrasting the social maps produced in the workshops with interviews and other secondary data sources including literature on communication for development, capacity development and organizational learning.

