



Empowering women to manage watsan technologies

Ms. Ruthy C.D. Libatique, *Kabalikat ng Pamilyang Pilipino Foundation, Inc., Philippines*

LACK OF WATER IS A PROBLEM. But women as the principal user of water by virtue of their traditional role in the household are more affected than the men. Some even perceive the problem as more theirs than men's. Men who are out on farmwork or other labour lack the time to install a water supply system in their homes or at least in the neighbourhood. This is the situation, the women of Capiz found themselves in 1988.

Capiz is a province in Central Philippines where there are abundant rains during the wet season. Capiz Development Foundation (CDFI), a local non-government organization identified the Ferrocement Rainwater Catchment Cistern Technology (FRCS) as appropriate for the province. Since 1984, over 300 Ferrocement Rainwater Tanks (FRT) have been constructed in Capiz with assistance from the International Development Research Centre (IDRC), United Nation's Children's Fund (UNICEF) and the *Tulungan sa Tubigan Foundation (TSTF)* another Philippine NGO. Community participation is a major approach CDFI and TSTF are applying in the construction of these facilities. However, constructions are often delayed because the menfolk could only attend to the job during their off-days from farmwork or employment. The women were left to wait until "dream tanks" were built. Because the problem had long existed and fed up with waiting till their men could put up the facility, the women resolved that they themselves would build their waste tanks. The women asked to be taught how to build the tanks. Why not? That was not a bad idea at all. But how do you teach the women, who could barely read and write, technical knowledge and skills on construction?

Training the women was the first option thought of by the implementors. But training women for every construction work would prove to be very expensive and time-consuming. After several brainstorming sessions the implementors thought of developing a manual that will teach people, be it men or women how to construct and maintain a ferrocement tank in a nontechnical manner. The idea was broached to the IDRC for consideration. IDRC liked the idea at once, and called on *Kabalikat ng Pamilyang Pilipino Foundation Inc.*, a non-government health organization known for material development and health research to develop the manual on the installation, operation and maintenance of ferrocement tanks for CDFI, with assistance from TSTF.

Kabalikat immediately put together the team for the manual development. A materials development specialist, (the author of this paper) an artist and a project assistant composed the Kabalikat team. A woman engi-

neer from the provincial government of Capiz technical staff from TSTF and community development workers from CDFI helped the team in the various steps of development.

The first problem I encountered in the development of the manual was how to write the manual when I myself had zero engineering knowledge. Secondly, if I had the engineering knowledge, how would I convey this knowledge in a way the layman would understand and find interesting? How do I teach people especially women how to construct a ferrocement tank? One thing was certain, the manual has to be "women friendly"

The team drew up the plan of action. First, we had to learn how to construct the tank. So the artist and I went off to Capiz for a week to experience how to construct the tank from its initial to the final stages. We measured, mixed mortar, tamped and plastered the walls, along with the menfolk of the community. The first day was a nightmare. I could not understand what my workmates were doing. I was also hesitant to ask the menfolk every now and then for fear of holding up or slowing down the work. Fortunately, the lady-engineer patiently explained



Figure 1.
FRCS manual

to me the steps of construction and the reasons for them. By the 3rd day the artist and I felt very much part of the group. By the 6th day, our ferrocement tank was complete. In between participating in the construction, I had to stop and write key steps that would be helpful in the writing of the manual. The artist meanwhile made sketches.

After practical exposure to the building of the tank, I wrote the manual. Every now and then the step by step procedures were referred to the lady-engineer to check their technical accuracy. After outlining the steps I sat down with the artist to conceptualize the visuals of the manual.

The first draft was subjected to technical review by the lady engineer and the TSTF staff.

The visuals were drawn, but no instructions were put in the first draft to see whether the target audience would understand the visuals even without the corresponding text. Groups of men and women were recruited for the first pretest to determine comprehensibility, appropriateness and clarity of the "visuals only draft". The results were analysed and corresponding revisions were made.

The second, third and fourth pretests were on the "visuals with test drafts" with progressive improvements after each pretest. All the pretests used the focus group discussion approach. The second, and third pretests were conducted among men and women groups while the 4th pretest was with a *purely women group*. All the previous pretests paid special attention to the comments of the women. All the comments were responded to and validated in the subsequent pretests.

After every pretest, the artist and I went back to the drawing board to make the material more comprehensible and appropriate for lay persons especially the women. After four pretests, the manual was ready for field testing. The field testing required women to use the manual in building their own watertank. CDFI provided all the materials needed for the tank. There were 10 women and two men participants in the field test. I explained to the fieldtest participants that it was the manual itself that was being tested and not them. The women participants studied the manual, talked among themselves and proceeded to construct the tank. While building the tank, one woman who appeared to be the leader of the group was holding the prototype manual and reading it to the group. Every

now and then the group would gather around her to read the instructions.

While the fieldtest was going on the lady engineer was observing how the construction was proceeding while I was intently observing which portion of the manual the participants appeared to be having difficulty in following.

The digging for the foundation was done by the 2 male participants but the women participated in all other aspects of the construction.

Before the day's work is over, the author and the lady engineer discussed with the fieldtest participants what transpired during the day and what portions of the manual they found difficult to follow. The comments were duly noted for subsequent improvements later.

On the 7th day a brand new 10,000 litre tank was standing in the neighbourhood.

The 10 women and 2 men were proudly eyeing their handiwork built by following the construction manual. The participants could hardly believe they did it without supervision from a construction foreman or a mason. They were in fact asking if the tank that they build was strong. A final discussion with them was conducted to summarize and validate findings of the previous days.

Finally, the lady engineer was introduced to them as the engineer who was silently supervising their work. When they learned that an engineer was actually approving their day to day output, they started congratulating themselves. The women were very proud, at the same time astounded that they could build a tank. Now they are saying, give us a manual on how to construct a house and we will.

Today ferrocement tanks of various sizes dot the Capiz landscape. The women of Capiz are specially proud because they built their own tanks. The final version of the manual were distributed and used by the women in building their water tanks.

The lesson of this exercise is that audience-oriented materials can be more effective instrument of empowerment.

Material developers or writers should involve the target audience. One must not forget that he/she is writing the material for them and therefore consultation with them is vital. Doing so empowers your audience and soon the material shall empower them.