# Creating Images for Child Development Work in Pakistan

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## ABSTRACT

As a freelance digital artist in Karachi, Pakistan, .I have the opportunity to work with a number of organizations wanting to find digital solutions to their existing needs. By blending old and new technology and interacting with the individuals needing the answers, I have been able to provide answers for many of them. I would like to describe one experience of mine in participatory design with the intention of highlighting some issues that needed to be resolved from a visual artist's point of view.

## Categories and Subject Descriptors

I [Computing Methodologies] I.3 [Computer Graphics] I.3.3 [Picture/ Image Generation] I.4 [Image Processing and Computer Vision] I.4.1 [Digitization and Image Capture] J [Computer Applications] J.4 [Social and Behavioral Sciences] K [Computing Milieux] K.4 [Computing in Society] K.4.2 [Social Issues]

## General Terms

Design, Experimentation, Human Factors, Documentation

## Keywords

Visual Artist, Computer Aided Design, Community Work and Technology

## 1. INTRODUCTION

The Aga Khan University Human Development Foundation (AKUHDP) recently hired me on a contract basis to work on one of their on- going community health projects. The AKUHDP is an NGO that has many branches and research projects going on in various parts of Pakistan. It is located within the massive complex that also houses the Aga Khan University and Hospital in Karachi. .Many projects conducted by the NGO are done in conjunction with educational or research endeavors being pursued by members of the University/Hospital community.

The team that I was to hired to help needed to visually document the different stages of child development for specifically Pakistani children from 0 to 3 years at monthly intervals. Being devised by the Early Childhood Development Team (ECD) belonging to the AKUHDP for research-based projects in communities all over Pakistan, a child monitoring tool and caregiver instruction manual was required at the end of this phase of their collaborative effort. The ECD team had devised only a draft of the textual part of the tool when I joined them. This had been broken into five categories of a child's development at monthly intervals from birth as follows:

***Gross Motor, Fine Motor, Emotional behavior, Perception, Language***

The tool was to be used by community health workers and mothers in parts of Pakistan were literacy levels are very low. It's purpose was twofold: to collect data and monitor growth patterns of children for research and to encourage participation by caregivers when addressing factors that encourage child development. A part of the tool would be left with the caregiver as a record of the different stages of each child's growth. Included in it would be instructions on how to fulfill the child's needs at that stage.

A printed tool was needed in order to initiate the implementation phase of the project. The ECD team wanted the tool to be understood by caregivers even if they were not able to read the text. One visual per textual explanation was needed. This amounted to a total of approximately 400 images that were required for the tool. This was the first time for the NGO that such an extensive use of images would be used in a community participation project. The ECD team had no previous experience with such a document and was having trouble conceptualizing how each description would be displayed along with the document as a whole.

I was hired and introduced to the team as an artist. My work would be to video tape, then create photographs of children in different communities doing their age related tasks, convert those photographs into illustrations and compile a document which would have the assessment tasks and caregiver instructions in text as well as sketch form. The reason why I was contracted as opposed to a professional filmmaker, photographer, illustrator and graphic designer was that I was offering to provide all those services myself. Thus it would be more economical for the team as they would be dealing with only one person. I had made it clear to them that I was neither a photography nor a sketch expert, but a digital artist familiar with media equipment that could help me achieve these tasks. The whole job was to be completed in 3 months. By using various electronic design tools during this project I was able to communicate effectively with the team members and therefore visualize the final product for them.

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## 2. MEMBERS OF THE TEAM

### 2.1 Advisors

The *advisors* of the project included a non-Pakistani human development specialist and a senior pediatrician responsible for making all the final decisions with regard to the project. They were the ones who hired me. A lot of textual work had been completed by their team and they were keen to see it move towards a print draft version. A completed tool also meant field-testing could begin and research data would start coming in for the next phase. This would affect funding provided in the next year towards the project. I was also offering to hand over the hundreds of digital photographs that I would have used to create the sketches for the document. There was new territory being explored on many levels. There were going to be some unprecedented results!

### 2.2 ECD team

The ECD Team consisted of a doctor, gynecologist, community psychologists and lady health workers.They had been responsible for assembling the text for the tool under the guidance of the advisors. This had taken hours of deliberation and consultation of previous material prepared on this topic. Individual members of the team had been in direct contact with children and caregivers within the hospital and outside in specified research communities on a regular basis for a earlier projects. They would also be responsible for the field testing of the tool and the consequent phases of study that would follow.

The team also included a coordinator who was responsible for communication efficiency between the team and me. She took care of the formalities required for me to work within the AKUHDP environment. Her job was to access all resources that were available to the team and provide me the information I needed in order to deliver results to them on time.

### 2.3 Community

We collected our visual data from three different locations. Two of these were a daycare and a community health center within the AKU hospital premises. Outside the hospital we visited a low income housing community that was already the center of other research and community health programs by the University Hospital. Some members of the community were also trained health workers. They had been asked to contact and locate voluntary families with children who agreed to be filmed. Caregivers and children in all three locations responded with great enthusiasm and co-operation. They appeared curious and excited by the attention they received and the prospect of fame that is inevitably associated with media representation through video.

The fact that all the members of the team including myself who were present during the documentation process were female and children made it a comfortable environment. Another reason for the excitement was that the age related tasks were not challenges, but simple reflections of growth at that age, so were very easy to accomplish. We first explained to the caregiver what we wanted the child to do, then the mother or some of the other women present would proceed in interacting with the child. When our required action was performed by the child, the psychologist with me would shout "That's it!" and we would all clap. The atmosphere was very positive.

### 2.4 Designer

As an artist and scholar, this was my first experience working on a community-based project using all the tools that I am familiar with. Being a mother of three myself, I was extremely interested in the project and was honored to interact with leading hospital faculty for the short time that I was involved. After the team members were apprised of the tools and techniques to be used for visual documentation, a lot of thought provoking discussions ensued as to which ones would be appropriate for the Pakistani community and why. I also was motivated by the challenge of using my knowledge as a media studies expert in an unprecedented way.

## 3.FINDING SOLUTIONS INTERACTIVELY

Initially there was no input with regard to document design as everyone, coming from different backgrounds had a different opinion or no opinion at all because they thought it to be the work of the designer to provide details of the product appearance. Once it was clarified that I would be providing suggestions and they would need to make the final decisions, some sort of discussion was initiated. One of the advisors asked me to create a sample page using my digital camera and computer software (Adobe Photoshop, MGI Photoeditor etc.) which I then presented to the team. This allowed us to communicate using the concrete samples in front of us as opposed to just speaking hypothetically.

It took a little while for me to get used to the idea that this was not solely my piece, but a team effort. I had to let go of certain strong feelings I had towards document presentation possibilities and go with the team's majority vote. As a result of the team having seen documents produced by their institution for other projects and wanting to conform, I felt that their own expectations were limited with regards to the appearance of their document. They decided on a horizontal A4 size paper booklet with ring binders for the final print draft version of their Early Childhood Development tool. This choice could also be a direct result of their familiarity with Microsoft Excel grid printouts in all their text versions of the tool.

With regard to image representation, after great debate with the senior members in favor of photographs and the community health workers and research-conducting doctor rooting for line sketches, the latter was decided to be used for complementing the text. The reasons for using sketches over photographs was:

*a*) Since a study of motor functions was involved, line illustrations could be used to simplify the human body and thus exaggerate the movements depicted.

*b*) The team wanted a lack of context in the pictures so that they could be used all over Pakistan in communities of all economic backgrounds. They wanted to discourage specifics in the child's appearance so that a mother from a certain ethnic background of Pakistan looking at the picture of a child belonging to another ethnicity would not say "This does not look like my child and so I cannot relate to this booklet and it's instructions to my family."

In the beginning, the team also set the age parameter of the children to be photographed to within plus or minus 15 days of the age required. Later on, upon my insistence, as we were not able to find too many children using random selection to fit exactly the ages specified, the parameters were expanded to plus or minus a month or more, depending on the task that needed to

be visualized. Mutual agreement amongst team members was the deciding factor in selecting children for documentation in such cases.

The team agreed that this concession was allowed only for the visual documentation phase of the project. They agreed that in a line drawing, physical changes that are present during the monthly growth intervals of babies from 0 to 36 months would not be visible in most cases, thus a certain flexibility in selection of subjects could be allowed. For research purposes they knew that they would be much stricter regarding their cut off points.

Because in digital design there is no limit to the number of changes that can be made in an image using computer software or otherwise, an artist has to be very careful to draw a line somewhere, either in terms of time involved or in the level of completion of the product. Many seemingly minor changes take hours to do but are not taken into consideration by the client as they dictate their needs. As I alone was responsible for delivering the finally designed product, I had to keep bringing up the time factor and make sure that the team would work according to a time table to deliver their share of information which needed to be included in the documentation process or as part of the text in the tool.

The team members were used to working at their own pace and initially were reluctant to work under pressure and instead asked me to extend my working contract. When I clarified that I would not be available after the decided date of the project end, things really began to come together as the team realized that it would be hard to find one other person to fit in my allrounder shoes. Work began to be delegated amongst the team members, proof reading was conducted on emergency bases so that I would have have document proofs ready when I needed them. Although originally I had planned to do the layout design myself, I was forced to outsource it in order to meet the time schedule as well because the conversion from digital photos to sketches was turning out to be a very tricky and lengthy process. Only through such untiring efforts were we able to meet the deadline which had seemed highly unlikely at most times during the project.

Due to the advent of sophisticated photography and video equipment in the market these days, capturing and storing an image has become a relatively easy task. Siemens, the mobile phone company has been claiming that "everyone is a director" in their recent advertisement campaign for a video mobile phone. What actually differentiates an artist from another person is the quality of images captured and what happens to that image after it has been stored electronically.

In his book, "Camera Lucida, Reflections on Photography,[*1]" Roland Barthes advises how to look for a punctum in every photograph that we see. It is that part of a photograph that draws the attention of the viewer to it and therefore the whole picture. While recording my images on video camera my focus was on the action taking place since my first function was to video tape the event. I had given some thought to the location of the recording, making sure there was enough sunlight and space for me to move around and shoot from different angles to get the right picture composition without asking the participants to move. One team member worked with me by saying "this is what I want in the picture" before the filming or confirming a shot with "Atteqa did you get that action?" Later on I reviewed the Digital Video tape and selectively froze pictures that I thought complemented the textual explanations that were given to me.

Once the chosen images were stored into my computer I used my wireless mouse pen to trace over the photographs and make line drawings freehand. In order to do this I had to attend a few meetings just to get a grasp of what was being required for depiction. In some cases the expression of the child needed to be highlighted whereas in others the interaction between mother and child or the accomplishment of a certain physical movement was more important. The photograph had to show a very specific moment in time taken from an angle that initially was at my discretion. I presented a few samples to the team via email and they requested adjustments to the line quality and other details shown on images. The team also insisted that because theirs was a clinical document, the illustrations needed to appear fully and not cropped according to my aesthetic judgement. They also began questioning the content of each set of illustrations that I sent them for approval. In order to avoid the conflicts that began occurring between the shot they required and the one I had thought appropriate, I invited them to either view the video tape and decide or provide me with frame to frame written details of the image they required before shooting. They chose the latter reluctantly, which meant that a lot of extra paperwork began to be involved in this project just to clarify the objectives of the team members. But it got the job done.

I also ended up using some magazine pictures to trace some of the required sketches of children doing tasks that we were not able to photograph. The team did not understand how that would give the same quality as an actual photo even though I tried to explain pixels and picture resolution to them. In the end I just said "Trust me, you will not know which sketch has been taken from a photograph". In order to assist me with my task the team also located an electronic sketch expert who was already associated with the University Hospital. This professional illustrator was working on many different projects simultaneously and was only able to give them a number of sketches per day as opposed to me working day and night to provide them with the completed document by the required deadline.

In order to edit more than 300 pictures we ended up doing a lot of electronic communication using telephone, email, flashdisks and cds. I was working on my home computer and they were in their office at the AKU premises, a forty minute drive away. My layout design person was in her office in another part of the city. A weekly, face to face meeting was not enough to clear up ambiguous issues and I could not leave my computer as the time for the project deadline was too short. The team divided their forty page plus document into a few parts, finalized each part and sent it to me over the course of the thirteen weeks. I included the pictures that I had prepared for that section and handed the material over to my graphic designer so that she could incorporate it in the layout. We worked like this throughout the project.

## 3.1 A continually evolving project

When they received the completed print draft of the ECD tool, the team began the next phase of their project which was to pretest it. At this point they were able to visualize what their final document should look like. I would not be available to continue the project to it's final stage with the team, so I provided them with all the electronic data that had been collected as part of the design

process. There was an endless number of possibilities now for which this could be used by the team or myself.

The team decided that for the next draft of their document, their sketch artist would rework some of the illustrations I had made for them. This was because I had been working entirely freehand while he had been using shape making and shading tools on the computer and a difference between our sketches was apparent. Since he was a part of their organization and my contract was over, they would be continuing with him for further work as well. The sketch artist, however, was having trouble meeting the team's conceptual and compositional requirements. The digital photos shot by me played a significant role here as the team chose the appropriate ones and asked the illustrator to just copy them in sketch form thus saving themselves a great deal of time and paperwork.

## 4. CONCLUSION

In Karachi, Pakistan until recently there appeared to be no real need for creative visual thinking in most organizations unless a brochure was required for the company. Things are different now, as the race is on worldwide to use multimedia equipment in new ways. Electronic media gadgets and software have flooded the local markets at reasonable prices. Companies, large and small are showing interest in these tools as a means of investment, thus creating a demand for digital designers in the city of Karachi. For a project like the ECD tool development, where the team included me as an outsider for creative input, positive interaction amongst all the members of the group was critical in order for a successful and sustainable solution to be reached.

## 5. REFERENCES

[1] Roland Barthes, Camera Lucida, Reflections on Photography, Translated by Richard Howard, Hill and Wang