

Worksheets: The Experience of Nizamuddin Urban Renewal

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The Aga Khan Foundation (AKF), through the Nizamuddin Urban Renewal Project, has been working since 2007 toward the objective of improving the quality of the local community using heritage conservation as a stepping-stone. One key intervention has been the strengthening of the South Delhi Municipal Corporation School in Nizamuddin Basti through the improvement of the physical space, classroom processes and community engagement.

A key element in improving classroom processes has been the introduction and development of teaching-learning material (TLM). Worksheets have been central to TLM, but they took on a different role altogether during the lockdown. With the schools closed, there was no access to online learning in the resource-poor households of Nizamuddin Basti. The weekly educational package delivered to the students became their major academic resource. These were continued even when the schools opened briefly. The AKF team worked with parents, who in turn worked with their children; and older siblings worked with the children in the primary age group, which also increased the confidence of parents to work with their children. The role of this regular academic support was visible when the children were assessed after 12 months.

The education programme in Nizamuddin Basti began in 2008 with a baseline study of children's academic levels with the Department of Education, Delhi University. The study indicated a need to improve the academic levels of the children. A plan with a resource agency was developed and the first activity was a summer camp with the children of classes III to V. The focus of this was to improve literacy and numeracy skills as well as promote creative thinking. In addition to the other TLM, there was a special focus on developing worksheets that the South Delhi Municipal Corporation (SDMC) teachers could use during the academic year as well.

The summer camp and the TLM used showed positive results and it was decided to work towards improving these as this is a long-term project.

Evolution of the worksheet

When the Aga Khan Foundation began working in the Nizamuddin Basti in 2007, it was an underserved community. There was a municipal primary school, but it was barely functional with only about 50-60 of the approximately 100 enrolled children attending school. There were no other educational facilities in the *basti* though there are several other private and government schools in a radius of 3-4 kilometres. The project's baseline survey and discussions with the community had indicated a strong need to improve the quality of education offered in the only primary school.

The project worked to improve the physical infrastructure by using the building as a learning aid, appointing community teachers who understood the reality of the children, improving classroom processes, enriching the curriculum and finally engaging with the community to include them in the functioning of the school – through the School Management Committee and various forums to engage with the community.

The Nizamuddin project has seen three distinct phases in the school improvement programme: Phase I from 2008-11; Phase II from 2011-19; Phase III (the COVID-19 period) from 2020-21. In the first phase, we were in the process of understanding the community and had hired a well-known resource agency to support our programme. They developed about 250 worksheets to support literacy and numeracy. All the worksheets were made interesting with pictures, puzzles and other activities.

Literacy worksheets showed a clear progression:

Class I: Recognition of vowels and consonants with pictures

Class II: Reading words with and without *matras*

Class III: Writing words

Class IV: Writing small sentences

Class V: Reading texts/poems

Maths worksheets showed a similar progression:

Class I: Progressing from pre-numeracy to counting from 1 to 100, addition with single digits, filling

in missing numbers

Class II: Operations with 2- and 3-digit numbers

Class III: Working with 3-digit numbers

Class IV: Fractions

Class V: Division

When this approach was reviewed during Phase I, it was felt that while it had helped the children to a certain extent, there was a need to change as the National Curriculum Framework (NCF) had changed the textbooks and, in particular, the approach to language teaching by moving to the whole language teaching approach from the old approach of learning alphabets, then words, then sentences. Further, the worksheets developed had contexts that were not familiar to children of Nizamuddin. The worksheets for maths also followed a similar linear trend.

The why and how of worksheets

In 2011, recognising how children learn, we changed the approach. This included working with the community teachers so that they learnt the principles of child development and how children learn so that they could plan their lessons better and develop TLM and learning processes for the children they were teaching.

The new worksheets developed used the children's own languages, rhymes that were popular in the community, names that were more common in the community, phrases and expressions that children used often to facilitate reading. Children were encouraged to isolate sounds and then the associated alphabet in the word and then read the word and make new words based on the alphabets and words that they had learnt. These words were then used to develop stories and poems.

Activities in the worksheet encouraged children to be creative and use their imagination. Mathematical operations were broken down into simpler processes that facilitated children's learning with greater independence. The impact of these improved worksheets was visible in children's learning levels. An ability-based assessment indicated an improvement of 80 percent in abilities like writing the name of the object, describing a picture in a sentence, extracting information from a story/poem (indicating better reading and comprehension); in maths, they were able to

differentiate between small and large numbers, write them in ascending and descending order. There was a 40-50 percent increase in children's ability to link the story to their life experiences, as well as a better understanding of multiplication and division with the help of pictures.

Worksheets during the lockdown and after

Parents were given weekly packages comprising worksheets to keep the children engaged with the formal educational process. The community teachers¹ and the municipal corporation teachers together divided the children into three levels, regardless of which grade they were enrolled in. Level 1 comprised children who were new to school and older children who could not read and had limited understanding of numbers (those who were irregular in school); level 2 comprised those children who could read short sentences, but not fluently and could do mathematical operations with numbers less than 50 and the remaining children were in level 3.

Teachers prepared weekly educational packages that comprised eight worksheets – three each for Hindi and maths, and one each for art and environmental studies/hygiene/heritage. Community teachers worked with the parents on a weekly basis so that they, in turn, could work with their children. Instructions were included in the worksheets so that parents could explain concepts to their children. In addition, teachers were available on the phone to clarify doubts. There were several instances when parents requested additional help to first understand concepts like carry-over or division or multiplication themselves before helping their children. Teachers also explained the role of poems, stories in language acquisition and some basics of how children learn to read. This approach worked very well, especially with those parents who were more concerned with their children's education.

In level 1, different themes were chosen to recognise words, for example, the word *fruit*, where a picture of the fruit was given, and the name of the fruit was written in double lines for children to read, colour and write. Familiar names were given for children to isolate sounds and form new words. Parents, older siblings and friends were encouraged to work together to facilitate group learning. Levels 2 and 3 followed the same pattern, but with increasing complexity.

In maths, the activities in the worksheets focussed

on understanding the numeric quality of numbers, units and tens by forming bundles. For children at more advanced levels, hundreds and thousands were also included. Parents were advised to use a variety of objects for children to learn counting – sticks, stones, notes/coins and other household items. Worksheets also included mathematical operations.


Impact

The impact of this regular academic support in the

form of worksheets from teachers to children via parents was that children remained engaged with the educational process and the families became more engaged in their children's education.

An assessment carried out in June 2021 with a random sample of children, thus, indicated that children had retained their core skills and there was an improvement in some. There was a fall in skills and abilities that needed discussion, imagination, creativity and interaction with teachers and other children in a formal setting.

Samples of worksheets used in Phase II

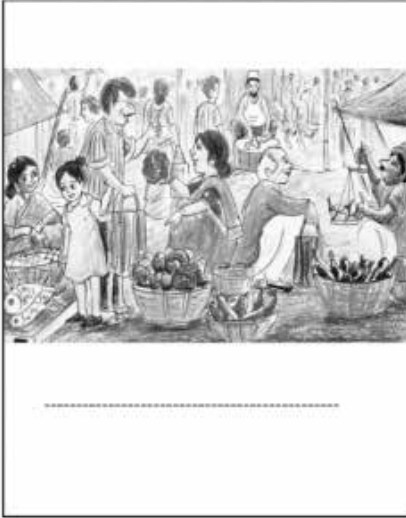
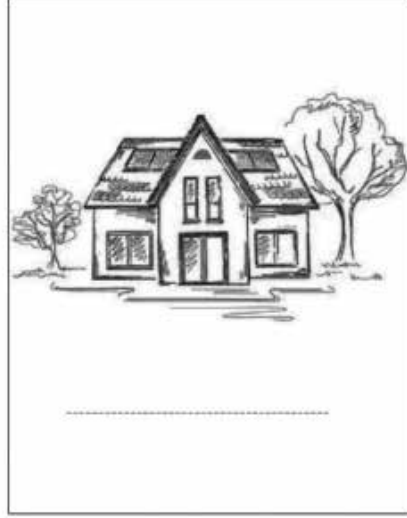
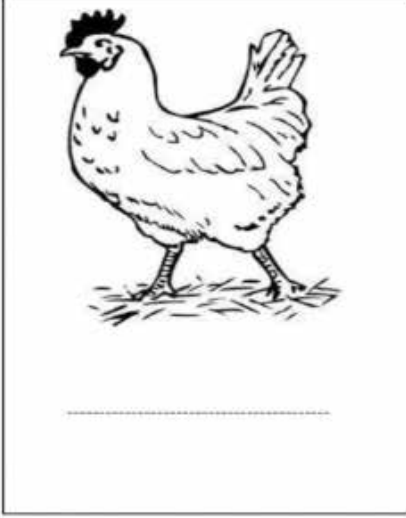
कार्यपत्रक - हिन्दी	
कक्षा 1	
नाम.....	
	मुर्गी माँ घर से निकली झोला ले बाज़ार चली बच्चे बाले चैं-चैं-चैं अम्मा हम भी साथ चलें
1. 'घर' और 'बाज़ार' पर गोला लगाओ।	
2. खाली जगह को भरो।	
मुर्गी माँ से निकली	
झोला ले चली	
बच्चे बाले	
अम्मा हम भी चलें	

कार्यपत्रक - हिन्दी

कक्षा 1

नाम.....

चित्र देखकर नाम लिखो।



कार्यपत्रक - गणित

कक्षा 1

नाम.....

चित्रों को जमा करके खाली डब्बे में लिखें

$$\begin{array}{|c|} \hline \begin{array}{c} \text{🍏} \text{🍏} \\ \text{🍏} \text{🍏} \end{array} \\ \hline \end{array} + \begin{array}{|c|} \hline \begin{array}{c} \text{🍏} \text{🍏} \end{array} \\ \hline \end{array} = \begin{array}{|c|} \hline 6 \\ \hline \end{array}$$

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नाम.....

गुणा

एक ही संख्या को बार-बार जमा करने को गुणा कहते हैं।



$$2 + 2 + 2 + 2 = 8$$

दो फूल चार बार = आठ

$$2 \times 4 = 8$$



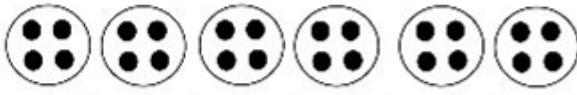
$$3 + 3 + 3 + 3 = \square$$

$$\text{तीन तारे चार बार} = 3 \times 4 = \square$$



$$5 + 5 + 5 = \square$$

$$\text{पाँच गुब्बारे तीन बार} = 5 \times 3 = \square$$



$$4 + 4 + 4 + 4 + 4 + 4 = \square$$

$$\text{चार लड्डू छः बार} = 4 \times 6 = \square$$



$$6 + 6 = \square$$

$$\text{छः कप दो बार} = 6 \times 2 = \square$$

In conclusion

At the time of writing this article, the schools in Delhi are still closed and we are continuing with the weekly worksheet pack – children’s major link to formal education.

The Aga Khan Foundation team has been struggling

to increase community engagement with their children’s education – previously, while parents were interested in the education of the children and the functioning of the school, they were not very invested in the educational process of their children and believed that the teachers and

school have to be completely responsible for their children's education. A positive fallout of the direct engagement with parents during the lockdown was that they began to take an interest in their children's education – some of it was guided by the fear that their children would be left out and some because they felt that their child's name would be struck off the register which was a proxy identity

document for some migrant families.

Finally, the AKF has now created a 'worksheet bank' with activities that assist in learning to read and write Hindi, almost all the basic primary concepts in maths and several themes in art, heritage conservation, health and hygiene which may be of use to other agencies working in similar areas.

Endnotes

- 1 The Aga Khan Foundation has appointed some community teachers in the Municipal Corporation school.



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