



Anganwadis **Research Document**

SELCO Foundation



Background and Context

In the early 1980s, 120 out of every 1000 newly born children were dying even before completing one year. Even after 70 years of independence, more than 22% of the Indian population lives below the poverty line (In 2012, the Indian government stated 22% of its population is below its official poverty limit. The World Bank, in 2011 based on 2005's PPPs International Comparison Program, estimated 23.6% of Indian population, or about 276 million people, lived below \$1.25 per day on purchasing power parity). Ignorance and illiteracy are still rampant among the rural populace. Severe malnutrition on account of acute poverty which gives room for low-resistance and the consequential early childhood disease are the main causes for this alarming situation.

As per the 2011 census, India has around 158.79 million children constituting 13.1% of India population, who are below the age of 6 years. Majority of these children live in an economic and social environment which impairs a child's physical and mental development. The government of India launched the National policy on children in August 1974 while declaring children as a supremely important asset. The Integrated Child Development Service (ICDS) was launched on 2nd October, 1975, which functioned through a vast network of ICDS centres, better known as *Anganwadis*, as an effort to meet the holistic needs of children below the age of 6 years, adolescent girls, expectant and nursing mothers.



INTEGRATED CHILD DEVELOPMENT SERVICES (ICDS)

The ICDS scheme is the foremost symbol of India's commitment to her children. India's response to the challenge of providing preschool education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality on the other hand. It is one of the more successful models of inter-sectoral convergence. The concept of providing a package of services is based primarily on the consideration that the overall impact would be much larger if the different services are delivered in an integrated manner, as the efficiency of a particular service depends upon the support it receives from the related services.

The ICDS provides an integrated package of early childhood services in the form of supplementary nutrition, immunisation, health check up, medical referral services, growth monitoring and non-formal pre-school education. Children less than 6 years of age, adolescent girls, pregnant & lactating females and women of reproductive age group (15-45 years) are beneficiaries of the ICDS scheme. At the grass root level, delivery of various services to target groups is given at the *Anganwadi Centre (AWC)*. An AWC is managed by an honorary *Anganwadi Worker (AWW)*, an honorary *Anganwadi Helper (AWH)* with an ASHA worker visiting regularly. Accredited social health activists (ASHAs) are community health workers instituted by the government of India's Ministry of Health and Family Welfare (MoHFW) as a part of the National Rural Health Mission (NRHM).

A large part of the AWCs functioning is providing non-formal pre-school education which is imparted to the children in the Anganwadi by the Anganwadi workers. The key functionary of ICDS scheme is the

Anganwadi worker, an honorary worker who belongs to the community and caters to a population of 1000 people each. Non-formal Pre school Education is a crucial service provided under the ICDS scheme and caters to the development needs of children between the age group of 3 and 6 years. Activities in an Anganwadi are designed and carried out by the Anganwadi Worker to stimulate the physical, motor, social, emotional, language and cognitive development of children.

ANGANWADI CENTRES

An *anganwadi* centre (AWC) is the first point for contact for maternal healthcare and early child development in India. This centre should have an *anganwadi worker/teacher*, an ASHA worker and a helper.

These centres have prerequisites defined by the government which are as follows:

Ideal use/space requirements of an *anganwadi*:

As per the ICDS guidelines, the minimum size required to build an Anganwadi center is 600 sq.ft.

A model *Anganwadi* should ideally have:

- A large hall for study/sleep area
- Kitchen with ample storage (preferably a separate storage space)
- Bathing area to promote cleanliness
- A toilet for staff and children (while maintaining good health and hygiene)
- Examination room/nursing area for mothers
- Outdoor play area with playsets with the importance of a compound wall
- Residence area for Anganwadi workers/helpers based on the proximity to work and to promote efficiency

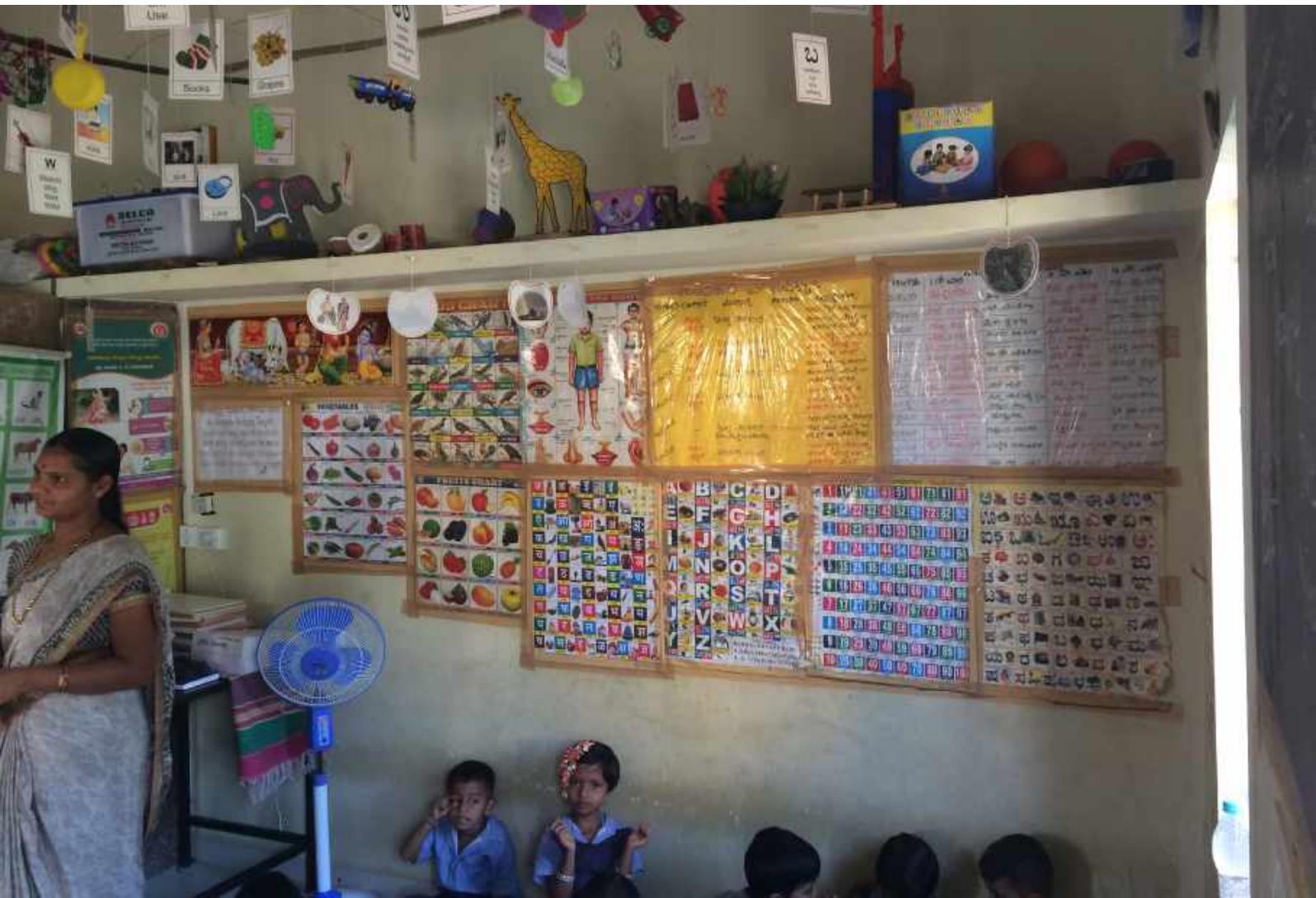


Basic Amenities

- Own supply of water
- Reliable grid connection- a continuous energy source
- Regular cleaning facilities

Educational Tools

- Interactive Learning Tools (Physical)
- Learning charts, toys, blocks
- Books



Problem Statement / Innovation Motivation

Government run *Anganwadis* are facing a huge drop in enrolment due to lack of good facilities and slow acceptance of technology in comparison to the privately run *Anganwadis* or Montessori schools. The most common activities organised at an *Anganwadi* centre are morning prayers, songs and free conversation. But lack of teaching aids and play material are considered as major constraints in organising pre- school education successfully. Research has indicated that the infrastructure that the *Anganwadi* has access to, like a building to run the centre, water, sanitation and access to power, are the major factors which contribute to the success of the *Anganwadi*. The majority of these centres operate in remote village areas and cater to the children and women from these villages.

Operating in remote areas, these centres have no access or have unreliable access to the grid.

As per the Annual Status of Education Report (ASER), the percentage of children in the government run *Anganwadis* has dropped from 89.9% in 2014 to 71.3% in 2016. The report says that poor curriculum and poor teaching techniques have led to disinterest and lack of motivation in both the children and their parents. Although private *Anganwadis* charge a certain area variable fee, the parents with weak economical backgrounds still prefer to admit their children there, given the availability of better facilities which include digital education tools.



Context of the End Users

Anganwadi Worker (AWW)

An *Anganwadi Worker* is the focal point for the delivery of ICDS services to children and mothers. An *Anganwadi* normally covers a population of 1000 in both rural and urban areas and 700 in tribal areas. Services at an *Anganwadi* centre (AWC) are delivered by a Worker (AWW) who is a part-time honorary worker. She is a woman of same locality, chosen by the people, having educational qualification of middle school or metric or higher. The *anganwadi* worker is the most important functionary of the ICDS scheme. The *anganwadi* worker is a community based front line worker of the ICDS programme. She plays a crucial role in promoting child growth and development. She is also an agent of social change, mobilising community support for better care of young children.

She is assisted by a helper who is also a local woman and is paid honorarium. Being the functional unit of ICDS programme which involves different groups of beneficiaries, the AWW has to conduct various types of job responsibilities.

Not only does she have to reach to a variety of beneficiary groups, she also has to provide them with different services which include nutrition and health education, Non- Formal Pre School Education (NEPSE), Supplementary nutrition, growth monitoring and promotion and family welfare services.

ASHA Workers

ASHAs (Accredited Social Health Activists) are the first point of contact of healthcare in rural India and every village must have an ASHA worker. ASHAs are local women trained to act as health educators and promoters in their communities. Their tasks include motivating women to give birth in hospitals, bringing children to immunization clinics, encouraging family planning (e.g., surgical sterilization), treating basic illness and injury with first aid, keeping demographic records, and improving village sanitation. ASHAs are also meant to serve as a key communication mechanism between the healthcare system and rural populations



Problem Database

Current status of Anganwadis

Various field studies have been done across states on the condition of *Anganwadis*. Their study revolves around covering the presence and quality of basic services at these *Anganwadis*. The information given below describe the condition of the majority of *Anganwadis*, however this might not be the state of all *Anganwadis*. There are Govt. and NGO run *Anganwadis* which comply with all the infrastructural and programmatic requirements for the centre to provide the best care to the children.

Standalone efforts by NGOs, CSRs and State governments are focussed on building on model *Anganwadis* however there is a still a big chunk of *Anganwadis* which require interventions and support.

SELCO Foundation conducted on-field baselines across a few districts in North and South Karnataka to further understand the working conditions of *anganwadi* centres and assess the potential interventions to aid these centres. A sample size of 25 was initially squared down on for the first round of primary research. The baselines implored into the general characteristics, working conditions of the AWWs, built environment and education.

INFRASTRUCTURE

The location and condition of the building directly affects the number of beneficiaries who would be coming to the centres. Poor and inadequate infrastructure can create many challenges in the delivery of ICDS services, can create hazards and health problems for *anganwadi* children

and can result in the loss of beneficiaries. A total of 62.5% of the buildings were built before 1995 which are in a bad shape and require renovation.

AWCs usually operate out of a separate rented building, school or own building. The buildings are usually in a *pucca* space and however often need repair. Due to the crunch of funds, this becomes neglected. According to the survey results, 39.1% of the AWCs receive funds only once in two months.

66.5% of the AWCs also lack compound walls and open well crafted playing spaces for the children. Poor and inadequate infrastructure can create many challenges in the delivery of ICDS services, can create safety hazards and health problems for the *anganwadi* children and can cause a loss of beneficiaries. Lack of space, often leads to doubling of activity space as kitchen. Though feeding is one of the important activities at AWCs, most of the AWCs don't have a separate kitchen with proper ventilation. Nor do they have a separate storage room for groceries. Some of these AWCs don't have access to all required kitchen equipments as well.

The lack of space especially in urban areas is attributed to increasing rent and a fixed rent amount by the Govt. Most of the time AWC workers have to pay from their already meagre salaries. AWCs are located in rural villages and wards in urban slum areas, covering a population of 800. The communities are expected to organise a space, though for about a third of *anganwadis*, the government pays rent:



recently upgraded to Rs 750 for rural and tribal projects, and Rs 3,000 for urban projects, if the room is at least 500 square feet in size. However finding such a big space at current rates is almost impossible. This does not include rent for electricity and water connection.

WATER AND SANITATION

The sanitation condition in AWCs in most *anganwadis* in the country is in a dismal condition. Most of them don't have an operating toilet. Children either use the grounds or makeshift toilets. According to the owners of the rented spaces, with limited water supply, they find it difficult to maintain the hygiene if so many people use it.

From our research, only 37.5% of the buildings had a separate toilet facility. According to studies conducted, the correlation between the lack of toilets and or unsanitary toilets and school drop out rates (especially girls) in India is very high.

Very few AWCs in the country have their own tap connection. They are mostly dependent on the well or water from nearby public services point. Sometimes the water is procured from neighbours as well. Presence of safe storages for drinking water is another issue. Usually the drinking water is stored in plastic cans with no prior provision of filtration. However, 70.8% of the surveyed AWCs in Karnataka had their own tap connection but lacked good sanitary storage of it.

WITHIN THE CLASS

It will often be noticed in AWCs, classrooms with missing basic furniture such as chairs, tables and blackboards. Learning tools available are not replaced on time and get torn and worn out.

Weighing machines which is an essential instrument for preparing growth charts and monitor health of children is also absent in most of the AWCs, let alone the weighing machine for adults.

ENERGY ACCESS

AWCs especially in rural areas struggle with proper access to grid connection. This leaves the staff and children without constantly functioning lights and fans. The conditions is worse in areas with hot climate. The research indicates that 54.2% of the *anganwadis* have access to electricity but are susceptible to power cuts and 41.7% of them had no access to grid connection. None of the *anganwadis* had access to any alternate source of power. Lack of energy access also blocks the possibility of adding any digital interventions in these AWCs.

UNDERPAID AND OVERWORKED STAFF

Anganwadi workers are responsible for providing a number of vital services including pre-school education, supplementary nutrition, nutrition counselling, growth monitoring, and so on. *Anganwadis* are part of the ICDS, a centrally-sponsored scheme whose norms are set by the Government of India and costs are currently shared on a 60:40 basis (Centre:States). Although AWWs/Hs perform some of the most important services at the frontline level, the central government has always maintained that they are voluntary workers and therefore what they are paid is an honorarium and not a salary. Besides their daily duty at the centres, the *anganwadi* workers and ASHAs are burdened with tasks that include surveying for government schemes, for diseases like swine flu and malaria, election duty, pulse polio camps, municipal corporation camps and mass-marriage ceremonies.

Proposed Possible Solutions

DIGITISING EDUCATION

The first few years of a child's life are the most integral period for the following:

1. Nutritional security
2. Curiosity Building
3. Social awareness
4. Confidence
5. Sensory and motor skills
6. Interest in learning
7. A positive self-image

The Early Childhood Care and Education (ECCE) Programme is focused on:

- **2 to 3 years**
Proper health care and nutrition
- **3 to 4 years**
Well-rounded early learning
- **4 to 6 years**
School readiness

The initiatives focused through this programme focuses on age group from 3-6 years, where the child is introduced to the learning environment and is eventually made school ready. **As per the researches done (mentioned in the CG Slate Programme), the current issues in the ECCE are:**

1. Inconsistency in teacher quality: Huge difference between what has been planned and what is actually being implemented on the field due to the inconsistency of execution and delivery via teachers and *anganwadi* workers
2. Inconsistency in content delivery: Given the complexity, diversity and size of our country, any solution that needs to be designed should involve the use of contextual ICT solutions with a focus on local culture and language

This raises a few concerns, viz.:

1. *Anganwadis* lacking "play-way" methods: As per observations, it is found that the *anganwadi* workers mostly involve themselves in the routine tasks like taking attendance and feeding children. Thus the *Anganwadi* centres have been running with minimal play and learning material added to the issue in competency of workers
2. Inadequate quality of delivery: In spite of the expansion of the ICDS program with many *anganwadi* centers coming up, the coverage of children for ECCE is still low

An early research study done by SELCO Foundation in 8 *anganwadis* in Yavatmal district in Maharashtra found that none of the *anganwadis* had access to any digital learning tools or aids. Most private *anganwadis* have audio visual content to aid the *anganwadi* teachers these days which have proven to be effective in improving cognitive abilities of children while also increasing attendance and improving student retention.

A suggested intervention is having digital learning content which could be disseminated through tabs or TVs. The focus of the intervention is to minimise the role of an *anganwadi* teacher from being a pedagogy expert to more of a facilitator and using technology as a tool to ease her process as she is overworked and overburdened.

Suggested solution:

1. An efficient TV+Tab or Tab set with appropriate content for learning to be used as an alternative. The same set can be used to play content for health awareness/learning tools for the community as the anganwadi centers double up as community centers in most places
2. To facilitate these interventions, appropriate teacher trainings to be provided on both technical and educational content fronts
3. Solar system loads to be designed to account for these efficient TVs & Tabs and meeting the energy gap needs in an anganwadi center

The solution is designed to cater to regional needs, it is open to local language customisation and is independent from data connectivity

A few of the estimated outcomes are:

1. Increase in learning effectiveness: Observations from the pilots done shows an improvement in the effectiveness of learning. This can be backed based on tracking the games played and time spent on the same and the response of children to particular game assessment
2. Curbing malnutrition via attendance: An observed increase in attendance thereby is estimated to result in significant improvement of nutrition levels for children
3. Concept pick-up: Children will be able to understand Basic English words, solve simple arithmetic and will have improvement in motor skills due to the pedagogy-based design of interactive and motion sensor based games



Proposed Possible Solutions

BUILT ENVIRONMENT

Anganwadi buildings should be sustainable learning spaces for children for a holistic growth and to make sure they are school-ready. According to the early study done by SELCO Foundation in Karnataka, 62.5% of the buildings were built before 1998 and would need to undergo testing for structural stability, preferably undergo reconstruction. All new buildings should have ample natural light and ventilation considering passive cooling techniques for maximum thermal comfort of children.

Suggested Solutions:

- a) For affordable and reliable natural light and ventilation -
Airlite; an acrylic sheet which facilitates natural light and ventilation could be easily installed in these centres. This can be installed in pucca, semi-pucca and kuccha structures
- b) To make the space more creative, interactive and educational for children, all

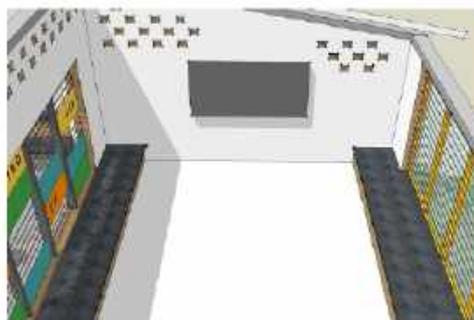
buildings could pertain to the Anganwadi guidelines of BALA (Building as Learning Aid) with additional sustainable learning guidelines by SELCO (under process). This approach to building an anganwadi includes using the built environment of the space as learning tools for children. It has been incorporated by the government in many anganwadi centers and has proven to be an effective integrated learning method. The built elements can be part of the floor, wall, windows, doors, ceiling, platform, furniture and outdoors

- c) Paintings of pictorial stories inculcating basic knowledge of colours, alphabets, numbers, animals etc for children - External facades with awareness paintings for women/caretakers about health and hygiene.

- d) Since most of the Anganwadis do not have separate toilet spaces, new separate spaces should be designed to be inclusive, child-friendly and fun. This will also lead to practice of using toilets at an early stage.



playful element to engage children



well lit and ventilated space



compressed stabilized earth blocks



twin pit- low flush toilet



Proposed Possible Solutions

ENERGY ACCESS

Appropriate basic energy access i.e. a solar energy system can be intervened within all anganwadis with poor quality grid connections or no grid connection. Based on natural ventilation of the system, a suggested solar system can consist of:

- One light + one fan + exhaust fan
- For anganwadis that act as community spaces post working hours, loads can be designed to include more lights and fans as per the requirement
- TV and audio system for audio-visual learning tools or health awareness have to have a separate system design for their judicious use.



Ecosystem Mapping

The ecosystem map is a crucial part of the user research and the subsequent deployment process, which allows us to understand the channels through which we can deploy solutions and how we can continue to support them in the long run. The following is relevant for the research conducted overall aspects of the anganwadi centers and does not assume a single solution

Stakeholder Domain	Nature of Stakeholder*	Justification for nature of stakeholder selected	Name of Partner	(If not identified) Gaps to be filled by SELCO Foundation
Technology (Product/ Services/etc.)	Vendor/Suppliers	Tablets for the digital education program in the anganwadis suitable for the program	Lenovo	Peripherals such as Tablet covers,Screen protectors and installing content and stands in a
	Manufacturer/ Innovator	Solar Technology provider	Selco India	
	Vendor/Suppliers	Nayi Disha provided content that seemed most suitable for anganwadi children. -Flexible content - -Relatable to children	Nayi Disha	Should identify more content providers localized to different regions, NayaDisha's capacity not high enough for the same.
	Other	Stand manufacturer for the tablets, stands are crucial to the solution as the tablet needs to be adjusted based on the height of the kid for the	TBD	Suitable partner to be identified and the same should be tied up with the Hardware provider going forward.
Finance	End User (Cooperatives/ Crowd Sourcing/ MFIs/ CSR/ Bank/debt/ other)	Exploring a financial model with World Vision(edu ngo) where in 50% of funds would come from local funders	World Vision,Mahesh Foundation	Suitable financial model to be established based on the feedback from the pilot.
Service Provider	Enterprise (For Profit)		Selco India(Solar servicing),Nayi Disha(Training)	
Capacity Building	End-user	End user training partners in addition to the content provider should be	TBD	Currently content provider building capacity of the end user.
Policy	Local (ThinkTanks/ Civil Society/ Institutes/ Govt.)		MLAs,Panchayats.	Look at MLA fund, Panchayat fund for financing the project in their constituent Anganwadis
	State(ThinkTanks/ Civil Society/ Institutes/ Govt.)	WCD is looking at interactive content in Anganwadis and had approached NayiDisha for the same earlier this year	WCD, Education department of the state	Approach WCD with the idea, WCD had reached out to NayiDisha in the past for its content, leverage the same to pitch in our model.



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