Prayaas

(An Endeavour For Education)

Theme: Education In Lockdown

What if we are in a lockdown situation for more than a year?

Date and Place: *31. 05. 20, and India*

Team Prayaas ...(An Endeavour For Education)

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Lockdown Scenario

1. How might Sandhya, a 12-year-old student continue her education effectively during lockdown ?

2. How might Rajesh ensure quality education for his son and daughter during lockdown, while managing his own work and family ?

3. How might Sudhir support his students smooth education during lockdown considering various challenges at ground level ?
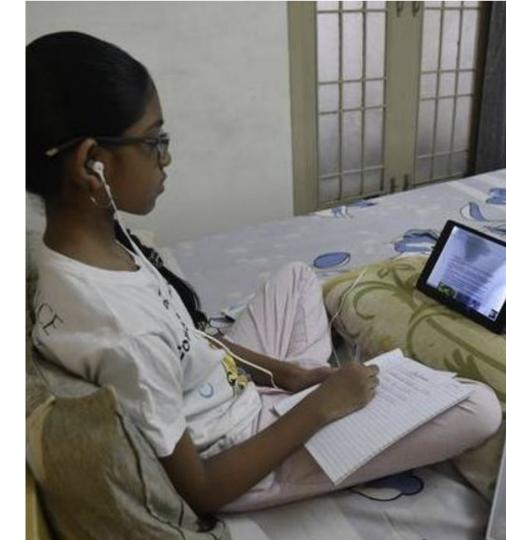
Imagesbazaar

Problem Identified

PROBLEM DESCRIPTION

How might we enable effective lower-secondary education during lockdown in India?

WHY IS IT AN URGENT PROBLEM?

There are **320,713,810** learners affected due to nation wide lockdown in India, out of which **133,144,371** belong to lower secondary level of education(UNESCO). The magnitude of problem is even more serious globally. The children belonging to this group are at formal operational cognitive stage of childhood development(Jean Piaget), which is when they start thinking logically, view the world around them and plan for the future. This is a very crucial age for children and receiving quality education is of utmost importance for their overall development.

If this problem is not taken care of, it will hamper the future of a large number of children.

Meet Sandhya...

PROFILE

Title: Student, Middle School
Gender: Female
Family Setting: Stays with family, has siblings
Infrastructure : Adequate - smart phones/laptop, T.V, Internet, books

DEMOGRAPHICS

Education: Class 7 B,
St. Thomas School, Saharanpur

FEELINGS

Values & Goals: Continue education, keep learning
Worries: Vast syllabus, limited time, unable to understand topics completely, can't clear all doubts
Influences: School policies, Parent & teacher support

OBJECTIONS

- Non interactive nature of current online education,
- Frequent interruptions due to connectivity
- Tool limitations & school policies for doubt clearance
- Lack of personal touch with teachers & classmates

Meet Rahul...

PROFILE

Title: Student, Middle School
Gender: Male
Family Setting: Stays with family, has siblings
Infrastructure : Limited infrastructure - T.V, Radio, Basic phones, Books

DEMOGRAPHICS

Education: Class 8 B,
Janta Junior Government School, Unali
Saharanpur

FEELINGS

Values & Goals: Continue education, keep learning
Worries: No classes, vast syllabus, limited time, unable to understand topics completely, can't clear all doubts
Influences: School policies, Parent & teacher support

OBJECTIONS

- None or limited school sessions.
- Lack of social connect with peers and teachers.
- Lack of devices & connectivity to access online content.
- Syllabus is overwhelming & unable to clear doubts.

Meet Sudhir...

PROFILE

Job Title: Teacher, lower secondary,
St. Thomas School
Gender: Male
Family Setting: Married, with kids

DEMOGRAPHICS

Income: Rs 18,000
Education: M. Sc.

FEELINGS

Values & Goals: Create value in children's life
Worries: Unable to impart education to kids effectively due to lockdown, unable to gauge children's attention in classes, finishing up the syllabus, personal safety
Influences: School administration, Government policies

OBJECTIONS

- Lack of a suitable & effective bridge between students and themselves for education.
- Lack of suitable curriculum for remote education.
- Lack of evaluation/assessment tools for online education.
- Quality of interaction with students during lockdown.
- Lack of supportive guidelines/training for conducting online education

Meet Meeta...

PROFILE

Job Title: Teacher, lower secondary, Government School
Gender: Female
Family Setting: Married, with kids

DEMOGRAPHICS

Income: Rs 30,000
Education: Graduation with additional mandatory course in pedagogy

FEELINGS

Values & Goals: Create value in children's life
Worries: Unable to impart education to kids effectively due to lockdown, personal safety, possibility of children dropping out of school.
Influences: Government policies, School administration

OBJECTIONS

- Infrastructure limitations on school's and student's end.
- Lack of cooperation, awareness in parents
- Lack of suitable curriculum for remote education, quality of interaction.
- Lack of supportive guidelines/training for conducting online education.

Meet Rajesh...

PROFILE

Title: Parent, Sandhya's Father
Gender: Male
Family Setting: Married, with kids

DEMOGRAPHICS

Occupation: Businessman
Income: Rs 35,000
Education: Graduate

FEELINGS

Values & Goals: To ensure good quality of life for children, to ensure education continuation
Worries: Child facing education in studies, child's excess digital exposure, potential negative health impact due to new normal
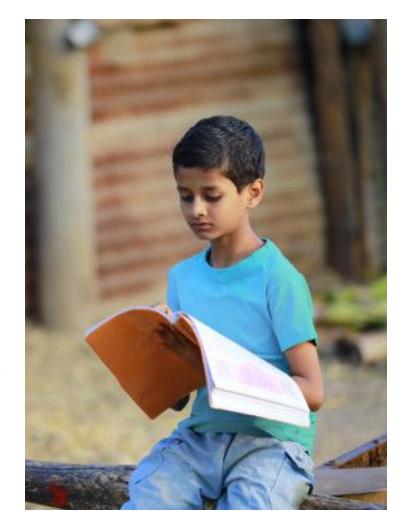**Influences:** Government policies, School administration, personal economic condition

OBJECTIONS

- Fear of child getting infected with corona, extended lockdown
- Current quality & impact of online education
- Infrastructure limitations
  Too much effort in micro-managing child's education on daily basis

Key Insights

- Effective remote education will happen given that students, teachers & parents are given with an effortless tool to communicate.

- Working parents / uneducated parents have insufficient / less knowledge to teach and encourage the kids.

- Effective remote teaching will happen when provided with tailored curriculum & ways of credible remote assessment.

- How can teacher, parents & students be guided for adapting to online mode of learning and support as and when required

- Social empathy is affected due to less interaction other than family members

Explorations

ALTERNATIVE SOLUTION

Peer to peer learning, elder students teaching
younger students locally

WHY WE CHOSE NOT TO GO WITH THIS ?

Might become ineffective in Covid - 19 red zones, No
involvement of schools, can be clubbed with the final
solution as an add on

Explorations

ALTERNATIVE SOLUTION

Open elective model for students, pick up favorite subjects from desired schools to customise your own set of teachers for enhanced learning

WHY WE CHOSE NOT TO GO WITH THIS ?

Interesting solution but caters to a different set of audience, only valid for students with adequate infrastructure, might put pressure on popular schools and reduce quality of engagement due to volume

Solution

Introducing

seekHo
Education For All

A platform for students, teachers and parents to adapt with the new normal education during lockdown, i.e. remote learning.

It aims to provide equal education for all students, irrespective of their infrastructure limitations.

Solution

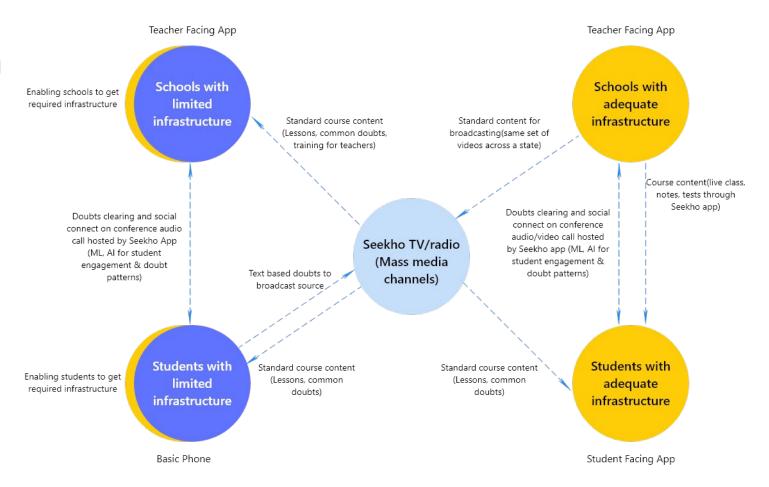**Solution takes two approaches based on available infrastructure**

Reaching students with mass media communication

Reaching students through internet based devices

For limited infrastructure
(T.V., radio, basic phone, books)
(Temporary stage until infrastructure made available)

For adequate infrastructure
(Smartphone/laptop, T.V., internet, books)

Solution System

Teacher Facing App

Schools with limited infrastructure

Enabling schools to get required infrastructure

Standard course content (Lessons, common doubts, training for teachers)

Standard content for broadcasting(same set of videos across a state)

Teacher Facing App

Schools with adequate infrastructure

Course content(live class, notes, tests through Seekho app)

Doubts clearing and social connect on conference audio call hosted by Seekho App (ML, AI for student engagement & doubt patterns)

Seekho TV/radio (Mass media channels)

Text based doubts to broadcast source

Doubts clearing and social connect on conference audio/video call hosted by Seekho app (ML, AI for student engagement & doubt patterns)

Enabling students to get required infrastructure

Students with limited infrastructure

Standard course content (Lessons, common doubts)

Standard course content (Lessons, common doubts)

Students with adequate infrastructure

Basic Phone

Student Facing App

Problem & Solution

I want to study but I can't go to school due to lockdown

Rahul
Can't attend classes at all

Teacher
Communicating remotely is difficult

Sandhya
Disintegrated solutions for education

Attends pre-recorded lessons broadcasted on TV & radio for all students, phone number based profiles with teachers

Lessons available in regional language and English with subtitles on Seekho TV

Videos fetched from 1 trusted school per state for language relevance, could be recorded classroom lectures or separate recordings

Teacher has to ensure that students attend the lessons on TV/radio, collaborate with parents, student's contact information on Seekho app

Teacher has to conduct live sessions, ensure attendance, collaborate with parents through Seekho app

Attends live lessons with school based login & profile on Seekho app

Automatic subtitles enabled

Problem & Solution

Existing syllabus feels too elaborate and difficult

Rahul	Teacher	Sandhya
Complex syllabus for self-study	Current syllabus difficult to teach remotely	Too much & complex syllabus

Teacher has to get trained to teach with the new curriculum and new mode of teaching, make parents aware & collaborate with them

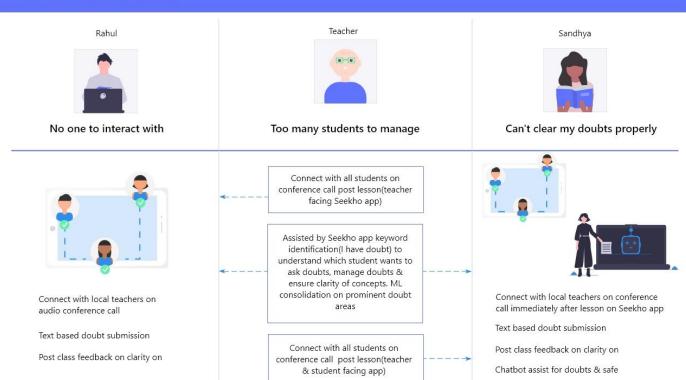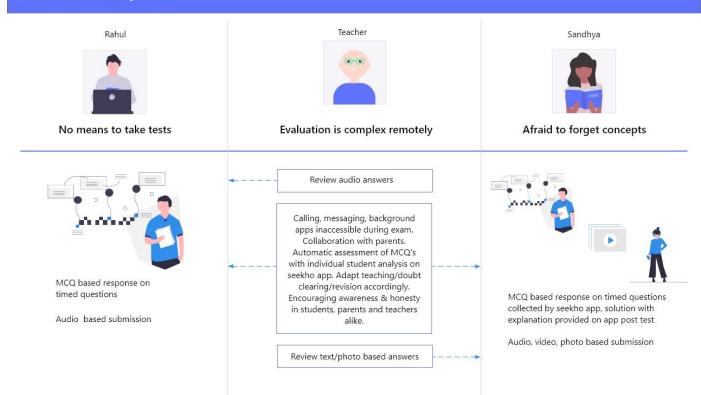Adapting the curriculum for remote education, standard curriculum(if not possible then State & CBSE board)

Customization to Seekho TV & radio based lessons(same content, different approach)

Adapting the curriculum for remote education, standard curriculum(if not possible then State & CBSE board)

Problem & Solution

How will I clear my doubts?

Rahul	Teacher	Sandhya
No one to interact with	Too many students to manage	Can't clear my doubts properly

Teacher:
- Connect with all students on conference call post lesson(teacher facing Seekho app)
- Assisted by Seekho app keyword identification(I have doubt) to understand which student wants to ask doubts, manage doubts & ensure clarity of concepts. ML consolidation on prominent doubt areas
- Connect with all students on conference call post lesson(teacher & student facing app)

Rahul:
- Connect with local teachers on audio conference call
- Text based doubt submission
- Post class feedback on clarity on

Sandhya:
- Connect with local teachers on conference call immediately after lesson on Seekho app
- Text based doubt submission
- Post class feedback on clarity on
- Chatbot assist for doubts & safe

Problem & Solution

How will I take my exam?

Rahul

No means to take tests

MCQ based response on timed questions

Audio based submission

Teacher

Evaluation is complex remotely

Review audio answers

Calling, messaging, background apps inaccessible during exam. Collaboration with parents. Automatic assessment of MCQ's with individual student analysis on seekho app. Adapt teaching/doubt clearing/revision accordingly. Encouraging awareness & honesty in students, parents and teachers alike.

Review text/photo based answers

Sandhya

Afraid to forget concepts

MCQ based response on timed questions collected by seekho app, solution with explanation provided on app post test

Audio, video, photo based submission

Problem & Solution

How will I interact my peers?

Rahul
I feel lonely & disconnected

Study Buddy assigned, can connect over the phone, free messaging for discussions

Address the class activity once every week by different

Teacher
I have no clue on student's interaction

Appropriate buddy creation to maximise learning, moderate conversations, content during open peer to peer interactions, devise group activities for remote mode

Sandhya
I can't discuss or do group study

Study Buddy assigned, can connect over the phone, chat, video call

Students can choose to have a group video during recess for lunch together with selected peers

Discussion/group chat enabled

Solution

While remote education is being provided through mass media channels to ensure continuity of education, the benefit and flexibility of connecting through a device is additional and should be pushed forward for best remote learning experience

Some ideas to ensure infrastructure availability in masses :
- Providing subsidies for device for under-privileged students
- 100 Rs per month EMI for smartphone for education
- Peer to peer learning with recognition & rebate on device fee
- Lending devices/using shared devices amongst a group of students
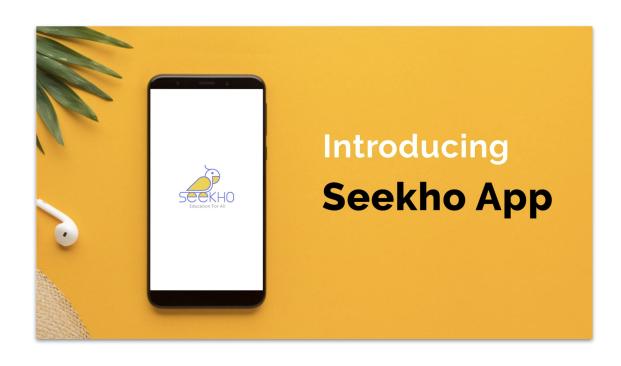
User Experience

Video Google drive link
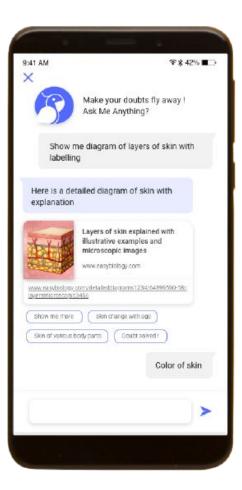
https://drive.google.com/drive/folders/1wmO2OL-GrbnHr-M2hXgDUaTa8wCN7c1E?usp=sharing

User Experience

Seekho (Learn) Chatbot
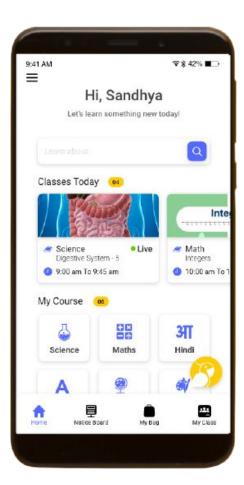
- Approachable chatbot for first hand doubt clearance
- Feeding the curiosity of child
- Child safe space for internet content browsing

User Experience

Education For All

Segregated sections (Dashboard) for student to manage their study
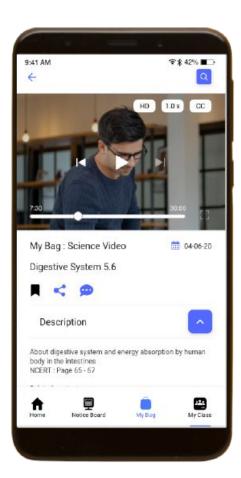
- Upfront today's time table for easy access to classes
- School bulletin for child to relate to school
- My bag with organised study material, tests and doubt repository
- My class for social connect with peers and connecting with teachers

User Experience

Live Class View For Students

- Video quality adaptive and customisable as per internet connectivity
- Subtitles, bookmark feature
- Custom speed for past classes
- Comments enabled for peer discussions
- Repository of broadcasted videos & podcasts

User Experience

Easy Class Management By Teacher (For students with limited & adequate infrastructure both

- Students data pre-fetched on the app
- One touch group call & message feature

User Experience

SEEKHO
Education For All

Parents view for their child
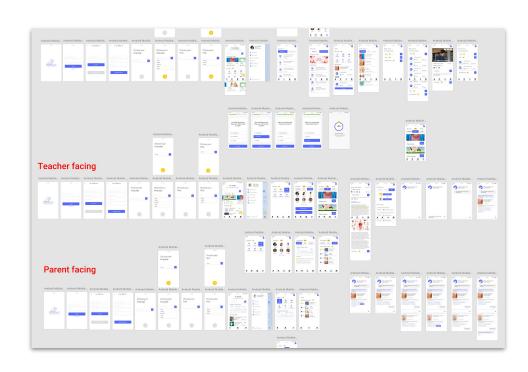
- Monitoring progress of child
- Can see child's engagement in class
- Can connect with relevant teachers as and when required

User Experience

To see the Flow in detail please follow this Xd Prototype link.
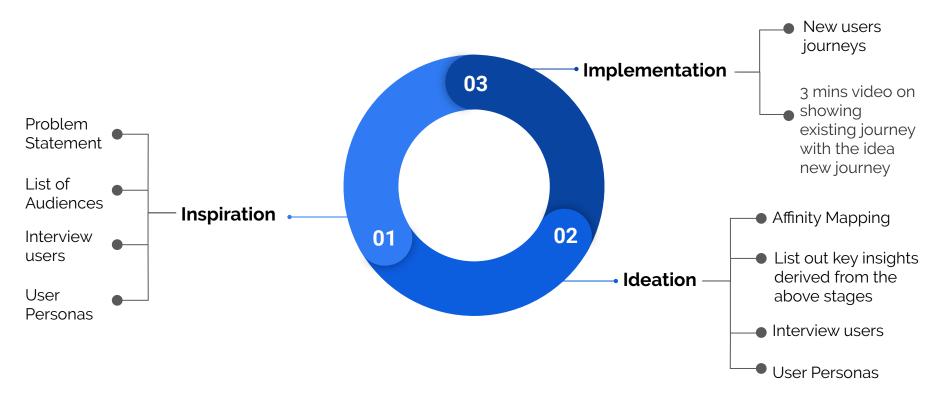
https://xd.adobe.com/view/989725fa-e444-4faf-6cd8-a79cfbc75be4-eea6/

Process

IDEO DESIGN PROCESS FOR SOCIAL IMPACT

Inspiration

- Problem Statement
- List of Audiences
- Interview users
- User Personas

Implementation

- New users journeys
- 3 mins video on showing existing journey with the idea new journey

Ideation

- Affinity Mapping
- List out key insights derived from the above stages
- Interview users
- User Personas

01   02   03

SEEKHO
Education For All

Team Work

seekho
Education For All

Affinity Mapping / Journey Mapping

Possible Solutions

UX India Research Framework

Impact

Solution is based on major issues captured during user study, students can overcome their limitations during remote education

- Continued education in lockdown
- Classroom environment can be recreated to a great extent through the platform
- Penetration of solution in low infrastructure areas possible
- Curriculum focused on engagement & learning rather than only scoring marks will transform indian education
- Effective doubt solutions students for better clarity of concepts
- Managing & accessing students remotely easily manageable
- Overall, ensuring quality education safely for student amidst lockdown & Covid-19 crisis

Execution & Viability

HOW CAN OUR SOLUTION BE IMPLEMENTED AND SUCCESSFUL

- Infrastructure : Use of widely available channels like television & radios, not only through mobiles & laptops
- Option of lessons in their local language which will be easy to understand by students.
- Involvement to local teachers with students (in both limited and adequate infrastructure) provides child a comfortable space to learn

Conclusion

Lockdown is like a shock to our existing education system & an opportunity to shift to more engagement & learning based approach that is accessible and can be imparted to anyone from anywhere. Seekho app caters in different approaches to various students to ensure equal education for all.

Future Scope

- With proper testing, this model can be applied in remote areas even after lockdown,
- AR/VR can be utilised to enhance the experience
- Educational kits & usage of items readily available at home to learn about concepts (ex : sugar for crystallisation, flowers for biology etc)

Thank you!

We would like thank all the people who contributed their valuable time for our user study. We would also like to thank our mentor Lawanya Ramachandran for her unconditional support, and showing us the right direction. We also thank UMO - DXS for giving us this opportunity. It was a crazy and fun filled collaborative experience and we as a team loved the process. Thank you !