PrimaEdu-i

Digital Interactive Connected Intelligence Learning Board for Primary School Education

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Problem Statement

With COVID19 pandemic scenario, many industries are going through disruption in their standard operating models with social distancing norms and government guidelines. One such industry which is very critical and could have an transformed future as well, is, the ==education industry==. For the Teacher, Child, Parent ecosystem to continue in the standard operating model is a big challenge with the New Normal scenario.
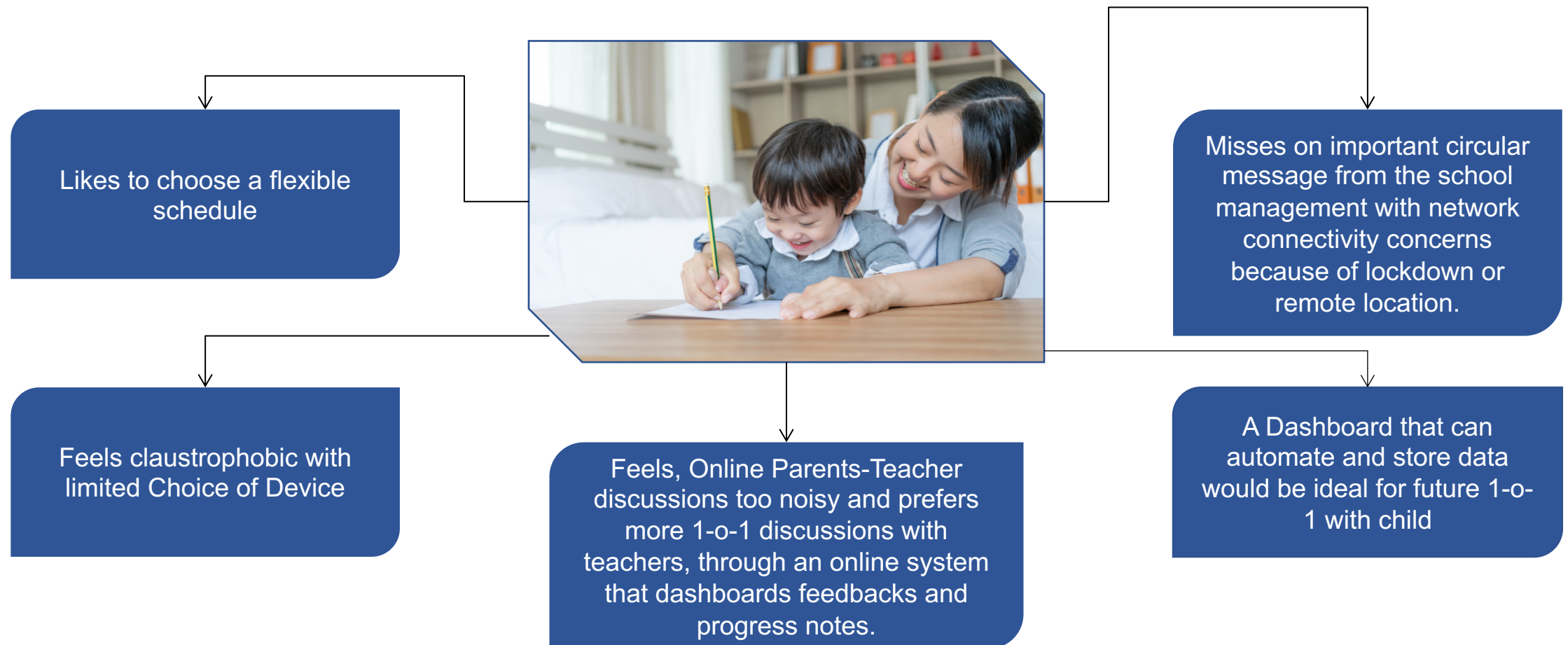

Education is a great value builder for any economy and cannot be compromised on schedule, quality, precision, intuitiveness and usability. It is very critical for any Economy to build a **learn from home education system at par with the real world experience**. There are multiple digital platforms for mid and senior school. But for ==primary school==, the use case is even more complex to keep the child, parent and Instructors adapted to the ==New Normal of Remote Learning==. And with diverse Online options, it is a big challenge for Education Institutes and Parents to arrive at a consensus decision to start using a **Digital Tool aimed at transforming the Real world Classroom/school experience into a Virtual Remote Learning/Teaching/Parenting Experience and Virtual Education Ecosystem.**

This is a broad problem statement to solve and the key, is to empathize, ideate on a **tangible solution**, for "**The Teacher**", "**The Parent**" and "**The Children**" Community by tapering down on the problem statement and identifying priority use cases.
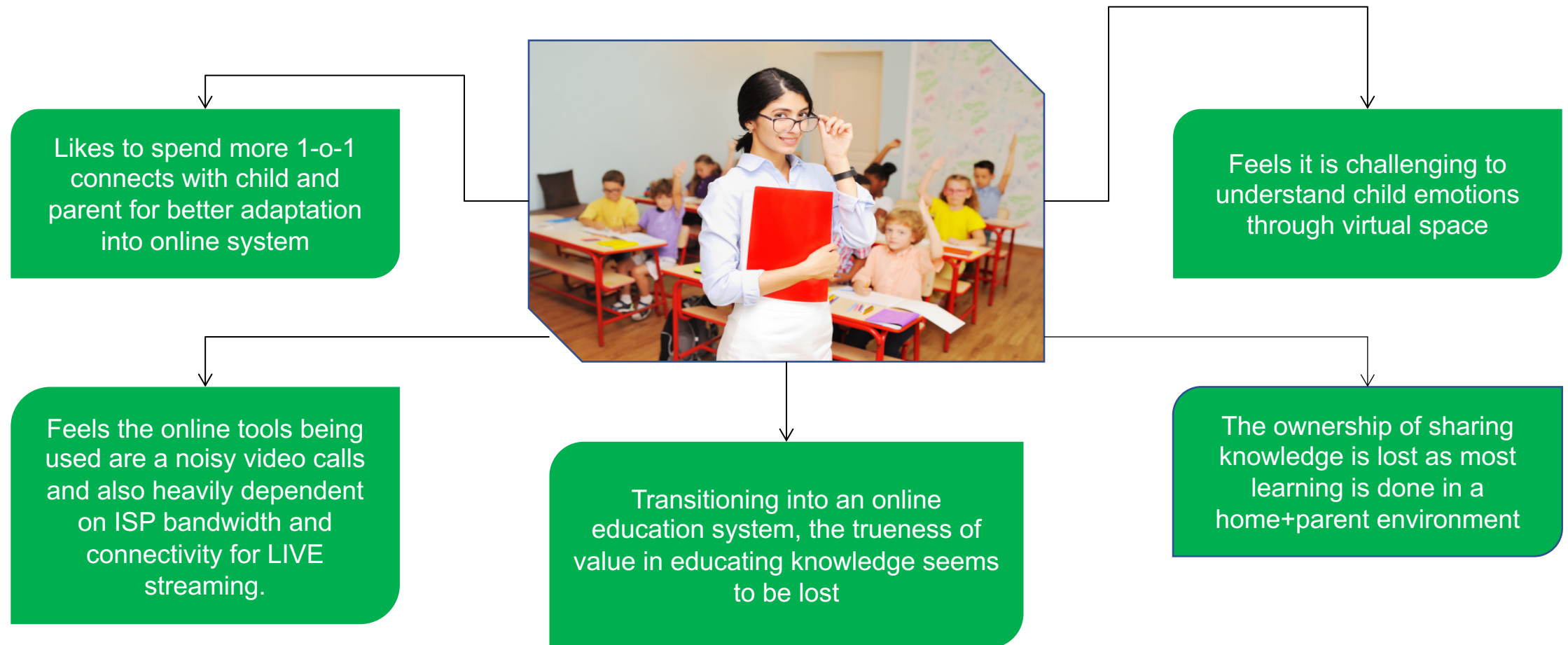
Research – "The Parent" persona and emotions

As a parent myself, I had a scenario in front of me to vision and adapt myself and my children with the transformation in the education model to face remote learning with the academic year starting in few weeks. This was a problem to solve as a user and as a technologist. I plugged myself into a persona, "The Parent" persona. I am part of a parent WhatsApp group for both my children class community. And in that group, I floated around few thoughts and gathered few **insights from other parents in understanding more on the problems to solve** for "The Parent" user group.

Likes to choose a flexible schedule

Misses on important circular message from the school management with network connectivity concerns because of lockdown or remote location.

Feels claustrophobic with limited Choice of Device

Feels, Online Parents-Teacher discussions too noisy and prefers more 1-o-1 discussions with teachers, through an online system that dashboards feedbacks and progress notes.

A Dashboard that can automate and store data would be ideal for future 1-o-1 with child

Research – "The Teacher" persona and emotions

Teachers go through a thankless job at a time during such operational changes in the education system. Because they need to **abide with school management, government guidelines** and at the same time need to **stay focused in preparing the children with best value in knowledge, learning and activities**. And to deal with primary school children is no less challenging, with academic deadlines as well.

Likes to spend more 1-o-1 connects with child and parent for better adaptation into online system

Feels it is challenging to understand child emotions through virtual space

Feels the online tools being used are a noisy video calls and also heavily dependent on ISP bandwidth and connectivity for LIVE streaming.

Transitioning into an online education system, the trueness of value in educating knowledge seems to be lost

The ownership of sharing knowledge is lost as most learning is done in a home+parent environment

Research – "The Child" persona and emotions

If Teachers and Parents go through heavy challenges in adapting to the New Normal remote learning environment, the Child is no less worried or frustrated. Children do not have the patience to sit long hours on Digital Medium and with this New Normal, it is definitely challenging and **traumatic for the child**. This could even cause emotional and behavioral problem in children, like **feeling insecure, demotivated, unlearned, neglected, or simply just panicky to see the adaptations taking place around them**.

Confused with the New Normal Adaptation

Increased memory and intelligence load to adapt to online tools

Feels isolated, unattended, unheard and lost

Distracted with other options of content on the digital medium

How to Problem Solve?: The Ideations & Use Cases

Key Value Differentiators or Use Case Features ideated to solve the problem definitions between the 3 personas/user groups:

Time Management & Flexible Schedule for LIVE sessions

Play and Fun gamifications suitable for Primary School Children

Device Recognition intelligence for an adaptive UI

Multi-Factor Connects with Integrated Apps and networks.

Automated Data Store process automation to prevent loss of class notes and instructions

An Integrated system, to sync and view data of sibling children from different class or school

One to One Individual Connects and meets through the online tool

Video/Screen Record feature to capture physical activities to evaluate motor skills, hand-eye coordination, judgement of emotions

Emotional Intelligence recognition system to identify trouble/ behavioral differences in children, through streamed and recorded videos

Accidental screen and device navigation control for children

Natural Language Processing automation to recognize queries and inputs from user groups and to send out notifications/ sms alerts.

Classmates forum to exchange information on class notes, assignments, schedules etc.

Recorded Virtual Tours of eco parks, regional landmarks to overcome the challenge of physical tours and field trips.

Payment Gateway for tuition fees

Deep Analytics on strengths & areas of improvement

Pre-built learning activities based on age group, syllabus and subjects

Virtual Blackboard for teachers to draw, scribble, erase class notes and teachings.

Design Philosophy and The Solution Overview

In real world with standard education operating models for Primary School, we have a Grade teacher manage a set of children, teach, evaluate and interact with their parents. The challenge as seen earlier from the problem statement is, the teacher, parent community using **multiple Digital Tools to shift to a New Normal Environment.** The solution is to overcome this multiple digital tool scenario and translate the real world education ecosystem into a technology driven digital education ecosystem. The design philosophy is to break the digital ecosystem into smaller groups/PODs.

PrimaEdu-i is the answer for this.
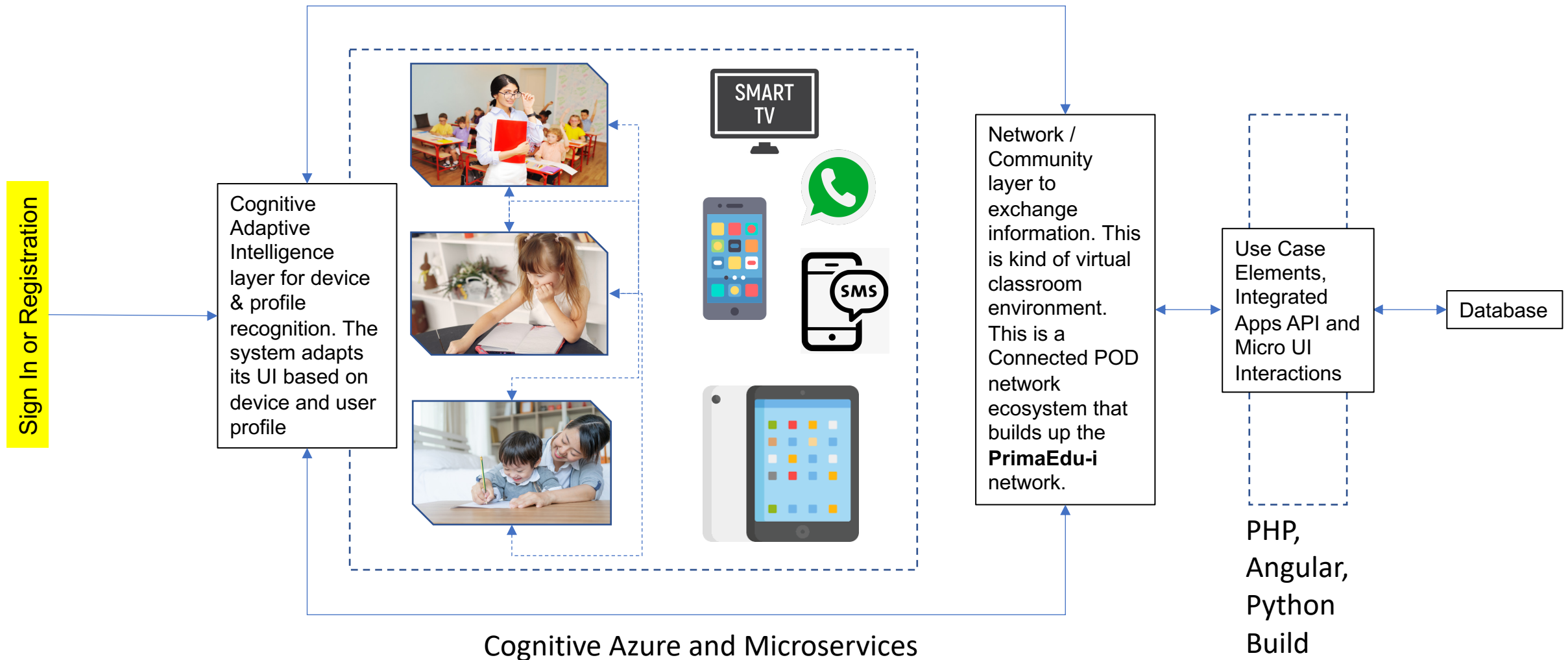**A Learn from Home Education Ecosystem Dashboard networked with many smaller Digital Triage PODs** for teaching, learning and parenting experiences.

A PrimaEdu-i Digital Triage POD

Solution Architecture

The architecture for this virtual ecosystem is a build of an intelligence layer, network layer, integrated app api layer with the basic elements of the Application Interface and Use Case Features.

Sign In or Registration

Cognitive Adaptive Intelligence layer for device & profile recognition. The system adapts its UI based on device and user profile

Network / Community layer to exchange information. This is kind of virtual classroom environment. This is a Connected POD network ecosystem that builds up the **PrimaEdu-i** network.

Use Case Elements, Integrated Apps API and Micro UI Interactions

Database

Cognitive Azure and Microservices

PHP, Angular, Python Build

Vision

Social Distancing and COVID19 guidelines posses a great threat to disrupt the standard operating models across industries.

Education services industry is no less impacted. Segments like the Primary Education sector is a sensitive cross section because of the user community it involves like the children of age group 4 to 10. The change in the New Normal posses threats of trauma and psychological behavioral issues in children of tender age because of the change in the way things operate around them.

The vision is to seamlessly transition from the real world education ecosystem to the learn from home digital ecosystem without any loss in experience in the New Normal COVID19 scenario.