



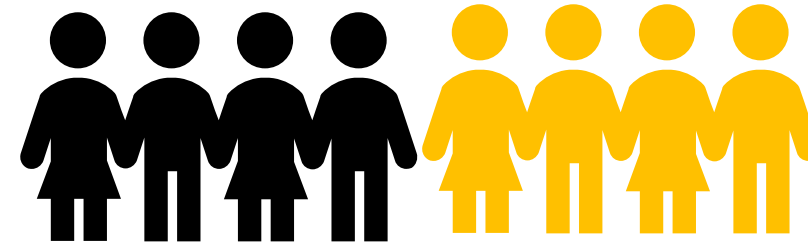
Technology in Education

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Two Major Issues



Lack of basic reading, writing and math skills starting early years.

50% children in the developing world spend 4-5 years in school without learning basic skills.



Rote learning accompanied by chalk and talk teaching middle school onward.

Examination centric teaching learning.

No life skills or work skills learned at the end of school years INSIDE the school.

Teaching at the Right Level (TaRL)

is a non-tech approach to help children catchup on basics of reading and math. short but intense intervention

- Assess all children at baseline
- Activities in three types of groups:



Whole Class Activity

Story listening activities for the whole class



Group Activity

Small groups of children as per level of learning



Individual Activity

practice what is learned in the whole class and small groups.

- **Periodic assessment to check progress ,reorganization of groups and finally endline.**

Assessment Tools

नगमा समझदार लड़की थी। मगर उसका छोटा भाई अमन बहुत नटखट था। एक दिन दोनों बाज़ार में घूम रहे थे। अमन ने रास्ते में पकौड़े देखे। उसे पकौड़े बहुत पसंद थे। माँ उसके लिए पकौड़े बनाती थी। नगमा ने कहा यह पकौड़े तीखे होंगे। मगर अमन नहीं माना। अमन ने पकौड़े खाए और उसकी आँखों से आँसू निकलने लगे।

रात हो गई है।
चाँद दिख रहा है।
तारे भी चमक रहे हैं।
सब लोग सो गए हैं।

न प म
च स
थ ग द
र ल

आग सोच
ताला
गिर पानी
मौका धुन
देश
पैसा बूढ़ा

Reading – Hindi

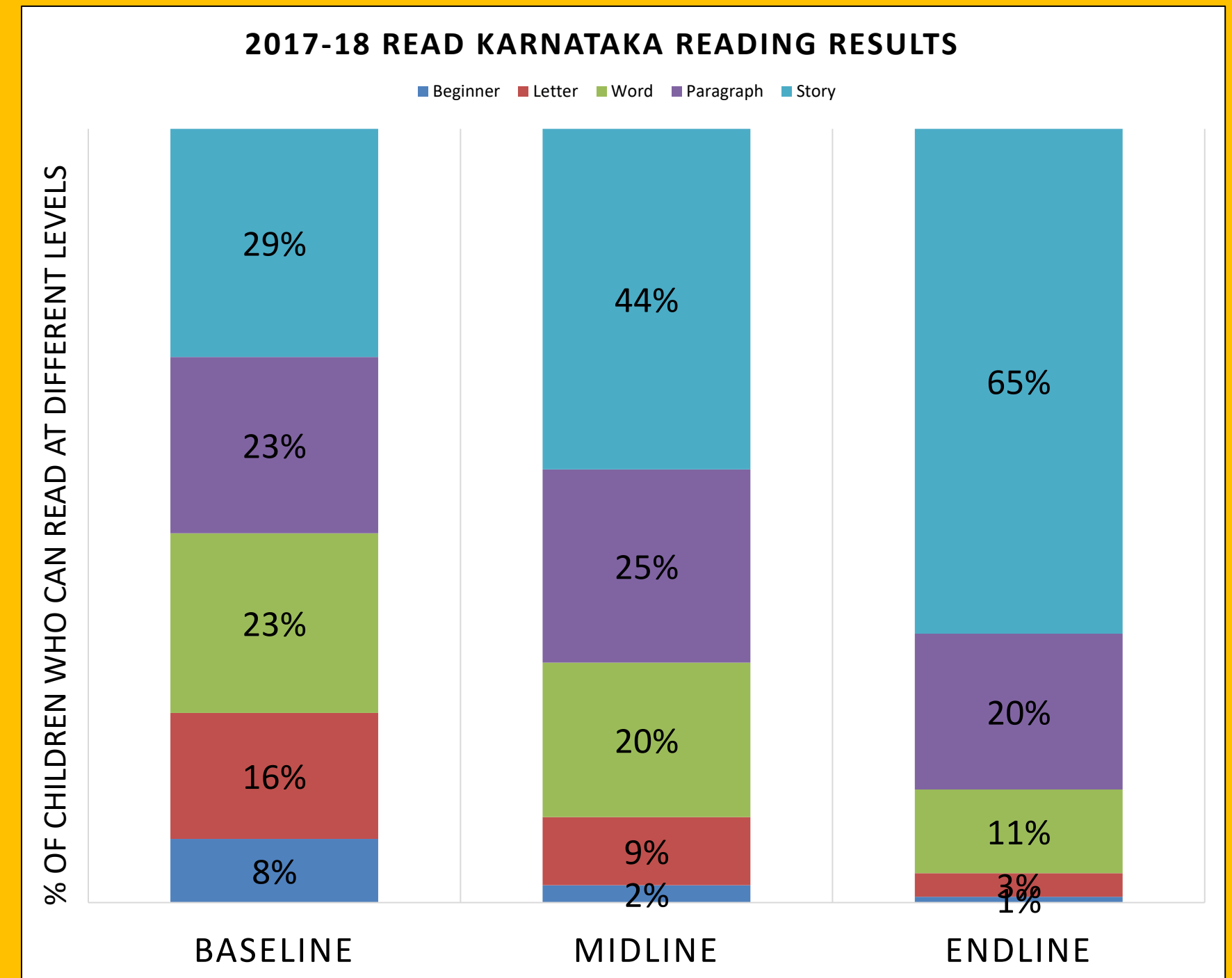
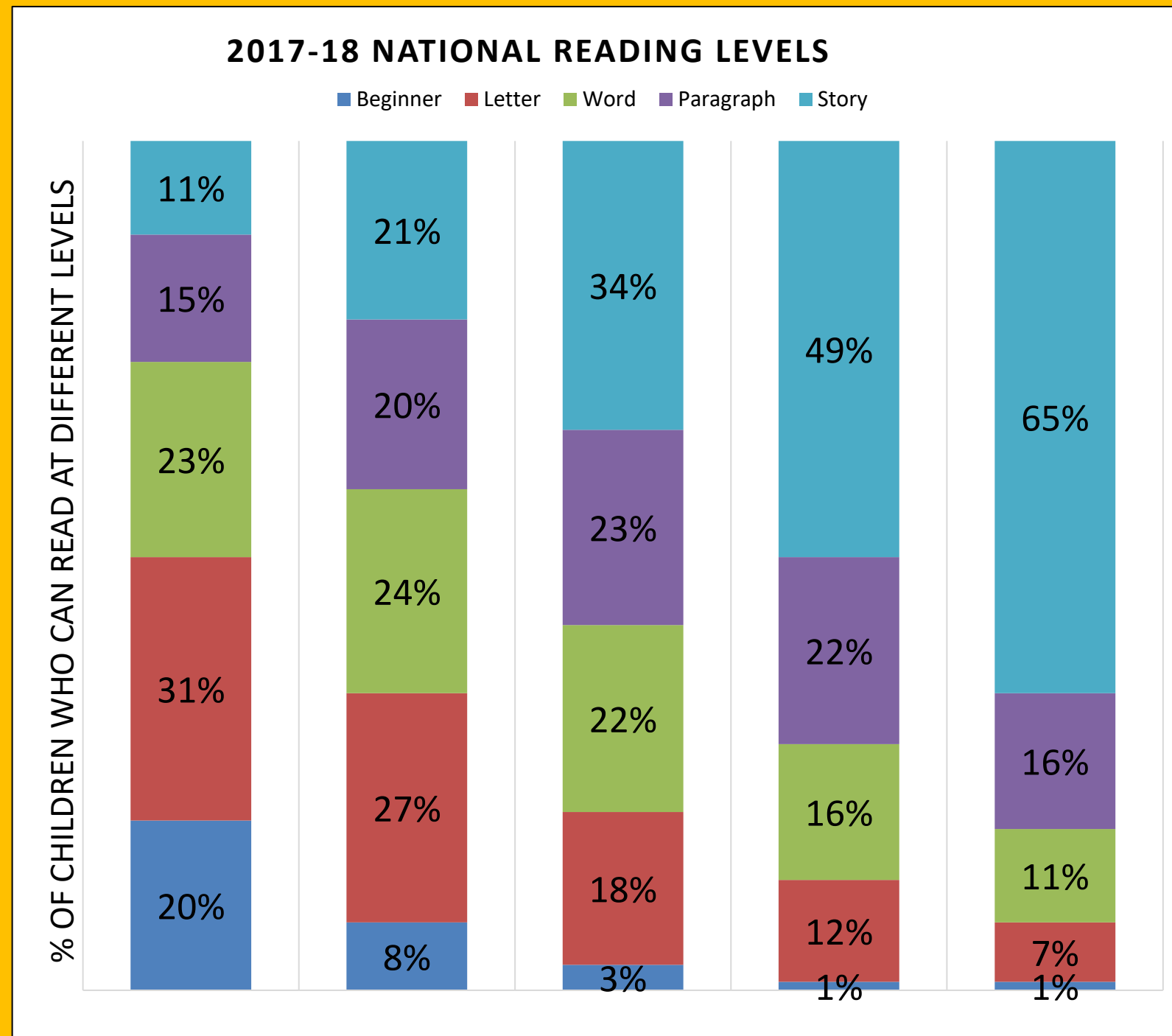
अंक पहचान 1-9	संख्या पहचान 10-99	घटाव	भाग
5 7	74 23	$\begin{array}{r} 63 \\ - 44 \\ \hline \end{array}$ $\begin{array}{r} 51 \\ - 35 \\ \hline \end{array}$	$7 \overline{) 898}$
8 4	91 86	$\begin{array}{r} 92 \\ - 48 \\ \hline \end{array}$ $\begin{array}{r} 71 \\ - 35 \\ \hline \end{array}$	$4 \overline{) 659}$
2 9	24 79	$\begin{array}{r} 45 \\ - 27 \\ \hline \end{array}$ $\begin{array}{r} 34 \\ - 19 \\ \hline \end{array}$	$8 \overline{) 946}$
3 1	37 61	$\begin{array}{r} 43 \\ - 29 \\ \hline \end{array}$ $\begin{array}{r} 46 \\ - 17 \\ \hline \end{array}$	$6 \overline{) 757}$

Math – Hindi

Results

Pratham Learning Camps in India in ~ 4000 govt. schools with 135,000 children. Grades 3-5. 30-40 days.

Pratham partnership work with governments: *Eg.* Govt of Karnataka across 13 districts, 17,300 schools, 478,000 children. Grades 4 & 5. 60 days.



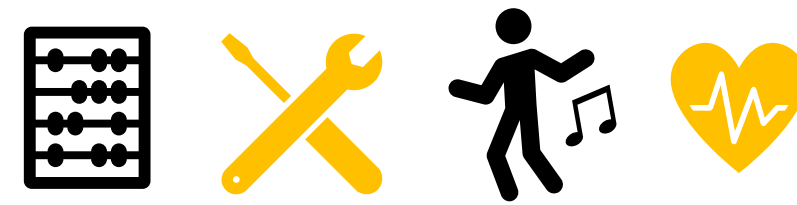
Hybrid Learning

( **PraDigi** Open Learning)
PRATHAM DIGITAL



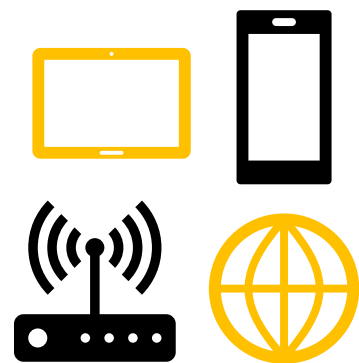
SOCIAL STRUCTURE

- Community-based, for children older than 10
- Children form their own neighborhood learning groups
- Older children or youth register to learn digitally and teach younger children
- Mothers included



CURRICULUM (NOT AGE-GRADE BASED)

- Children's levels and choices matter
 - Learning for school: children assessed, choose courses
 - Learning for life: art, music, hobbies, health
 - Learning for work: introduction to vocations and livelihoods, pathway to vocational courses leading to jobs



DIGITAL INFRASTRUCTURE

Digital Device Library – Content repository-Raspberry Pi + data card+ 3 to 5 tablets taken care of by young volunteers or parents.
Smart phones and ordinary phones owned by families.

Some Thoughts

Mobile phones are too small for interactive learning at a relatively young age.

Interactive learning should not be limited to interaction between the child and the device.

Digital devices are not meant to only deliver knowledge. Children learn to use devices to create local knowledge too.

Investment necessary in creation or translation of content in local languages.

Many technology apps could be used for self learning.