



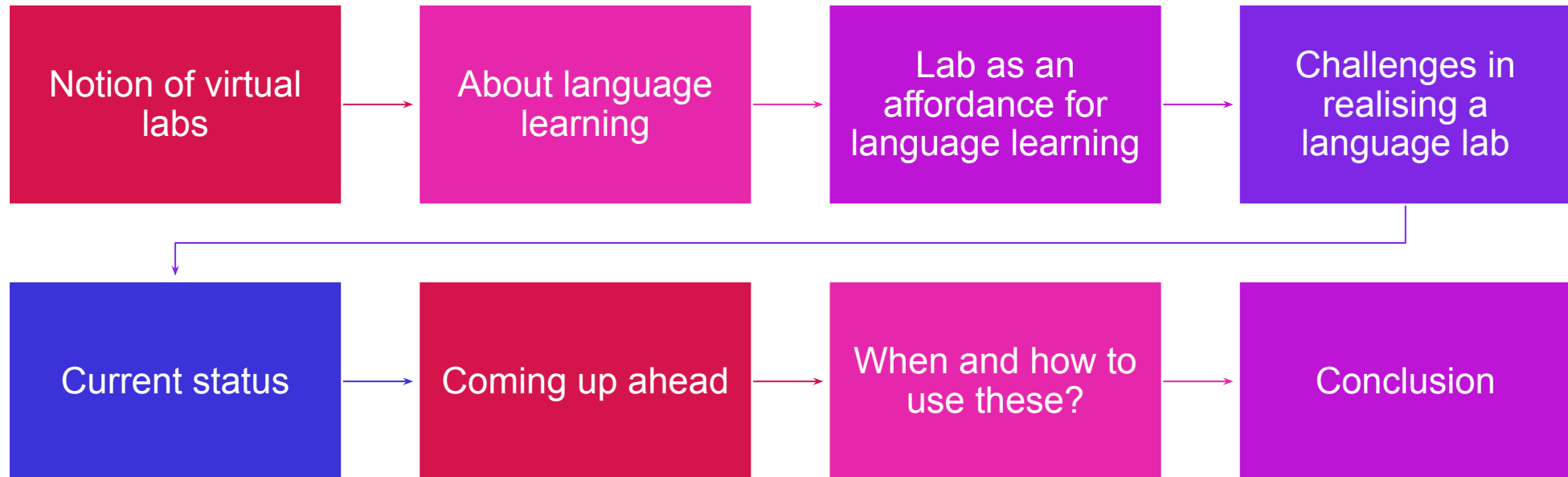
LANGUAGE LEARNING UNDER VIRTUAL LAB INITIATIVE

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Outline



Language Labs

No experiments as in science lab to do!



But LL requires large amount of practice...



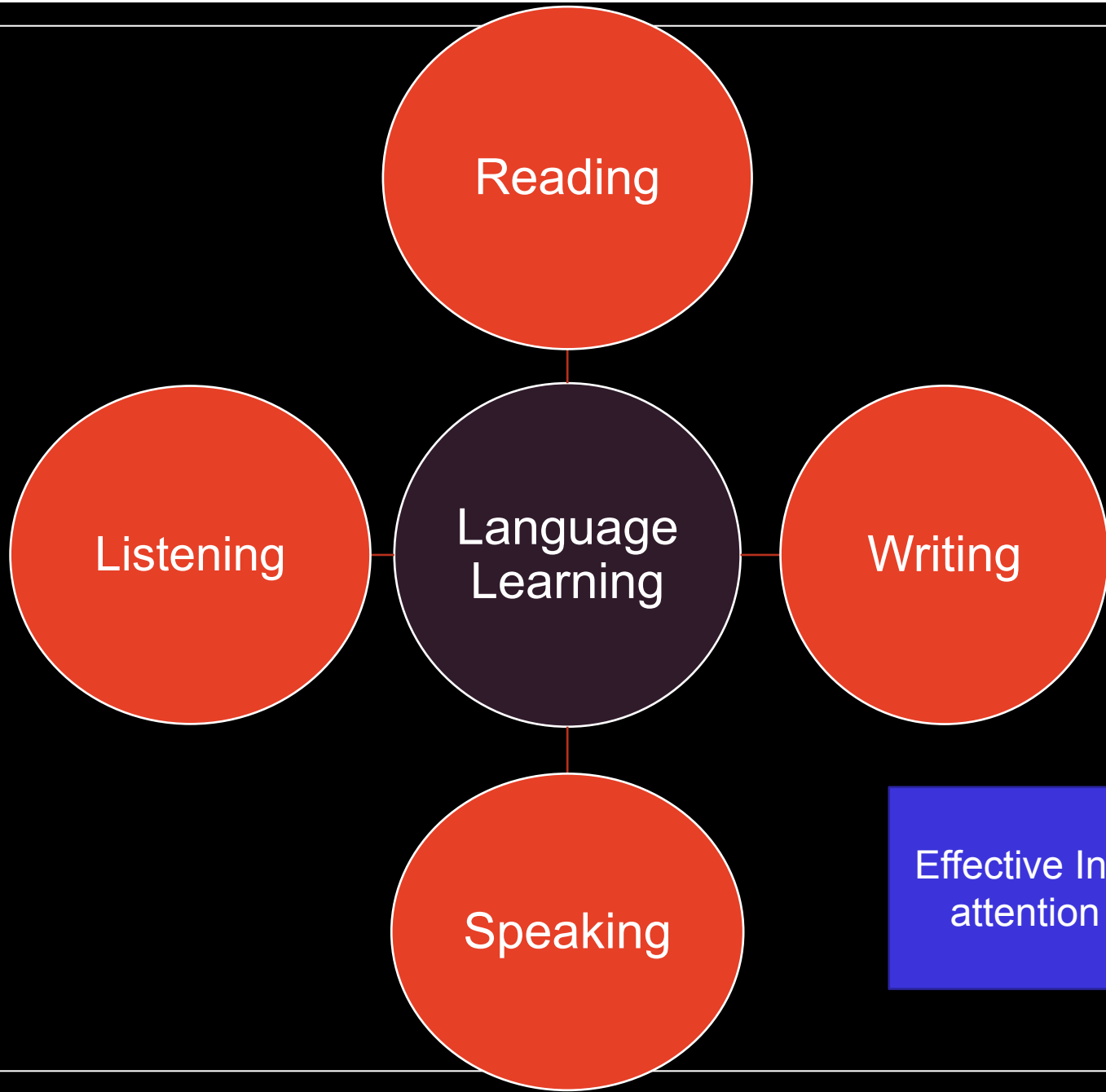
Prompt constructive feedback essential...



Language Lab as a way to achieve this!



Must have a large enough repository to choose from



Effective Instruction requires attention to all 4 aspects

Reading

- To help familiarise with constructs and usages.
- To build vocabulary with context
- Improve comprehension

Writing

- Knowledge of grammar and spelling
- Vocabulary and how/when to use
- Mapping ideas to words/sentences
- *Most energy usually spent here in LL*

Speaking

- Pronunciation of words
- Intonation in sentences
- Impromptu sentence formation

Listen

- Pronunciation – decoding
- Comprehension from oral input

Higher level constructs

- Composition
- Review a writing
- Speech
- Conversation
- Research paper

Language lab under Diksha

- Currently 12 labs focussed on mostly the W aspect
- Speech and other aspects under exploration/implementation.
- Currently for English; others in pipeline



ENGLISH LABS

- Learning Prepositions of Location
- Learning Prepositions of Location (Picture Dictation)
- Correction and Omission Activity
- Learning Preposition of direction
- Passive to Active Voice Conversion
- Active to Passive Voice Conversion
- Tense Conversion
- Improving Comprehension Skills
- Direct to Indirect Speech
- Reported Speech
- Subject-Verb Agreement
- Singular to Plural Conversion

DEMO OF OLABS (ONLINE)



LABS COMING UP

Sanskrit Lab

संज्ञा शब्दरूप

धातु-रूपाणि

सर्वनाम शब्द रूप

एकवचन - बहुवचन शब्द

Hindi lab

पर्यायवाची शब्द

विलोम शब्द

English lab

Speaking activity--Pronunciation of words

Clause detection in sentences

Change the highlighted word(s) to plural form.

Question

Nominative ▾

नर

गजे

उपविशति।

गजे

!

Subject Repository

नरम्

नराः

नरान्

नराय

नरेन

नरेभ्यः

नरैः

नरौ

नराभ्याम्

नराभ्याम्

Verb Repository

उपवसि

उपवति

उपवथ

उपवथः

उपवतः

उपवामि

उपवन्ति

उपवामः

उपवावः

Submit

धातु-रूपाणि

लट् लकार

हस्

पुरुषः	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	हसति		हसन्ति
मध्यमपुरुषः	हससि	हसथः	हसथ
उत्तमपुरुषः	हसतः	हसावः	हसामः

हसतः

हसथ

हसामि

हसौ

हसस्य

Submit

Clear

Show Answer

Language Labs in virtual mode



To support Speak-Listen modes, good quality speech synthesis and recognition capability required – evolving and maturing now.



For feedback on Write aspects, good quality grammar checker, parser, morphological analyser, etc required – still a challenge.



Discourse modelling is still a hard problem...

This constraints, what
is feasible under
virtual LL

Implementation of Lang Labs



Usually a set of pre-loaded sentences are used in LangLabs



Feedbacks can be accordingly pre-determined.



Options are limited for exploration/practice.

Implementation

...

- We use an instance generator to generate questions for solving...
 - <Some person> is going to <some place>
 - This can be used to generate hundreds of sentences changing the <..> components.
 - Srishti is going to school; Madhav is going to market

Implementation...

Users get a wide range of sentences to try; minimal chances of repetition.

Feedback can be structured on the template.

- *Subject not agreeing with the verb in number.*
- *Auxiliary verb not as per the given sentence.*

Implementation

- Typing in words/sentences lead to human errors.
 - To provide response, we mostly use: drag/drop, re-arrange, select from a pool.
- Correctness evaluation is by system: so prompt feedback is assured.



Using the Language Labs-1

- When explaining concepts in class....
- Use to show demonstrations, to prompt students to guess answer, etc.
- Consciously giving wrong answers can be used to show the error responses and corrections.



Using the Language Labs-2

- Assign practice sessions for out of classroom activities.
 - Try 10 sentences
 - Access the student log to check the history: sentences tried, attempted solutions, etc.



Using the Language Labs-3

- Encourage students to practice online, till they reach a correctness level above 90%.
- Logs can be used to check (if needed) for internal evaluation, etc.
- *Proxy usage cannot be excluded.*

Conclusion



Under the MoE virtual lab initiative, a good collection of labs for a range of subjects is coming, including languages.



We invite you to try this, and share your feedback.



If there are areas of language learning which you think are difficult areas for students, kindly share with us.



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