

Language-in-Education in South Africa: Some Plain talk

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What am I doing here?

What does language have to do with cognitive education?

- Language and cognition are inextricably linked
- Language and cognitive development are inter-dependant
- There is very little you can think about without language
- Literacy is inherently a language-based activity
- Oral language skills are critical for literacy.
- Like cognition, language has a neuro-biological basis

Language learning

- Children are genetically pre-programmed with the brain (cognitive) processes necessary for learning language
- These processes interact with environmental input and.....
- Children learn the language they are exposed to

Environmental input

- The type of environmental input modifies brain functioning by
- strengthening/weakening neural connections and
- enhancing/diminishing various brain regions
- THEREFORE THE TYPE OF INPUT IS IMPORTANT

Brain processes for language development

- Are both language-specific and general cognitive processes (e.g. attention and working memory)
- SENSITIVE PERIODS : important neuronal and brain developments take place- the brain is ready for learning and needs input
- Learning results in structural and/or functional changes in the brain because....
- The brain uses language input to organize the cortical networks necessary for further language learning
- The more input it processes the more efficient and skilled the brain becomes

Functional brain development: Cortical Networks

- Cortical networks are established for language processing
- Each network has core regions essential for performance of a task (e.g. Broca's area and angular gyrus for reading sentences)
- Core regions are language-specific
- Functional connectivity between core regions leads to efficient and automatic processing
- Automatic processing is fast, parallel and does not involve active effort.

Cortical Networks cont.

- If processing demands are high, general regions outside of the core regions may be recruited to assist until automatic processing emerges
- Thus the amount of activity in the cortical network decreases with practice resulting in the activation of only the network essential to the task i.e. the language – specific network

How do children acquire a second language?

- A second language refers to a language acquired after first language development has begun
- They use the same brain processing as they did for their first language so....
- They need INPUT
- Processing a new language is demanding so...
- They will draw on general cognitive resources – outside the language networks until the processing becomes automatic with PRACTICE

Implicit and Explicit learning

- Additional language learning can occur implicitly or explicitly or both, with each of these mechanisms drawing on different cognitive processes
- Implicit learning uses automatic, rapid and simultaneous processing mechanisms, and is not conscious.
- Explicit learning is a controlled, conscious process in which learners are directing their cognitive resources.
- It is a slower, more sequential process of learning

Implicit and Explicit Learning

- Young children use implicit learning for processing “natural” language
- BUT
- Implicit learning is not sufficient for additional language acquisition because the learner’s cortex has already been “tuned to the L1” and the additional language is consequently processed through automatic and implicit L1 mechanisms which may compete or interfere with L2 learning.
- Thus younger L2 learners need to be provided with different forms of teaching that facilitate explicit learning
- LANGUAGE MUST BE TAUGHT

Language learning at school

- The development of language continues well into the school years and beyond.
- At school language development is the result of both incidental (implicit) learning and direct instruction (explicit teaching) in specific language skills
- In the pre-school years, children learn to talk, but as they move into school, they talk to learn.
- There is a difference between social and academic uses of language

What is academic language ?

- The language of the classroom
- The language of academic disciplines (learning areas)
- The language of texts and literature
- The language of extended reasoned discourse
- Very few children come to school having developed academic language
- **Academic language is important in any medium of instruction - Home language or additional language**

Properties of academic language

- Decontextualised: meaning is created through the language only (the speaker and listener do not directly share the experience being communicated)
- Increased conceptual and linguistic demand
- More abstract and less frequent vocabulary
- More complex syntax
- An increased variety of language functions and discourse styles
- Relies on Metalinguistic ability
- Literate form of the language

Metalinguistic abilities (Language awareness)

- Enable child to think about language.
- Use language to describe language – it is a controlled conscious process.
- Metalinguistic ability is important for the development of reading

L2 Learners and academic language

- L2 learners can acquire conversational social language fairly quickly but it takes longer for them to learn academic language
- This may be because academic language learning requires explicit learning

Questions

- Do we have language-in-education problems in South Africa?
- What are these problems?
- How can we address them?

Evidence for Language-in-Education problems in South Africa?

- YES !
- Low literacy levels
- Poor development of academic language seen at school –leaving and in university

So what is the problem?

- Many argue that the problem is that the majority of children are learning in a L2 or L3 i.e. English
- Matric results will improve if children learn in their home language

However, this is not straightforward.....

- There are many reasons for the crisis in education:
 - Inequality in different educational contexts
 - Health issues
 - Poverty
 - **Language-in-Education practices**
 - Teaching methods and quality
 - Curriculum design
- **THESE FACTORS CANNOT BE SEPARATED OUT**

Language- in -education practices

- Educational linguistics is neglected in teacher training programmes
- *Teachers do not understand the cognitive processes involved in language learning*
- Inadequate language knowledge is exacerbated by ill-informed and misunderstood concepts of Whole language, Communicative Language Teaching, natural language, critical and social literacies
- Language and literacy must be taught explicitly – process is important

Do children do better in the home language?
(Morrow, Jordaan and Fridjohn, 2005)

	English	Isi Zulu
Urban ex model C schools	90%	58%
Township schools	72%	74%
Rural Schools	53%	74%

Do children do better in the home language ?

- Reading Comprehension Study : Grade 5

Setswana	English
40.3%	33.2%

So We have problems with
language and literacy in ANY
language!

It matters not what the language
of teaching and learning is.....

It is about quality of instruction

Why teach literacy?

- Decoding and word recognition develop relatively quickly if taught well (also in L2 learners)
- BUT reading comprehension is highly dependent on oral language proficiency including:
- vocabulary knowledge, listening comprehension, syntactic skills and metalinguistic skills

Good quality language teaching

- The development of academic language should be one of the primary goals of education, particularly within multilingual contexts.
- This requires attention to educational linguistics

Educational Linguistics

- Knowledge of psycholinguistic mechanisms underlying language learning
- Involves language awareness
- Integrates content and language teaching

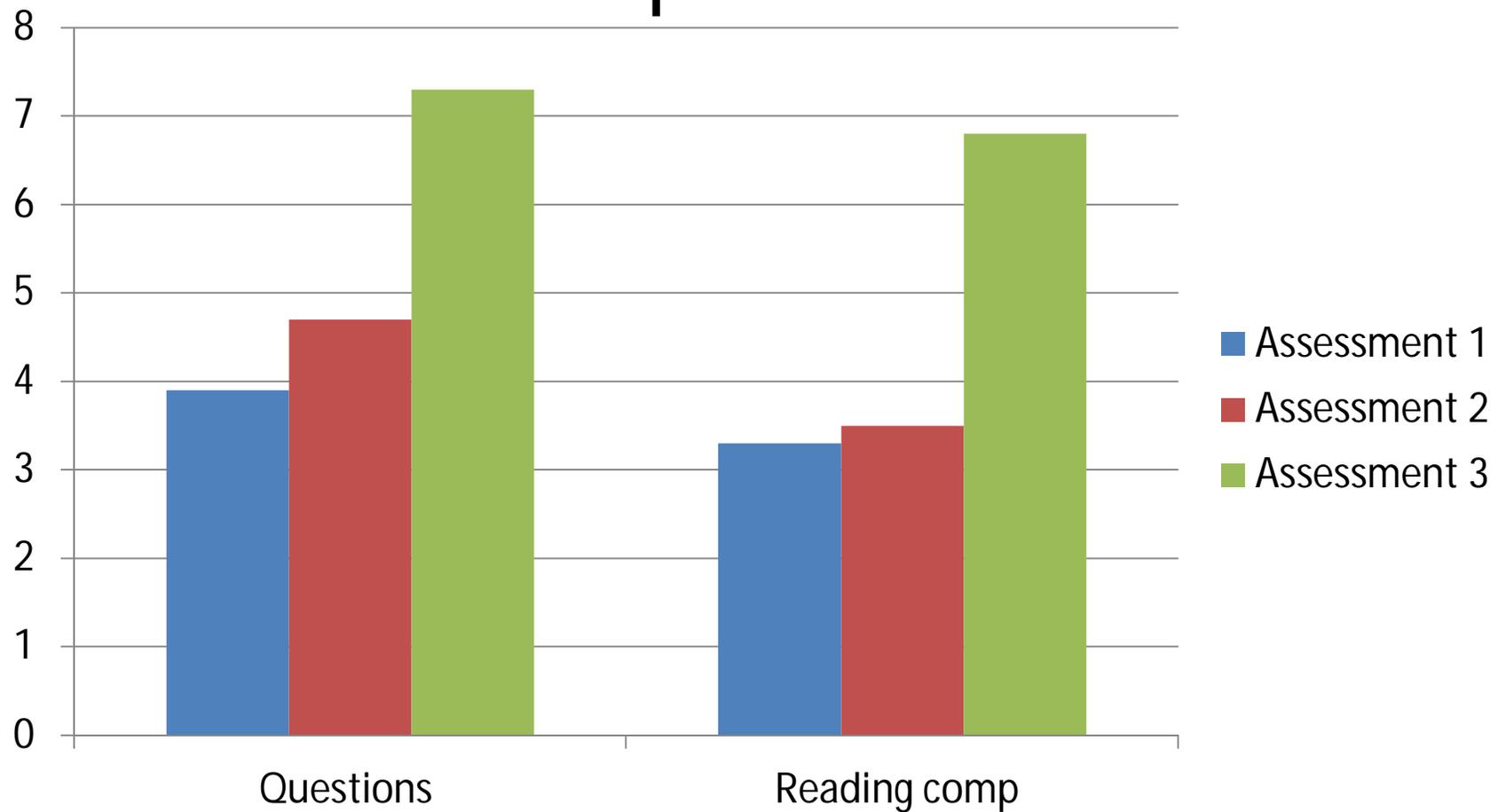
To develop academic language:

- Devote time to language development each day
- Academic language should be integrated into the curriculum
- Develop academic language in oral communication in well structured activities
- Need a curriculum with a defined scope and sequence because academic language is complex and difficult to teach
- Instruction of academic language should begin as early as possible

Developing academic language

- Identify language aims linked to content aims
- Provide language instruction
- Provide language exposure
- Provide practice : *practice does not make perfect, only perfect practice makes perfect*
- Provide feedback
- Engage learners

Look what happens if we develop academic language in the foundation phase



Conclusion

Language is not everything in education but without language everything in education is nothing (Wolff, et al., 2006)

Language matters !

Lets start languaging !