



SOCIAL INNOVATIONS EDUBYTE 4 2020, INTERMEDIATE PHASE MATHS AND LANGUAGE



At PEP Academy we help learners' transition from foundation phase - where they are learning in mother tongue - to intermediate phase – where they are learning in English. The change of language is one of the reasons that the transition is difficult. Learner academic results tend to drop in Grade 4 and then drop further in Grade 5.

Some children arrive in Grade 4 with limited understanding of English. But maths is learned through language – and involves reading, writing, listening to and discussing mathematical ideas in English. So, a child needs to make sense of the language before she can begin to make sense of the maths.

While teachers may be required to use English as the language of instruction only during school time, in an after-school programme we can be more flexible.

While the CASME report suggests that more research is needed in this area, it encourages teachers to explore flexible language practices such as code-switching and translanguaging (using multiple languages in the classroom).

Learners should be able to express their thoughts about the mathematical problems as clearly as possible – in any language. The language should not interfere with the learner's ability to explain how she is approaching solving a problem.

There are different studies in the area of maths and the language of learning and teaching. Larger scale studies encourage teachers to improve the learner's proficiency in the language of learning and teaching – in our case, English. Smaller studies encourage teachers to also use the learner's home language in the lessons to encourage understanding.

So what is our view at PEP Academy?

What is important is that a child should be able to learn, understand and apply the maths – in any language; and that the language should not get in the way of the maths. In an after-school programme, let's encourage collaboration between learners – allow them to work together to discuss mathematical ideas and to solve problems together – and allow them to do so in whichever language is most comfortable for them.

Make learners aware of mathematical notations and encourage them to see that they are language independent.

Mathematics is its own language with its own conventions, symbols and notations.

For example, the symbol for the number 2 is “two” in English, “twee” in Afrikaans, “mbini” in isiXhosa, “bili” in isiZulu, “pedi” in seSotho, etc.

This is an open source educational resource drafted by Social Innovations. This note draws from the research report Into the Gap, authored by CASME. The references for the research are cited in the full report which can be downloaded from www.socialinnovations.co.za