Do you mean I could teach from Crossing The River for a whole term?

Years: 5 - 8

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With a sense of excitement mixed with amazement, this question was asked recently by a participant in the professional debrief session following a Discussion Lesson. The Year 7 class had explored Lesson 23, *Crossing The River*, for 90 minutes and would have happily continued. In the 90 minute debrief the teachers were exploring the pedagogy of the lesson and the mathematical extensions of the problem.

The question didn't really need to be answered. It was going to be possible for that teacher to teach from *Crossing The River* for a whole term because he could see/sense that the problem was rich enough to support that.

Interestingly, on reflection, some teachers realised that when the Year 7 lesson had started they didn't think there was enough in it to last the assigned hour and a half.

Perhaps the more important question was the implied one:

> *What would the curriculum look like - how would it 'feel' to students and teachers - if it were constructed around Pivot Problems such as this which could be visited and revisited to 'milk' their richness?*

- Maths would be less likely to look like a passing procession of changing chapters.
- Maths would be less likely to appear as a set of skill hurdles stretching on to educational infinity.
- Skill and knowledge development might have more sense in the context of problems that require or generate their need.
- Maths might more closely reflect the way mathematics professionals work.
- More teachers and students might find maths more intellectually and emotionally satisfying.

One teacher has looked at the lesson with new eyes. You are invited to review it too. There is even a Classroom Contribution adapting the lesson to younger children.

Further, it was the professional development context which enabled the teacher's insight. In what ways could a PD program, delivered over time, support curriculum shift in your school, cluster, district, system? Consider options at Mathematics Centre Professional Development:
http://www.blackdouglas.com.au/mathematicscentre/monthem.htm

The lesson involves a huge range of content, a summary of which is:

Content

- algebraic generalisation
- concept of variable
- functions
- gradient
- graphing ordered pairs
- interpreting graphs
- linear graphs
- mental arithmetic
- number patterns
- ordered pairs
- solution of equations
- substitution