

The use of GeoGebra to motivate, to present and to deepen the comprehension of math

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GeoGebra offers...

- Simplification
- Clear presentation
- Fast transmission of information
- Interesting and attractive presentation
- Stimulation for logical thinking
- Presentation of intuitive models
- Motivation
- Deepened comprehension

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...tool not the goal of teaching...

- If the use of a computer in teaching becomes self-sufficient, we miss the goals of education.

Then

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... "fake beamer crash" - 4 slides self-censored for this not-real life public presentation...

...motivation becomes manipulation...

Therefore, to attract attention does not necessary mean motivating...

To motivate means to move, to push ... towards acquiring new knowledge and deepening the old...

True motivation can thus be measured only by

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True motivation can thus be measured only by
the enhanced quality of content presented, and by
the increased interest and involvement of the students.

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...no Nüremberg Funnel...



...easy learning...

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Teaching (math)... What is first?

- How? (strategy - teacher)
- What? (content)
- How? (taxtics - tools)

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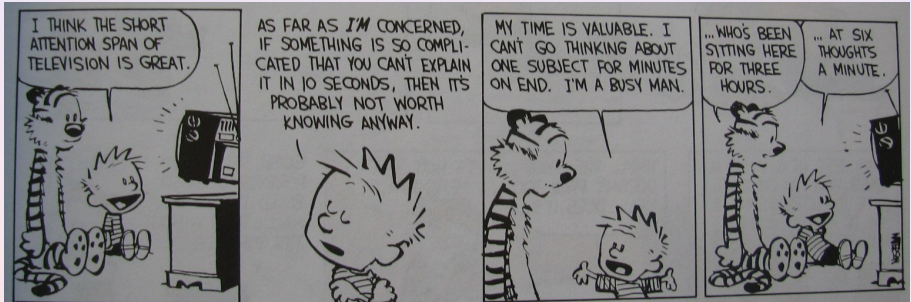
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...short attention span...

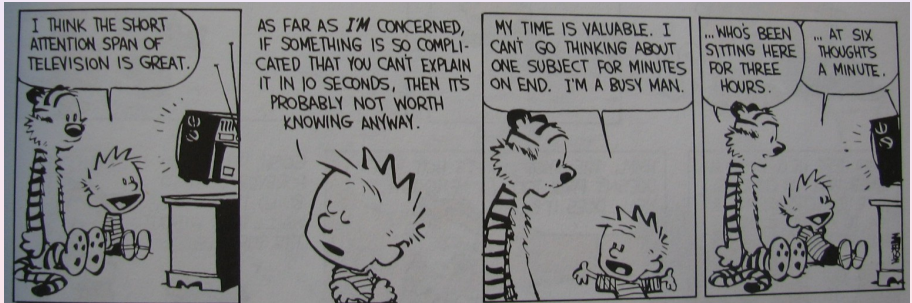
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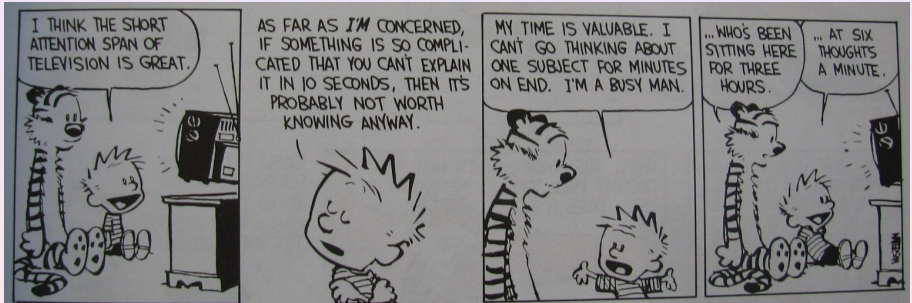
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To fight short attention span...

- We need ... meaning ...
- ... not "real life" ...
- Math should be interesting, ... not useful.

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To give meaning...

- "Difficulties" must be transformed into "problems", "problems" into "challenges".
- ! Difficulties with technology are initiated by difficulties in mathematics.
- Problems with technology are initiated by problems in mathematics.
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Transformation: Difficulty \longrightarrow Problem \longrightarrow Challenge

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What is deep enough understanding?

- From strategy to content...
- From content to tactics...
- From tactics to enhanced content...
- ... and back to wiser strategy.

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To give meaning ...

... we have to know, (for example) that ...

- Functions ARE NOT about $f(x)$, independent and dependent variables, ... but
- ... about **relations**.
- Cartesian system IS NOT about Cartesian coordinates x and y , ... but
- ... about Descartes's COGITO ERGO SUM.

And GeoGebra offers an incredible opportunity to do just that
(..later comment with applets..).

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GeoGebra...

- ... teaches us to know more than we teach ...

→ applets

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GeoGebra...

Let us do our best to use GeoGebra to help, to encourage, to promote ...

- ... our love of teaching and learning ...
- ... teachers who love teaching others to love learning ...

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Let us use GeoGebra to be better teachers.

Teachers are those, who love teaching others to love learning.

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