

- **develop a principled argument for your recommendation (can you provide evidence, data, ...?)**
- **discuss the major weaknesses of the other choices**
- **relate your argumentation to the article(s) of your reading assignment**

Position 2 is more applicable to real world situations and will better prepare students for their future academic lives. By implementing hand-held calculators after the children have already learned the material they are further refining the child's ability to carry out mathematics in various ways, thus giving the child a better understanding of math. As one progresses and gains more knowledge in that area of study it should become easier to grasp newer information. With math, one needs to know how to carry out the simpler tasks in order to solve the more complex questions. Its important to have a solid foundation to build upon, and that is what this solution offers.

position 1: ignore the existence of the gadget; we are not interested in technology, but in important mathematical skills; recommendation: do not use hand-held calculators in schools -

I feel with any type of education it is important to have a "tool for learning" as is mentioned in the reading. In this case, the hand-held calculator is a tool that children can use to further reinforce their understanding of mathematics by learning how to solve and carry out arithmetic in a different way. This relates to the training wheel example of a learning tool. Everyone starts out on 4 wheels before they migrate to 2 on bike. Without this tool for learning, learning how to ride a bike would be a very difficult and painful experience that many people would opt against.

position 3: invent/ create new calculators, new curricula, new scaffolding mechanisms that make learning these skills more fun and create a deeper understanding of underlying concepts — recommendation: using these hand-held calculators, the learners would acquire the skills and the knowledge and eventually become independent of the gadget ("scaffolding with fading") -

This new technology as much as it may help could possibly make students too dependent on the use of the new calculator. It seems that there is no focus on the basics of mathematics. If you're constantly riding a bike with training wheels on and you're too used to it and find it a more attractive alternative than 2 wheels because of the friendly learning curve then you'd be in for a surprise when the time finally comes to remove the training wheels. Its important when learning to not rely on something heavily because its easier to do or because you're used to it.

position 4: find new ways to distribute responsibilities between humans and machines such that humans do the qualitative reasoning, use estimation skills, relate the mathematical result to the real world and machines do the detailed quantitative computations recommendation: establish new divisions of labor, rely on distributed intelligence -

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Assignment 13

This may work better if it were applied to a class other than say elementary school mathematics. Estimation skills won't get one far in future pre-calc classes etc. As with position 3, there doesn't seem to be a introduction to the basics. Yes, its more of a real world method of applying math, but I feel it won't have the same positive impact on students.