Review of: "Essential Calculus, a Revolutionary Approach to Teaching Calculus"

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Potential competing interests: No potential competing interests to declare.

The objective of this paper is to propose an innovative schedule to teach calculus, within ten weeks. First of all, teaching quickly does not mean that the learning and understanding is quick. The student must train, practice and solve problems in order to own a mathematical notion and to use it properly and automatically.

I understand that it should be necessary to teach Mathematics quickly so that students could follow the lessons of Physics. When I was a student I suffered because of the 'time lag' between the lessons of physics and those of maths. And the tools needed to solve problems in physics are often taught much later in the course of Mathematics.

In the introduction the author should not refer to Newton and History of Science that he simplifies and seems far to know. Moreover, in section 5, he reduces physics to solving first or second order differential equations (after modelling). I think he should be careful with such affirmations.

Scientists are well aware of the differences between the rigour of Mathematics and the approximations allowed in Physics. The paper seems to mix both topics. It pretends to teach Calculus without any rigour (theorems, definitions etc.) So is this Mathematics?

It would also have been fruitful to state what a student is supposed to know before this ten weeks course.

As it is written, I do neither see the interest of the paper nor the author's specific contribution. But I see a lack of rigour if he pretends to teach Mathematics. He could have claimed that he aims to teach some mathematical tools for physicists… And may be the title 'Teaching Calculus for physicists' would have been more suitable'? 'A Revolutionary approach…' is a bit too exagerated!