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

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The paper outlines a 10-week course in Calculus with the aim of solving differential equations as soon as possible. In this sense, the article looks more like a preliminary version of a textbook. Hence, each section contains an explanation for the given topic.

In my opinion, the methods described try to undo the progress of the 20th century that introduced mathematical rigorousness, and the author returns back to the mathematical roots where intuition was more than correctness. It is no wonder that the proposed methods remind me of how Newton (supposedly) obtained specific formulas.

It is my opinion that the proposed organisation of the course has some merits. On the other hand, It could do more harm than good. At the moment, certain steps are too vague, which could give the students a wrong understanding of what is allowed in math. Modifications of the limit in the 8th section are an example of such a problem. In the end, we have a correct result, but through the wrong process. There are also no theorems, no definitions, no assumptions and no marks indicating the start and the end of a proof. As a result, understanding the paper takes much work.

I suggest including a serious discussion about the course's merits to improve the article. It is claimed that:*the primary purpose of calculus is to solve differential equations.* However, I think that this is not the complete truth. There are other valuable parts of calculus, and the paper omits them (e.g. the paper skips the monotonicity entirely). I understand that in the field of physics, the statement may be true, but I am no expert in the field of physics. Hence, I suggest emphasising that the author focuses solely on physics.

I would also like to mention other proposed modifications to the usual calculus course. Suppose I remember correctly, in the book *Calculus Reordered: A History of the Big Ideas* by *D. M. Bressoud* there is another proposal on reorganising the teaching of calculus. I suggest comparing your ideas with the ideas of other authors.

Finally, it is hard to take the article seriously if its form is so lacking. There is no list of references, tables, and pictures lacking numbering, and there are many misprints. For example, sometimes there is a dot to represent the product, sometimes a star, and it occurs even in the same formula. Integrals lack the differential dx. Sometimes, the brackets have strange sizes (there also appear sometimes redundant brackets), and in several places there appear the wrong operator. Graphs *f(t)* and *g(t)* lack description, and the table of calculating integrals on the same page has a misprint in its header. Therefore, I recommend reading the paper thoroughly to eliminate these mistakes.

Overall, I think that the ideas can be applicable in certain situations. It is just necessary to identify such situations, and the presentation needs improving.