The best method for teaching or learning math & science

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You see,most students and people hate math.Do you wonder why?Don't worry,this is about the best method of teaching & learning math & science. I'd like to explain it by my own story;

About 16 years ago when i was in school and for the first time had an algebra course,my dear math teacher first taught us the mathematical operations on monomials & polynomials like adding & multiplying,also some of the algebraic identities like the perfect square identity,and solved for us some examples,also gave us much of homework.It took about 4,5 sessions.On the next class,he started teaching us "factoring polynomials" like this ;

"O.k. students,let's start the new lesson,factoring. Factoring is the inverse of multiplying monomials & polynomials",and he explained it by an example, then he'd started teaching us the methods of factoring.I think at this point the unconscious mind of a typical student would like to kill itself,thinking unconsciously that,for 4 sessions the teacher was talking about multiplying the expressions,and the identities,and we did a lot of homework,and now all of a sudden he's talking about doing the inverse of all of what we had so far,all of the work and effort we had in doing the homework,WITHOUT giving us a good reason of why we should do the inverse now,after all the things.On the next sessions my teacher continued teaching the methods,and required us to do homework,and some of them were hard.

The disadvantage of this style of teaching or learning,besides of it's crazy beginning,is that at some point over the lesson(here factoring) when students try to solve a higher level problem,some thing inside their heads asking them unconsciously ((what are you doing?)),
((what's all the effort for?)),and that's the point when they start disliking the subject,become disappointed, and give up.

This is not just for the story i told you,but it is in every thing.For instance, consider teaching multiplying polynomials and the identities.Here,there may not be a crazy beginning like for my story with factoring,but again at some point when students try to solve a problem,some thing inside their heads asking them the mentioned questions.

So,in my point of view,there are two types of teaching or learning right now.The first one is like my teacher's,talking about the non sense abstract stuffs.The second one is similar to the first one,but the instructor FINALLY gives the students some reasons(or applications) of the non sense stuffs he/she has taught.

THE BEST METHOD,is not like the two above,but to teach that way,for instance in teaching factoring, The instructor after defined factoring talks about the most important cases in which we need factoring(which may take at least 1 or 2 sessions), and then teaches the methods of factoring.The benefit of this method is that the instructor satisfies the unconscious minds of the students at the beginning,that what are you learning here is not non sense and useless but it is important.I believe that by this method,first of all,students learn by love which is very important,they're curious to learn more about the subject(here factoring),and doing homework would not be annoying and make them dislike the subject,because they know that we need to factor for some useful reasons the instructor gave them at first. That would be way better if the cases be touchable, came from practices(like an example in building a car in which we need to for instance factor), and cover more areas of science,and engineering.

I've got a free tutorial channel at youtube,in which i teach some mathematical subjects in a way close to the best method.Here are some of my courses ;

1.Factoring polynomials
2.Algebra(basics)
3.Integral calculus

I don't mean that an instructor should give the students all the cases in which we need the subject(here factoring) at the beginning,but my point is that we should give them enough of the most important cases at first to make them realize that what are you learning in this session and the later ones is important, and we could give them another most important cases or just cases later.

Whatever i told you above is also for self learning,and not just for math but also for science.

As another subject,consider integral calculus.In a typical course or textbook,the instructor starts by defining integrals,and may be some theorems,then the methods of integration,and FINALLY some cases in which we need integrals,like calculating the volumes of objects and the length of curves,you know,after well raping the brains of students by talking about the non sense abstract stuffs.
The disadvantages are;

1.After some point when students try to integrate a complicated function,some thing inside their heads asking them unconsciously ((what are you doing?)),((what's all the effort for?)),And that's the point when they start disliking the subject, and become disappointed.
2.The cases in which we need the integrals are non sense.They just say that for calculating the length of curves we need integrals,without mentioning why we should care about length of curves,who needs to calculate it.
Again,my method here is that,after we defined the integrals we should talk about the most important cases in which we need integrals(not at the end), and then we should teach the methods.Also,we should give the students more details for the cases like calculating the length of curves.

This was how could we teach & learn math & sci by the current educational system & syllabuses for the best,but if i had a school or college in which i was able to make my own educational system & syllabuses,i would run it in a way even better than the best method above.I explained it in my podcast also in the following videos;

[If i ran a school,i would... 1](#)
[If i ran a school,i would... 2](#)
[If i ran a school,i would... 3](#)