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1.Object from childhood

When I was around 7 years old, I found a caterpillar and decided to put it in a jar. When the caterpillar ate the plant, I went to look for another plant with the same characteristics of the plant on which I found it, and learned how to recognize the plant species. I saw the molting of the caterpillar several times. Soon I could tell when the caterpillar was about to molt because of characteristics of the body and changes in behavior. I could see the whole process until the caterpillar formed the pupa and became a butterfly. I was not able to see the exact moment in which she became a pupa, nor the moment in which the butterfly emerged. . . but I was really curious about that. So I collected more of them and observed them more often, and even began to write on a calendar the time of the day in which each had formed the pupae. Soon I was able to see the exact moment when a butterfly emerged from the pupa, and since I had the time on which the pupa had been formed, I had my first calculation of the time of development. I predicted that the others would last the same time, and they did! So after a few weeks I could tell my mother "Mom, I'm going to be in school when this butterfly comes out, so please open the jar at 10:30 am so that she can come out and fly". She could not believe it was true until she saw the butterfly emerge while I was in school, a little before 10:30am. I was also in love with those caterpillars. . .

They were not objects, which makes them even better. They are as complex a learning object can get: a living organism, a species. I learned a lot about observation and about life cycles, about hypothesis and predictions, about what a population and a species is, even about data collection, all by myself. I was aware of the awe of my parents about my discoveries, and gained self-confidence because of that. Twenty years later, I am a biologist and have studied insect behavior for several years, and I'm not able to tell if it's because I was meant to do that, or because the learning experience with raising butterflies was so rewarding that I wanted to learn in that way for the rest of my life. It's still very important now that I'm entering the world of education as a professional, since I still believe discovery is one of the best learning pathways.

2. Provocative, intriguing, surprising idea (passage) from Mindstorms

The most surprising idea I found was that schools are not going to exist in the future; I imagined the world with no schools for a while and thought about how much schools define our life in this moment, and about the responsability they have in that sense. A big question came to my mind after reading that: are they isolating the young minds from a rich learning environment?

This is a passage I found provocative: "The help would not consist primarily of teaching the child how to program the Turtle circle, but rather of teaching the child a method, a heuristic procedure". I think those methods are more important than the facts usually taught in schools. Those methods are not only helpful, but necessary to solve different kinds of problems, and education should focus more on the degree to which a student acquires different methods or procedures. This idea of helping the student by giving him a procedure that will be useful for him in other contexts makes me rethink what teaching is about, as compared with the teaching process I went through in elementary and highschool.

3. Which ideas have passed the test of time and which haven't.

I think all the ideas of Mindstorms have passed the test of time, and many are still revolutionary even if they were written 25 years ago. His ideas about the importance of computers and how they would become part of everyday life have already materialized. Many of his ideas about learning with technology have become a reality. But the tools for his ideas are still being developed, and his philosophy still guides the development of those tools. Furthermore, his philosophy of education goes beyond technology and is still a call for revolution in education.