

ASSESSMENT, LEARNING AND THE CURRICULAR LADDER

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I home schooled our son, Neel, for a year between Montessori and class one. A combination of factors led us to do this; Neel's allergies, his unhappy experience of schooling, and we couldn't find a school we liked nearby. Also having been a teacher for 10 years in an alternative school I found myself thinking why not give home schooling a try.

Home schooling Neel turned out to be very different from teaching a class in a school.

In school, my mandate was to cover a certain amount of ground, which was the agreed-upon curriculum. My job was to locate students on the curricular ladder (of conceptual knowledge, skills, ways of investigating the world etc.) and help them move up rung by rung. I needed to ensure that there was active learning and that whatever we were doing contributed to the overall well-being of the child. I used observation, conversation, written work and testing, to figure out where each child was on that ladder. There were divergences in what children learnt, but on the whole we kept our sights on the curricular ladder.

With Neel, I was primarily concerned with whether he was learning actively. I was not much concerned that he was learning equally in all directions. Rigor could be achieved by offering him experiences that built on his initiatives and enthusiasm. My intuitive sense was that patchiness and unevenness in the learning of subject matter could be addressed, if necessary, later on. What seems very difficult to unlearn is a notion of oneself as "bad" at something, the sense of hopelessness and "stuck-ness" children develop with a particular subject or domain.

Learning at Home

So my approach was mainly to see what interested him. There were things that he clearly wanted to do. He pored over animal books, which developed into questions of how animals are different from each other. He found a book which described each phylum with many pictures of animals in each group and he wanted me to explain how each phylum was different from another. This led to two directions. One was towards evolution, which went way back into the origins of the earth, tectonic plate shifting, volcanoes and dinosaurs. I guessed he was going to enjoy studying how animals adapted to different environments. I located David Attenborough's "The Living Planet" on Youtube. He was riveted. Meanwhile his father was taking him bird-watching on the weekends.

Sometimes I initiated readings, asked questions, and taught him number games. Some of these would engage his attention, especially when we tried to count up to large numbers, first in tens, then in hundreds and then in thousands. Word building was not a great hit. We would do some maths in the contexts of shopping and cooking, growth charts, medicine doses, car distances and speeds.

He hardly wrote that entire year. He had had a very bad time with writing in school. Though an enthusiastic and vocal learner, the fine motor control required for writing had not developed adequately. His teachers had insisted he write and we had coaxed him at home. On hindsight, this had been a mistake. He had simply not been ready to write, it was not within his zone of proximal development, so to speak. He had spent huge amounts of time doing something that

was too difficult for him, rather than spending it learning something which would have made him feel capable and energised.

But that year he read a lot. He was reading books meant for older children. This was also because he had large amounts of unstructured time, with access to books, and his neighbourhood friends were unavailable because they were in school.

If assessment means trying to find out where the child is vis-à-vis a predetermined quantum of curriculum, then I did not assess my son. The Latin root of assessment is “assidere” which means “to sit with” or “to sit beside”. In this conception of assessment it seems to mean meeting the child where he is. Often the dialogue is the assessment. It is walking along with him on his journey of learning, understanding how he is thinking and figuring things out, what excites him, what frustrates him, extending his learning, teaching him things when he asks for them or seems to need them. My job was really to begin from his questions and curiosity and offer him experiences that from which we could build disciplinary ways of organising knowledge and investigating the world.

There were many surprising moments too, where I was the learner. We were discussing shapes, we were trying to see how a square could be cut into 2 triangles. Neel was asking, “Can you make a circle from a square?” I said that I didn’t know how one could do that. Then he said, “Yes, we can. Take our dining table; it is a square with 4 corners cut off. Now if we keep cutting the corners and then again the new corners that are formed, and if we go on doing this, then the table will start becoming a circle!” Now that is clearly the kind of thinking involved in calculus.

The curriculum, a ladder or a network?

I remember a day when Neel (about 7 years old then) came back from school with some homework that involved addition of three digit numbers. He could add 3 digit numbers with his Montessori bead kit. But the worksheet seemed to require him to add the numbers the regular

way, with the symbols for carrying over. Now Neel can already add 2 digit numbers in his mind, sometimes by decomposing, sometimes by regrouping, sometimes in other ways. He doesn’t use the same strategy every single time, and I think for him, that’s partly the fun of it. He can always tell you how he did it. Algorithms don’t excite him. I’m sure there are some children his age, who like the predictability, the efficiency and the reproducibility of algorithms. They are excited by the power of algorithms. But Neel struggled with the sums. I could see him getting more and more frustrated, then he said, “I can’t do this, I know how to do it already, it’s too simple, it’s boring.” Then after a while, he said, “I’m no good at maths”.

I understood the situation like this. He knew that it could be done by the algorithm but he was not ready to work with it yet. But then why did he make this leap and say, “I’m no good at math.” What was happening here?

I said, “Let’s do something you like in maths. What do you want to do?” He said the older class was doing averages. He wanted to find out the average age of everyone in the house. And so we had an enjoyable time doing that. I asked him what he thought an average was. He explained it to me. Then he seemed to have figured out we have to add up everyone’s ages, and apportion the resulting number to the total number of people. This was no problem because all ages of people in the house were single or double digits.

Now why did he decide he was no good at maths? Is it because somewhere in our schooling system, there is a subtle message that following the prescribed route to learning something, climbing the curricular ladder, is the single way to learn? Now perhaps it is true that some things require previous knowledge/understanding, for instance it would be hard to argue that children can learn multiplication without a notion of addition. But does multiplication need a prior knowledge of subtraction? Why then do so many teachers and textbooks conceive of the curriculum as so much

of a ladder? Can we not think of the curriculum as a network with many beginning points and many pathways?

Now I have no doubt that Neel will figure out 3 digit carryover addition eventually. But he may not, if he begins to believe that it is more important than averages, or has to be figured out before he can get to averages. Why is it, that what the child can do and what he is already learning, does not matter as much as what he ought to be learning. And what does this message do, to his notion of himself as a capable learner?

I suppose one's notions of assessment flow from one's conception of the curriculum and of how children learn. Is learning a methodical step-by-step process, like climbing a ladder with evenly spaced steps? What children will learn seems to be quite mysterious, they can make leaps. The same child, who leaps, can also struggle with skills and learning, which other children are whizzing through. What I realised through home schooling is that when we force fit children into a lock step learning pace, "batch- process" them so to speak, we may miss out on what they are really learning because we are so pre-occupied with what they should be learning.

Now all of this raises some questions for our consideration.

1. What is my vision of the curriculum ladder like? Is it a single route, a wall built brick on brick, of concepts and skills? Or is my vision of the curriculum more of a network, or a map, with many entry points and many routes (with some sections that are ladder-like)?

2. Hence is my vision of assessment, to mark off the height where the child is, on that ladder? Or is my vision of assessment a dialogue which helps me choose learning experiences that feeds into the questions, excitement and initiatives of children.

3. Is our conception of the ladder curriculum merely an efficient way of organising learning for large numbers of students, or is it fundamental to how we think learning should take place?

4. If it is not fundamental, is there a different way of organising the curriculum that begins from children's questions and extends their thinking, skills, knowledge and ways of investigating the world, instead of focussing on even "coverage" in all directions?

5. Perhaps we can't think of organising the curriculum in any other way for the kinds of numbers we have in our classes. In this case is it not our bounden duty to inform our students that the ladder we have chosen is only for the sake of convenience? Is it not vital that children realise that there are many other entry points and alternate routes for learning. Wouldn't this take away the sting of failure, and legitimise other beginning points and routes (at least theoretically)?

I would propose that using the class 10 exam as a reason to opt for even "coverage" in all directions is a poor argument. In my opinion as a parent and a teacher, I would guess that someone who has taken initiatives in his learning, who has learnt to co-chart his own course, who can read, write and reason, is well prepared to learn anything in class 8. But perhaps what will also help us think through such questions is to return to the big one, "What is learning or education for?"

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