

# MP3Pres-1

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## SUMMARY KEYWORDS

einstein, school, learning, visual spatial, children, labelled, teacher, called, brains, education, albert, words, thinkers, chance, problem, lateral thinking, newton, adults, slow learners, programmes



00:00

The Einstein factor transcripts first broadcast by ABC in 2000.



00:08

Some very gifted children are often condemned as failures in the school system because they learn in a different way to the majority of kids. Robin Williams,



00:19

You will never amount to anything my school teachers implied that to me on many an occasion. One school master also said those words to another rather distracted lab called Albert when he attended classes in Munich.



00:32

Fortunately, Albert Einstein was encouraged by his family, and they still had money before hard times fell to let him have another go at another school. Now, I'm not comparing myself for a minute to the great physicist who transformed the 20th century, but you may like to compare yourself or maybe a child or adult, you know,



00:42

... could it be that we don't understand those little lateral thinkers and condemned them

to be failures despite exceptional promise



01:02

This is the Einstein factor at work. The very things that made Einstein a scientific genius made him a less than perfect pupil. When it came to learning by rote or even doing simple arithmetic, he barely survived his education.



01:18

He was told he was an insult to the school. To remove himself, which he did, and went for an educational walk-about in his teens, a dropout, he was only saved by family and friends.



01:29

He was fortunate in his mentors, who introduced him to popular sciences and the philosophers who hold him back to school, who spoon fed him before exams. He was also fortunate in the new school, which was progressive with a lot of hands on learning.



01:45

What would happen to him today, I wonder. He might be labelled ADD [attention deficit disorder] and put on medication, quite early on he might be labelled at risk and filtered out by various means with the very best intentions, of course,



02:01

These children can look like slow learners so they are streamed, their whole education dumbed down, chances of excellence gone for good. What a waste.



02:10

We need to look at these children much more carefully. In the light of recent learning, research and working with bright underachievers, it dawned on me that they are often unmistakably gifted, not in spite of their dyslexia time difficulties, but because of them.



02:26

His teachers never saw this wonderment and his persistence. They never saw this visual spatial brilliance. They saw only . his INEPTITUDE.



02:27

Neurologist, Norman Gershwind, describes what he called the pathology of superiority, ,, that is brains that are wired for lateral thinking, for the big picture for visual imagination and for abstract thought, but not for the three R's.



02:42

Recent analysis of Einstein's brain bears this out. When we honour Einstein, society must acknowledge that spelling and number competence are not more important than insight and vision.



02:53

But when we look at seedling Einsteins in school today, what do we see? Do we see lateral thinking or Do we see distractibility



03:02

Strong visual spatial intelligence or an inability to focus on words



03:07

High mathematical potential or inability to do sums?



03:11

Do we totally misread these children. Instead of weeding them out as slow learners, it might make a lot more sense to promote them into programmes designed to optimise their strengths, while at the same time giving them a chance to catch up on some of their weaknesses through their strengths and not through endless repetition of what doesn't work for them.



03:33

Fortunately for Albert, his family supports his enthusiasm and provides resources to grow . But what if the school could use these children's passions as a springboard to further learning?



03:45

Einstein speaks of loving interest in the desire for truth. That divine curiosity which every healthy child possesses but which is often weakened early . For a school to work with fear. To force an artificial authority, he says destroys the sincerity and the self confidence of the pupil



04:03

For Einstein and children like him , confidence is an early casualty of our education The system is still, in spite of all the research set up for learning by listening, fine for some, but Einstein and many others are programmed differently.



04:19

There pathology of superiority is like a dyslexia that learns with pictures and ideas and actions rather than with words and symbols. Because they are not sequential thinkers, they crave the overview before the detail because their auditory processing is weak. They are not good at listening or rote learning.



04:38

There is nothing wrong with their ears. It's just that for neurological reasons being talked at sends them into a daze. When Einstein warned against dead knowledge and empty words, he knew well that ideas get buried in terminology and that much of what is said in the classroom never even reaches the mind.



04:56

To help him concentrate. Einstein used to pace around twiddling a lock of his hair a tycoon might doodle or fiddle with executive toys.



05:05

These children and adults seem to know instinctively that they need to move to keep their brains alive, to concentrate, and they can easily be helped to find teacher friendly ways to fidget.



05:16

Young Albert was so late in learning to speak that his parents sought medical advice. And when he did start to talk, he softly echoed all his own words right up to the age of seven. Even at nine he was by no means fluent Enough to make anyone worry !



05:32

No one realised it was a problem of auditory focus.



05:36

By his teams, his learning was so poor that his teacher burst out with a prediction that he would never amount to anything. It may be laughable now but it must have been devastating at the time. There was no one to comfort him by saying you're very far from dumb, Albert, your brains just wired differently. You have it in you to be a great lateral thinker and dream up all sorts of wonderful new ideas. You learn best by seeing and doing his life proved it.



06:05

When he was not much more than a toddler.



06:09

He played with blocks almost obsessively and constructed card houses up to 14 stories, which must have led him naturally into geometric understanding. He was so fascinated when his uncle told him about this pythagoras that he painstakingly developed his own proof and he fell in love with a book about Euclid when he was 12 . Visual spatial intelligence at work, but he still couldn't do his sums.



06:40

At the very end of his life. Einstein recalled the awakening of wonder when his father gave him a magnetic compass to play with at the age of four or five. Here was a needle isolated and unreachable, totally enclosed, yet caught in the grip of an invisible urge that made it strive towards the north. This experience made a deep and abiding impression on me.



07:15

But is it reasonable to extrapolate from the great Einstein to children in school today? I believe it is not only valid but necessary, particularly when we consider how close Einstein came to academic extinction. I've lost count of the great creative thinkers who had difficulties of this kind in school .



07:34

Can it really be chance that the mathematical, physical line right back to Newton shows it. Henri Poincaré - , the acknowledged genius, averaged out as an imbecile on the Binet IQ test, brilliant in some areas, but dragged down by abysmal scores in other areas Very typical of these many children and adults , lucky for him, he was an honoured scientist at that time, not a school child.



07:57

Both Maxwell and Faraday are on record, as having had such problems, and even Newton was said to be inattentive and not bookish, which probably amounts to the same thing.



08:07

Can this be chance?



08:09

Is it not more likely that the brilliance of their abstract visual imaginations, their capacity to scent out the beauty and order in seeming chaos and their sheer inventiveness all came at a price?



08:21

Do the stereotypes of the absent minded professor or the mad scientist come out of thin air, much more likely they are derogatory labels for something frequently observed but not understood.



08:33

The word scatterbrain exactly describes these many children and adults . It's a word charged with meaning.



08:39

Einstein had plenty to say about education , from bitter experience, from the heart as always and from a strong sense of altruism.



08:48

It behoves us to take given that the highest outcome, the highest aspiration of any teacher, of any school is to nurture a future Nobel Prize winner,



08:57

Einstein called for active learning, pleasure in artist like workmanship ,a healthy curiosity for inquiry into the beauty of the mysterious, for the childlike inclination for play , independent thinking and judgement and for a vivid sense of the beautiful and the morally good.



09:13

Even though we might not have quite his turn of phrase, we'd go along with most of that.



09:18

But how . The hands on learning environment.



09:21

A lab / studio / library / museum / workshop is there an educational theory but mostly honoured in the breach



09:30

Einstein's concept of the facilitator who is given extensive liberty in selection of material and methods is a bit of a rosy dream.



09:40

That workshop style of learning which can give scope to the whole range of learning styles fulfils the recommendations, but can teachers be expected to transform themselves and school systems overnight .



09:52

Many of them are hanging on to the life raft with bleeding fingers as it is. Every few weeks schools are called at to address this or that social problem and they are not able to do more until they are helped to learn by experience, that Einstein friendly programmes can be add in rather than add on,



10:11

So much for the optimism.



10:13

But supposing just supposing that our wondrously successful screening procedures weed out all our original thinkers of the future



10:22

What Then !