

Number of persons age 18 and over, by highest level of education obtained, by race (ethnicity)

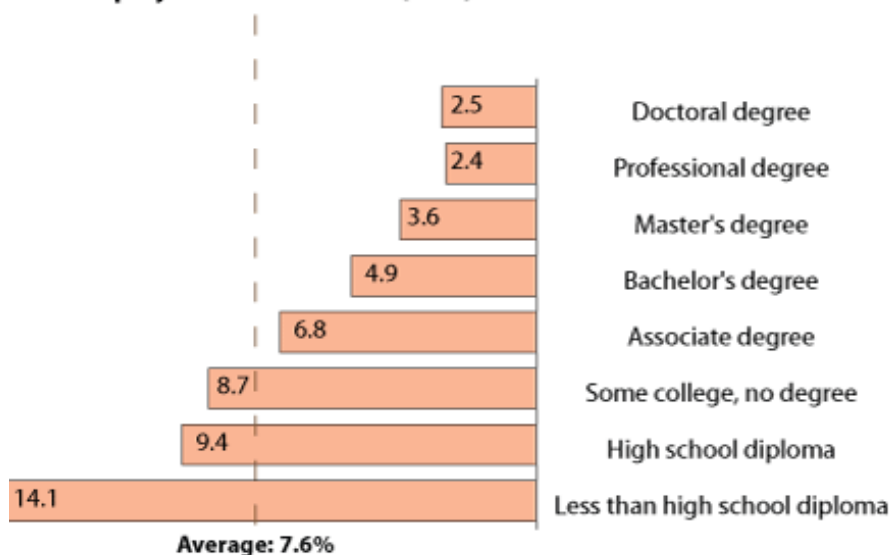
U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), March 2010

(Numbers in thousands, percentages added)

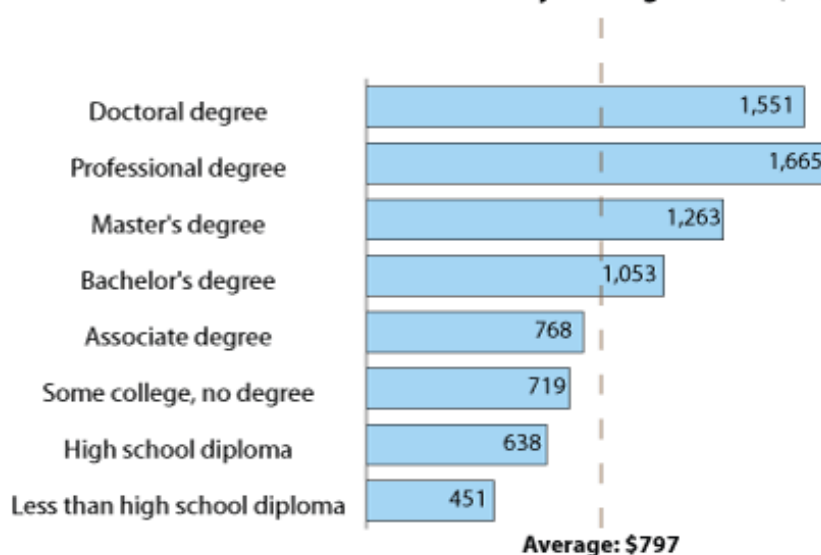
	Total # of youth	High school completion		Bachelor's degree		Masters degree		Professional degree		Ph.D.	
		# of youth with degree	% of total	# of youth with degree	% of total	# of youth with degree	% of total	# of youth with degree	% of total	# of youth with degree	% of total
White, 18, and older	156,247	48,778	31.2%	31,465	20.1%	11,935	7.6%	2,459	1.6%	2,154	1.4%
Black, 18 and over	26,282	9,356	35.6%	3,159	12.0%	1,189	4.5%	176	0.7%	122	0.5%
Hispanic, 18 and over	31,845	9,571	30.1%	2,862	9.0%	745	2.3%	139	0.4%	147	0.5%

Education Pays

Unemployment rate in 2011 (in %)



Median weekly earnings in 2011 (in \$)



Source: Bureau of Labor Statistics, Current Population Survey

El Sistema Presentation, Palm Springs

As I'm sure many of you have heard, El Sistema, founded in Venezuela almost 40 years ago by Dr. Jose Antonio Abreu, is now rapidly spreading worldwide. In Venezuela, any child who wants to, whether from the slums of Caracas or from a wealthier family, can learn classical music and El Sistema has over 100,000 participants in that country annually. There is now a huge program almost on a par with Venezuela in Columbia. It came to Los Angeles five years ago with our amazing young musical director of the Los Angeles Philharmonic Orchestra, Gustavo Dudamel. We now have El Sistema *nucleos* in two large community centers, 14 elementary schools, 10 of them in LAUSD, three LAUSD middle schools, one of which is a charter, and in our High School for Performing Arts. It is in fifty other cities in the United States and growing.

You've just heard Paul Heckman's report of scientific research on how children learn. Paul and I challenged ourselves to look at El Sistema in the light of this research in order to deepen our understanding of El Sistema's success. The video you are about to see was made in the past two weeks for this presentation; if you see a Hollywood type holding a microphone here or there, we are, after all, talking Los Angeles. And, truthfully, the video team loved making this, loved it every bit as much as the children, teachers and school staff. Let's take a look.

<https://vimeo.com/41450104>

In essence, the theory of learning includes three dynamic, fluid and changing aspects of how learning takes place – all of which are going on all the time. These are, first, conception, understanding, cognition – what do I get? Secondly are emotions, feelings, do I enjoy this, maybe, maybe not. And thirdly motivation, do I want to do this, or not?

This deeper viewpoint is in sharp contrast to classroom, standards based teaching, which insists that conceptions can be indoctrinated into kids by teachers, that the feelings of kids can be marshaled, and that their motivation can be a forced march. And it is, of course, failing completely.

If you think back on what you just saw, all three fluid dynamics of learning were not only taking place, but were permitted to take place, and encouraged to. What about that kindergartner struggling to get a hold of his triangle and do what the other children were doing? No one criticized him and more importantly no one told him how to do it. Each learns in their own ways. Once he felt he could do this too, didn't he get a kick out of accomplishing it, joining in with the others?

You saw a fourth grader saying that he needed help with bars 27 through 29 of the piece they were working on. He was not uncomfortable asking that question and the teacher did not criticize him for asking it, but went right to the uptake of the previous measure. She supported his approach to learning how to play that section. None of the children came into this program, or come back each day, or even continue to go from sectionals to the orchestra with fixed understandings, feelings or motivation. All of it is changing all the time and that's fine. That's the way we all are.

El Sistema, from its inception, was founded on giving loving support to poor children in that poverty-stricken country. It was viewed as much as social reform as teaching music. You could hardly see more clearly than you just have the connection between a warm environment and motivation in learning.

Behavioral psychology holds that motivation depends on accomplishing tasks that are difficult but nevertheless accomplishable. Weekly staff meetings that concentrate on metacognition, what children are accomplishing or not accomplishing, why some are succeeding, others not, takes on new importance in the light of understanding these elements of mastery. If teachers are deeply involved in discussing how children are doing, what they are doing, and in this case perhaps changing scores to make them more appropriate to where they youngsters are at, the learning will pick up precipitously. Skillfulness is self-reinforcing, "I've accomplished this, now I can try something harder and want to." And no one is holding a student back.

The teachers are accomplished musicians themselves. Sam Chillingarian – you might have detected his accent, was born in Armenia, learned violin in the most authoritarian of Russian schooling, played professionally in Vienna, and decided he didn't want to live out of a suitcase. Chillingarian came back to the US, he'd studied university here, and was teaching kids music in Glendale, which he still is, and discovered El Sistema through the efforts I've already mentioned and directs the program at Longfellow you just saw. Anne Rardin, the one with the violin, teaching beginning orchestra, has a doctorate from SC in music education and plays violin in five Baroque ensembles in addition to teaching both in Pasadena and LAUSD. This program came to Longfellow because of its support by LEARNS, which is the State-funded afterschool program in Pasadena, and with the enthusiastic support of Longfellow's principal whom you glimpsed briefly in her office, excited about the sounds her students could produce.

The environment is that of apprenticeship, of skilled artisans and novices, and not of the classroom, where teachers often simply dictate to the youngsters what they should be learning. In such a learning environment, the professionalism, the musicianship of the teachers, is not alienating to the children because they want to be able to do this too. They want to perform the violin like Sam or Anne, no different from wanting to play basketball like Kobe Bryant. They look up to such expertise, they feel great to be taught by pros, and they want to be as much like them as possible. They are in the program by choice. The model of skilled workers and their apprentices, a very ancient one indeed, breaks down the overwhelming alienation many kids feel in our classrooms.

Finally, is the importance of the orchestra. Playing in the orchestra positively builds further and enhances all of these elements. There is not the competitive atmosphere so familiar in classrooms and schools. It is not competing against each other; it is all working together, all the different kids and sections, as best as possible. A child can make a mistake, it isn't condemned. The music goes on. So this is not a chaotic atmosphere, it is one of unity. The students are unified in the effort to do the best job they can. "They are unified," Dr. Abreu says, "to create beauty." Here the richness of the experience of learning to play a musical instrument reaches a new depth because it is a peer and group

effort. And, in truth, these are precisely the 21st century skills – flexibility, teamwork, risk-taking, and creativity – that despite all its claims to the contrary, are not in our schools.

So also the feelings about the music, what feelings the child thinks the composer is striving for, what feelings she wants to communicate, are all the more important in the orchestral performance. It's "waves whooshing," like the girl in the video said so emphatically. The concert finale, when it comes, absolutely depends on whooshing waves of feeling.

El Sistema is called "the system," because, as Dr. Abreu long ago recognized, if different communities weren't learning the same thing, they wouldn't be able to perform together. The first orchestral piece children learn, Dr. Abreu felt, should be the fourth movement of Beethoven's Ninth Symphony, the "Ode to Joy." Now not only in Venezuela but across the world, including at Longfellow elementary in Pasadena, California, children get to play and sing this great expression of brotherly and sisterly love and joy. That's what learning could be about, and it is what the research shows us learning should be about.

Palm Springs dinner

You have in front of you a table and a chart. We need to keep reminding ourselves that public education is failing for most of our citizens. It is polarized along class and race lines, and the polarization is deepening. Thirty years of high-stakes testing is a patent failure, an effort that is being escalated despite the crystal clear evidence that is in front of you. As the statistics show, most people have not completed high school, let alone college. They face high unemployment rates and get very low wages – when they are working.

It can cogently be argued that our schools are channels to prisons. 60% of Black kids who drop out of high school will go to jail, and perhaps later to prisons because of the very high rates of recidivism in our penal institutions. One third of Black men will spend time in jail or prison. There are more Blacks in prison in the United States today, as a percentage of population, than there were Blacks in prison in South Africa under Apartheid. Our schools certainly are not, for most, channels to higher education.

Why? As Paul Heckman has just indicated what the research shows about how kids actually learn is pretty much the opposite of what is happening in classrooms.

This afternoon, I spoke of a wonderful example of what can be done in an afterschool enrichment program in classical music, inspired by Venezuela's El Sistema. It's taking place at an elementary school in Pasadena LEARNS, the state funded afterschool program and it is having amazing effects not only on the children, but on their parents, on the teachers and on the staff. Its success for children is building community in that school and its neighborhood. This was the Mott Foundation's initial intention in the 21st Century Community Learning Center grant – breaking down the cyclone fence between schools and communities.

In another much bigger afterschool program in Los Angeles, leaders of LAUSD's afterschool department, Beyond the Bell, have created a kid initiated and kid led program in 39 LAUSD high schools. In a few weeks there will be some 3,300 of those youngsters competing on five sound stages and many booths at Paramount Studios in various activities they've been working on over the year. Which will come out best? Last year two teenagers did a song and dance routine of "I can do anything better than you can" that topped any production of that song in South Pacific I've ever seen, I mean they walked off with it, top prize – and no one told them that's what they had to do. They were mentored, of course, but this was theirs, their idea, their own imaginative choreography, their own lyrics added to Hammerstein's. They thrilled the 2,500 students and adults who were watching at Paramount. That is how learning should be. Skilled, as far as the students can go, creative, fun, rewarding. It testifies to Paul's point that neurological capacities of young people's minds far exceed the narrow curricular grade-level standards imposed in public education.

The essence of what we are suggesting as an alternative direction for education is to let the kids initiate how they want to comprehend and carry out learning. You may be saying we might be able to do this afterschool, but what about academic studies?

Let's visit a classroom in West Sacramento. That is a very poor neighborhood. The school, West Sacramento Prep, is a middle and high charter school, 98% free lunch; a third of the kids undocumented. Paul will probably deny starting it because it does not follow the precise curricular standards that exist in state tests at all. It allows children to study content, the subject matter, in non-grade-level settings, in ways they come up with, with the guidance of teachers. There are 13, 14 and 15 year-old students at that school who are already taking courses in Community College in West Sac's fifth year.

So in this classroom, fifteen year olds, who were studying literature, got interested in what learning is all about, especially considering that some of them face paying out-of-state college tuition. Their parents brought them over when they were three or four. That's seriously problematic. How can they pay \$1000 a point? They're asking, what is learning about? What's it for? The teacher suggested they read Rousseau. Jean Jacques Rousseau had a good deal to say about learning. "Boy this guy is hard to understand, you have to read this paragraph by paragraph," they say. They are making a picture of Rousseau. On one side are bubbles depicting what Rousseau said, and on the other side are bubbles of what they think Rousseau meant. And there is a third column of bubbles which shows why they think this is what Rousseau meant, why they came to these conclusions. In other words, it is a depiction of their own metacognitive processes, their own ways of thinking. And being able to do that, valued for their ways of thinking, is every bit as reinforcing, as valuing, as performing that dance routine.

The students' own ways of thinking are what is critical. What is failing is curricularly dictated, grade-leveled, and top down directions of how kids are supposed to learn.

This is not abandoning standards. You cannot play Beethoven if you cannot read and comprehend all of the directions in his scores. You cannot read or depict Rousseau's thinking without much prior learning. But this learning is around content-centered education: Here is a Beethoven score, one of the world's greatest composers, here's a book by this French philosopher who thought education should be how society is arranged and profoundly influence educational thinking. Figure it out, tackle it, this is going to be neat, you're going to enjoy it, I can't wait to hear what you come up with. If you've got questions, let me know.

In this environment of learning, young people learn much more, much faster. Beethoven isn't in the elementary school curriculum and Rousseau is not in the high school curriculum. Students own their learning and this allows them to utilize their much greater capacity to learn that classrooms are holding back. What we are talking about is obviously a huge paradigm shift in learning.

This greatly needed effort to change education will not happen without the inspiration of theory, without convincing ideas, without discussion, debate, agreement, and disagreement. We are no different from our kids. We need to be convinced.

Right now, and this has been increasingly so for the past two years, there is widespread discussion of education taking place across this country – teachers who face cutbacks, curricular demands and standardized testing they disagree with. Battles are taking place in schools, districts and unions. Students, who face impossible tuitions and massive debt repayment, have made this a central issue in OWS debates. Diane Ravitch is speaking across the country on the real disaster schools face and their

problems. But you do not yet hear from Ravitch herself or others, discussion of changing the environment of learning, of encouraging kids to tackle content, instead of attempting to memorize it. It's is not yet in that discussion and it must be. From the standpoint of our Foundation I can promise you that within a not very long period, there will be a site for this discussion to take place. What I'm urging you to do, because you bring rich experience to the table, is to take part in this discussion. We have to become as free to agree and disagree on Internet as we are in meetings like these!