

*American RadioWorks*

# EARLY LESSONS

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The Perry Preschool Study was born during the ferment of 1960s. The goal was to help poor, African American children become “smarter” so they could do better in school. Fifty years later the study is still teaching us things about what causes children to succeed in school - and about the very nature of intelligence itself.

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## Early Lessons

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## Part 1: An Idea

When preschool was still a new concept, back in the 1960s, ideas about education, early childhood development, and intelligence were changing. One of America's first preschools was set up as an [experiment](#) to test some of these new ideas.

It was called the Perry Preschool. The man who started it, [David Weikart](#), had a specific goal in mind: to help African American children from poor families do better in school.

Weikart was a school psychologist and director of special education for the public schools in Ypsilanti, Michigan, a small city near Ann Arbor. Ypsilanti was a city of haves and have-nots. There was a large middle-class population of whites who worked at nearby universities and had good jobs in the auto industry, and a smaller population of African Americans. Many of them were unemployed; those who had jobs tended to work in the next layer of the economy, the support team that held up the auto industry and universities. They were janitors, construction workers, domestics and store clerks.

Ypsilanti was still a segregated city in the early 1960s. African Americans lived on the south side, in the neighborhood around the Perry Elementary School. Perry was an all-black school, and as with many segregated schools back then, lots of its students were failing to learn even basic skills. Many educators - across the country - **dismissed the problem of African Americans'** disproportionate school failure as something they could do nothing about. They blamed it on families, on poverty, and on the children themselves. They **said children who didn't do well weren't "smart" enough. They weren't capable of succeeding in school.**

But David Weikart didn't think there was anything wrong with the children. He thought there was something wrong with the schools. So he decided to set up a new kind of school to try to prove that black children were as capable of learning as white children were.

Weikart had a hypothesis - a hope - about what preschool could do, and how it would work. He thought preschool might help raise children's IQ, their intelligence quotient.

This was a time when people believed deeply in the idea of IQ, that how well you did in school, and in life, was primarily a function of how "smart" you were. They believed IQ tests could measure that, and they believed IQ never changed. It was genetic, fixed for life. Education wasn't going to change it. The fact that so many black children were scoring low on IQ tests and being assigned to special education - that was just sort of accepted by a lot of people at the time.

"I was working in a context where most people felt that IQ was God-given and, unfortunately, low-IQ minority children were just born that way," wrote David Weikart in his [memoir](#).

And IQ tests played a big part in determining a child's path in school. Students were sorted early based on their IQs; children with low scores were shuffled off to special education classes where no one expected them to learn much. A lot of them eventually dropped out. This is what was happening to a lot of African American children in the early 1960s, and Weikart wanted to do something about it.

So he came up with the idea for a preschool. His goal was to try to raise IQ scores before children got to kindergarten, get them off to a more promising start in school, help them avoid failure.

But child development experts told him it was a bad idea. They said preschoolers were too young to learn - especially low-IQ children like the ones Weikart wanted to work with.

"They felt that 3- and 4-year-olds, especially from disadvantaged backgrounds, would be unable to handle any program that I might plan to offer, and that in fact the program might actually harm the children," Weikart wrote in his memoir.

Their advice startled him.

“[I]t seemed unethical to just disregard their opinion,” he wrote. So rather than just run a preschool program, he decided to set it up as an experiment. Weikart thought the experts had asked but not answered a question “that demanded [an answer] so that public policy ... could be established.”

The question was this: Can preschool improve the intellectual and academic abilities of disadvantaged children?

“Or, simply put,” he wrote in his memoir, “Does preschool work?”

## Part 2: Setting up the Experiment

Weikart hired four teachers and a staff of researchers. The preschool was set to open in October of 1962. It was based in a community center the first year. Later it moved to the gym of the all-African American Perry Elementary School. The teachers spent the summer of 1962 knocking on doors in the neighborhood around Perry, looking for families willing to give preschool a shot.

Only three families said no.

“Many of these children - their sisters and brothers were [already] in special education,” says former Perry Preschool teacher [Evelyn Moore](#). “Their mothers knew what could happen. And so they saw this as an opportunity.”

Not all the children qualified for the study. They needed to have low IQ scores. Project staff used the Stanford-Binet Intelligence Test. Children had to score in the range that defined them at the time as “borderline educable mentally impaired.” (This meant scores between 70 and 85 points. The average IQ is by definition 100 points.) But, these children could not have any evidence of “organic handicap.” In other words, they weren’t retarded. But that’s what a lot of people said they were. Children who entered kindergarten with low IQ scores were considered lost causes already, barely able to be educated.

That’s why Evelyn Moore wanted to teach at the Perry Preschool. “I would do whatever we needed to do,” she says, “to prove that this many African American children were not retarded.”

Once the teachers and researchers identified a group of families, they had to figure out who would be in the preschool - the “study” group - and who would be in the “control” group. The idea was to compare the two groups, to

see if preschool made a difference in their IQ scores, and to see if preschool made a difference in how they did in school later on.

**To ensure the validity of the experiment, the researchers couldn't pick and choose who would be in and who would be out.** It had to be random. So they flipped a coin - literally - and half the children were in the preschool, the other half stayed home. There was no Head Start at this time, no day care. If children were not in school, they were home, usually with their mothers or other female relatives.

## Part 3: The Preschool

When the Perry Preschool began in October of 1962, the teachers were winging it.

“This was a brand new idea, so we had to be inventive,” says former Perry Preschool teacher [Louise Derman-Sparks](#).

There were no models, no curriculum guides for what they were trying to do.

“We were interested in helping children develop cognitively,” says Evelyn Moore.

The teachers were trying to stimulate children’s brains, get them learning the kinds of things they would be expected to know in school. And this was radical.

“At that time it was thought you might be punishing kids if you tried to teach them [school] readiness skills,” says Moore. Children learn when they’re ready to learn, that was the attitude. “You know, it’ll all [just] happen,” says Moore. “Well how do you make it happen?” That’s what the Perry Preschool teachers wanted to know.

“We tried everything,” says Derman-Sparks.

“We did a lot of writing and making stories with the children,” says Moore.

“We had a science table,” says Derman-Sparks.

“And there would be puzzles,” says Moore, “and we would have different levels of puzzles because we were [interested] in trying to get children into more complex ways of dealing with their environment.”

Preschool age children had never gone to a school like this before. Some middle- and upper-class families sent their children to nursery schools. But



nursery schools were all about social and emotional development, learning how to get along, and play.

“Their programs included large blocks of unstructured play and a focus on self-sufficiency skills such as training in toileting, hand-washing, coat-buttoning, and shoe-tying,” wrote David Weikart in his memoir. “Terms such as ‘cognitive,’ ‘problem solving,’ or ‘academic preparation’ were not mentioned.”

But it was help with these cognitive skills that Weikart believed children at the Perry Preschool needed. “It was the lack of [these skills] that was defeating so many of the youth I was seeing as a school psychologist,” he wrote.

And so Perry focused on cognitive development. But there were no formal lessons, no desks, not even coloring books. The Perry Preschool teachers believed coloring books encouraged rote ways of learning. They wanted their students to color outside the lines.

“It was never directed teaching where we sat them around a table with paper and pencil and told them to check worksheets. We never did that kind of teaching,” says Louise Derman-Sparks. “It was always in the framework of children actively learning.”

The idea was to teach everything through play, because that’s what 3- and 4-year-olds do: They play.

“To an outsider it would have looked like a good part of the [day] was play,” says Derman-Sparks. “But it was play that was very carefully structured in terms of the materials we put in the environment and the interactions of the teachers with the children.”

The Perry Preschool teachers believed education should begin with children learning to explore their own ideas and interests, not listening to what a teacher had to say all day. It was the 1960s. Everything was changing. They were inventing a new kind of school.

And if there was one thing the teachers focused on above all else, it was getting the children to talk - to talk while they were playing, to talk while they were on the playground, to talk while they were eating snack. They just wanted the kids to talk, talk, talk, talk, talk.

“Many of these children were not raised in homes where language was encouraged,” says Evelyn Moore. “The children who were quiet and

disciplined were considered smart in some ways. You know, ‘He’s a good child, he’s a quiet child.’”

This idea that children should be seen and not heard is an old and powerful belief. And it can be a practical parenting tool if you’re a poor, single mother living in a small apartment with lots of children. That’s how a lot of the Perry kids grew up. But the teachers believed getting the children to use language was the key to opening up their minds, and their possibilities.

“Tell me what you did last night. Talk to me about what your mommy did yesterday.” Moore says these are the kinds of things teachers would say to try to get the kids talking: “open-ended questions.”

Moore says it took her a while to learn how to do this. Before coming to Perry, she had taught elementary school. “Having been trained as an elementary teacher, it’s like, ‘This is right and that’s wrong,’ you know. ‘These are answers.’”

But she says when you talk to young children that way, they don’t say much, or they tell you what they think you want to hear. And that’s not what the Perry teachers wanted.

“We wanted to extend their ideas, to develop their ideas,” says Louise Derman-Sparks. “We wanted them to do creative things.”

They wanted their students to speak up - and be heard.

“We wanted to open up the world to the kids,” says Derman-Sparks. “We wanted them to know that the world was there, and they had a right to be in it.”

They took lots of field trips. “These were kids who had never left their neighborhood,” she says. So they put kids in their cars and drove them to the library, to the fire station, to a farm. Their mothers sometimes came along.

Evelyn Moore remembers a trip to an orchard in the fall. “[We] picked the apples, we brought ’em back. They peeled them, made applesauce.

“Then the brilliant idea struck us: let’s take the children back to the apple orchard in winter.” It was cold. The trees were bare.

“I can remember very vividly saying [to the children], ‘Well, where did the apples go? Well, what do you think happened to the apples?’ And one of the kids looked at me and said, ‘Teacher, I didn’t take ’em.’”

Moore laughs, then takes a breath. “Already kids thought, ‘I’m being accused of something.’”

The Perry Preschool was just a morning program. The children came to school for 2½ hours each day during the school year. Most children attended for two years.

While they were there, they got a huge dose of adult attention. There were four teachers and 25 children in the classroom at a time, and lots of other adults too. The researchers were in and out administering tests, collecting data. School officials and child development experts came to observe.

Teachers Evelyn Moore and Louise Derman-Sparks think that attention had a big impact on the children. And they think the attention the parents got mattered, too.

**“Home visits” were an integral part of the Perry Preschool program.** Each teacher was assigned five students, and every day after school, each teacher visited a family at home.

**“The curriculum that we were supposed to follow for the parents was to bring a whole bunch of learning materials and show the parents how to support their children’s cognitive development,”** says Derman-Sparks. **“So we’d bring this big sack of stuff and the parents were supposed to watch us doing cognitive kind of one-on-one activities with the kids.”**

They played matching games and memory games. They did puzzles and read books.

Derman-Sparks says the home visits could be awkward. What the teachers were doing was trying to teach people to be better parents. And that felt odd to her. **She was only in her early 20s. She didn’t have any children of her own.** And she says she felt like an intruder at first.

She remembers one little boy who lived with his mother, who was a teenager, and his grandmother. Their apartment was behind a church, and you had to walk up a set of rickety stairs to get there.

**“And I knock on the door and the mother answers it. And it was one of these railroad apartments so you could see right into the kitchen. And the grandmother was cooking on the stove and I hear her saying, ‘Oh shit, is she here?’”**

She laughs at the memory.

**“I didn’t feel exactly welcomed. And frankly I could really sympathize with her.** You know, she had been working all day on her feet and now she was

trying to get dinner on the table and here I am coming in with my little sack of toys.”

Derman-Sparks says she learned to put her sack of toys aside sometimes, and just sit in the kitchen and talk with the grandmother. They’d have a cup of coffee or Kool-Aid. She believes these visits meant a lot.

“I don’t think it was necessarily that we went to the homes every week,” she says. Rather, it was the message the visits sent to the families: “We are your children’s teachers, and we think your kids are great. And we really want your kids to make it.”

“I would love to know how that helped a parent relate to other teachers along the way,” says Evelyn Moore. “Because they had met teachers who they felt very comfortable with, teachers who laughed with them, showed a human side to them.”

That’s not the kind of relationship most of them had ever had with a teacher - their children’s teachers, or their own. What parents were used to hearing from teachers was how badly their children were doing in school.

The Perry Preschool teachers wanted to show the families - and the children - that school could be different.

They wanted their students to develop a love of learning, and the confidence that they *could* succeed in school.

## Part 4: The IQ Promise

The Perry Preschool was an almost instant success. After two years in the preschool, the average IQ score went up 15 points. That is a statistically significant jump in IQ, enough to move many children out of the “educable mentally impaired” IQ range and into the normal range. That kept a lot of them from being assigned to special education, and that was founder David Weikart’s goal.

“We were exhilarated by the results,” he wrote in his memoir, “and vindicated in our faith that we could provide an effective intervention in the lives of poor children at risk of school failure.”

It was 1964 at this point. The Perry Preschool was not well known outside of Michigan. But preschool was kind of in the air. There was a tremendous amount of interest in finding solutions to the problems of poverty and unequal education, and preschool looked like a promising possibility. There were programs in Tennessee, Connecticut, New York; a new generation of educators and activists was embracing preschool as a way not just to help poor black children, but to fight poverty itself.

And then in May of 1965, preschool went big. President Lyndon Johnson announced a new federal program called Head Start.

Standing in the Rose Garden on a beautiful spring day, surrounded by advisers heading up his ambitious War on Poverty, Johnson declared: “I believe [Head Start] is one of the most constructive and one of the most sensible and also one of the most exciting programs that this nation has ever undertaken.”

In his address, Johnson essentially promised the nation that Head Start would solve the problem of poverty.

“This program this year,” he said, “means that 30 million man-years - the combined lifespan of these youngsters - will be spent productively and rewardingly, rather than wasted in tax-supported institutions or in welfare-supported lethargy.”

It was quite a promise. When Head Start began it was just a summer program. It served about half a million children. And its goals were broad - not just IQ gains. Head Start included health and nutrition services. It was an employment program too; parents were hired as the teachers.

But to sell Head Start to Congress and the public, Johnson advisers talked up the idea of IQ gains. Some Head Start officials worried. They feared IQ might not be the right measure of success given the multiple goals of the program. They wanted the White House to emphasize that Head Start was a “comprehensive child development program.” But that was cumbersome, hard for the public to understand. IQ was tangible, and what the public really loved about Head Start was the idea that it could make children “smarter.” Everyone thought “smarts” was the key to it all.

Early results showed Head Start did raise IQ scores, by about 10 points. Congress approved funding increases, and Head Start became a year-round program. Thousands of families enrolled. One of President Johnson’s advisers called Head Start the War on Poverty’s “greatest measurable success.”

But not everyone loved Head Start. Some politicians were suspicious. Head Start cost too much. They said civil rights activists were running it. The program was too political. And they wanted more evidence that it worked. So the Johnson administration commissioned a study.

The study was released in the spring of 1969, and it showed that the initial IQ gains from Head Start did not last. The gains from summer programs disappeared quickly. The full-year Head Start programs resulted in test gains through first grade, but those gains, too, appeared to “fade out” by the time children were 7 or 8 years old.

The report was called the [Westinghouse Study of Head Start](#). It became synonymous with the term “fadeout.” When people talk about preschool today they still talk about fadeout. It almost always comes up during debate about Head Start funding.

Edward Zigler, who ran Head Start during its early years, writes about the IQ gain issue in his [memoir](#). He thinks the problem is IQ tests themselves.

“An economically disadvantaged child might have a perfectly adequate storage and retrieval system... to master quickly the correct answer to the Binet IQ test vocabulary item, ‘What is a gown?,’ but still might reply ‘I don’t know’ because he has never heard the word ‘gown’ and thus has had no chance to acquire this particular piece of knowledge,” Zigler writes.

“Or,” he continues, “the child may know what a gown is but respond ‘I don’t know’ in order to end the unpleasant business of dealing with a strange and demanding grown-up.”

IQ tests are not paper and pencil tests like achievement tests. IQ tests are administered one-on-one by an adult in a room alone with a child. Children not only have to answer questions like “what is a gown?” but they have to do puzzles and draw pictures, figure out math problems and do a lot of talking back and forth with the tester.

In 1968, Zigler and Yale professor Earl Butterfield published a [study](#) about the Head Start IQ results.

“We found that we could produce the same 10-point ‘gain’ by administering the IQ test under optimal conditions - for example, by having the tester rearrange the order of the questions, presenting the easier items first in order to assure some degree of initial success. The tester, at least initially, would also refuse to take ‘I don’t know’ as an answer, and continue to encourage the child to respond to the question.”

Zigler’s conclusion is that a positive attitude toward an IQ test, feeling good about it, wanting to do well, being motivated - this matters a lot. It increases a child’s score. And remember, those scores were a big deal. Schools used them to determine whether children belonged in special education.

“Our findings also helped explain why the IQ test score gains tended to disappear when Head Start children entered the public schools,” writes Zigler. “After a year or so in the frequently less friendly environment of the school, the children’s wariness of adults, and their expectancy of failure, probably returned.”

But the debate about IQ tests, what they measure, what they mean, is a complex, intense debate. The bottom line for policymakers and the public back in the 60s was this: Does preschool work? The promise was that preschool would raise children’s IQ scores. The Westinghouse Study was evidence to the contrary.

Richard Nixon was president when the study was released. He had supported Head Start during his campaign. But after the Westinghouse report, he wrote across the top of a memo: “No increase in any anti-poverty program until more research is in.”



## Part 5: Failure

Back in Ypsilanti, the Perry researchers were finding IQ “fadeout” too. By second grade, the IQ gains from preschool were gone.

But like Head Start’s founders, the Perry researchers had always thought the point of preschool was more than just raise raising IQ scores. Their ultimate goal was to prevent school failure. Raising IQ seemed like one way to do it, but maybe it wasn’t the only way, or even the right way. Maybe IQ wasn’t really the point.

And they were gathering evidence that preschool was helping children in other, unexpected, ways. The oldest study children were in fourth grade now, and according to teacher ratings, the children who had gone to preschool were much less likely than the children who had not gone to preschool to engage in “personal and school misconduct.”

And even though their IQs were no higher, they were no “smarter” than their peers, the preschool children were still less likely to be placed in special education for “mental impairment.” In other words, many children whose IQ scores indicated they should be considered “educable mentally impaired” were for some reason not being shuffled off to special education classes. The researchers weren’t sure why. And they wanted to know more.

But the school system was pushing David Weikart to give up the research and focus more on his job as an administrator. He was still the director of special education for the entire school system; the Perry Preschool research was just one of his responsibilities.

The preschool research was his passion though. So in 1970 he quit his job. His special education staff quit with him. They set up a nonprofit they named

the [HighScope](#) Educational Research Foundation to continue the Perry research.

Forty years later, HighScope is still following the Perry children. A series of surprises kept them going, unexpected [results](#) that changed the way they think about the purpose of preschool.

## Part 6: New Promise for Preschool

The first big surprise came in the late 1970s.

“We were still phoning into the mainframe [computer] at the University of Michigan,” says Larry Schweinhart. He was hired as a researcher at HighScope in 1975; now he runs the organization. “You’d stick the phone in the little cradle and we’d get these big long pages of printouts.”

The computer was spitting out results from achievement tests the Perry study children took when they were 14.

“And I’m thinking, this can’t be right.”

Schweinhart couldn’t believe what he was seeing: big differences in the test scores. The students who had gone to preschool did much better on achievement tests at age 14 than the comparison group who had not gone to preschool.

“So you go double-check all your methodology and make sure you didn’t put it in backwards or something.”

And the data wasn’t in backwards. It was right. On standardized tests measuring their reading, writing and math abilities at age 14, the students who had gone to preschool significantly outscored the students who had not. Now, it’s important to note that neither group scored particularly high. The preschool students scored at the 13th percentile on these achievement tests, on average. But the no-preschool students scored at the 6th percentile.

The differences between the two groups got the attention of the researchers. All of the study children started out at severe risk of failure in school. To be in the 13th percentile rather than the 6th was noteworthy

progress, and it was the biggest gap in achievement the researchers had recorded.

“And we also at that time did not find any differences in IQ,” says Schweinhart. “So you’ve got the IQ test, no difference, and the achievement test, big difference, bigger than ever difference.”

This was puzzling, and interesting. The assumption had always been that the key to doing better in school - and in life - was being “smart.” The smarter you are, the better you do. And it’s true - true then, and true now. The better you do on tests that purport to measure how smart you are - whether it’s an IQ test or the SAT or a test to qualify for the military - the better you do in life, in all kinds of ways. You get more education, you make more money, you’re even physically healthier.

But is it being “smart” that leads to those results, or something else?

Maybe being “smart” correlates with doing well, but doesn’t necessarily cause people to do well. And maybe whatever causes people to do well in life, maybe that is the thing that helps people do well on the very tests that purport to measure how intelligent they are.

These were the kinds of questions swirling around in the Perry researchers’ minds back in the late 1970s when they were examining those age 14 achievement test results. Why were the preschool children doing better in school, even though the IQ test results still showed that preschool had not made them any “smarter”?

Larry Schweinhart thinks it had to do with motivation. He believes the students who had gone to preschool were more committed to achievement; they cared more about doing well.

And so they tried harder in school. And they tried harder on achievement tests.

As it turns out, one of the reasons the preschool children did better on those age 14 tests is that they were more likely to finish the tests. The students who had not gone to preschool left more questions blank. They didn’t even try.

“I remember writing a little line in the front of the first report that I wrote,” says Schweinhart: “The most important thing you learn in a place is how hard to try.”

This finding made Perry researchers wonder what other differences there might be between the preschool group and the no-preschool group. So when the students were in high school, they interviewed them. They interviewed their parents. They collected all kinds of school records.

**And here's what they found: The preschool students had higher grades;** they spent more time on their homework; they were more likely to say school was important to them. The parents of the preschool participants had better **attitudes toward their children's education; significantly more of them said their** kids enjoyed talking about what they were doing in school; and they were more likely to say they hoped their children would get college degrees.

And when it came to actually graduating from high school, preschool made a big difference - for the girls in particular. Overall, 67 percent of the preschool group graduated from high school, while only 45 percent of the comparison group did.

All of this made the researchers want to know more: What would happen to the study participants after high school? Would the ones who had gone to preschool continue to do better - in life?

**But once the students were out of high school, the researchers didn't have** an easy way to keep track of them. So they hired Van Loggins.

## Part 7: The Study Continues

Van Loggins was a coach at Ypsilanti High School. The Perry researchers asked if he'd be willing to track down the study participants and do interviews. He hesitated at first.

"Any time white folks want to study black folks, I'm apprehensive," he says.

But eventually he took the job because he thought maybe some good would come from the study. It might help change things for African American children.

"I did interviews in cars, in airports, dope houses," says Loggins.

He lived in the Perry neighborhood, and he knew a lot of the study participants already. Some had been on his team in high school. Others he knew from the neighborhood - or he knew their mother or their sister or their cousin.

Sometimes it was hard to track them down, though, even the ones who lived right there in the neighborhood. Loggins says the area had changed. It's always been poor, but back in the 60s it was safe, everyone knew each other, people left their doors unlocked. By the 1980s when Loggins first did interviews, the neighborhood was rougher, more desperate. He says crack cocaine hit the area hard.

He remembers trying to find one study participant at a dope house. "You know, gun stuck in my face," Loggins says.

"Who's that?" says the guy with a gun at the front door.

Then a moment of recognition. And the guy says, "Hey, that's the coach."

He looks at Loggins. "I'm sorry about that, man."

"Hey man, you better check your boy," says Loggins.

“And then they started laughing and stuff, and I’m in!” he says.

Loggins interviewed all of the study participants - the ones who went to preschool and the ones who didn’t. He first talked to them when they were 19 years old. Then again when they were 27 and 40.

He asked all kinds of questions: income, education, if they liked their jobs, if they were saving money, if they got along with their families, if they’d ever been arrested. The researchers checked public records where they could, to make sure they were getting accurate information. Then they tallied up the data. And the results were stunning.

By the age of 40, the people who’d gone to preschool were doing much better - [in life](#). They were more likely to be employed; they made more money; they were more likely to own homes, cars, to have savings accounts. And they were less likely to use social services. They were also more than twice as likely to say they had positive relationships with their families. The men who’d gone to preschool were more involved in raising their children.

The biggest difference of all had to do with crime.

The people who had gone to preschool had far fewer problems with the law. They were half as likely to be arrested. In other words, preschool cut the crime rate in half.

By the age of 40, 21 percent of the people who did not go to preschool had spent time in prison compared to 9 percent of the people who did go to preschool.

“It’s just very difficult to find anything that will reduce crime,” says Perry researcher Larry Schweinhart. “And here’s a program that took place way before the crime and reduced it.”

These dramatic results led the researchers to a new set of questions about preschool: What kind of money can it save society?

Crime is expensive. “To take the McGruff Crime Dog slogan, if you can ‘take a bite out of crime,’ that matters a lot,” says Steven Barnett, director of the [National Institute for Early Education Research](#) at Rutgers University.

Back in the 80s Barnett was a graduate student in economics at the University of Michigan. And the Perry researchers hired him to do a cost-benefit analysis of the Perry Preschool.

So Barnett calculated how much money society had avoided spending because the Perry Preschool children committed fewer crimes. That was counted as a benefit.

He also looked at what the school system had saved because fewer of the preschool children ended up in special education classes.

“Special education doubles the cost of a child’s education,” says Barnett. “And if it turns out the child doesn’t really need that, if you intervene early and put the child on the right path, you can save a tremendous amount of money.”

Special education savings were counted as a benefit. So was money society saved on social service programs that people who went to preschool did not use. Another benefit was higher taxes that preschool participants paid because they earned more money.

Barnett compared all of these benefits to how much money the state and the school system originally spent on the preschool.

“What we found was that the economic value of investing in a very expensive preschool program was much, much higher than the cost of the program,” says Barnett.

The total cost of the Perry Preschool program was \$15,166 per child (This number is for two years of preschool, adjusted for inflation from 1962 dollars to 2000 dollars). The return to society on that initial investment was [\\$244,812 per child](#).

Preschool is a “social program from which everybody wins,” concludes Barnett. Good for the kids, and good for the taxpayers too.

And it’s the crime reductions that make the biggest difference when you run the numbers. Most of the public return (88 percent) is because of reduced crime. Males who went to the preschool ended up costing taxpayers 41 percent less in crime costs than males who did not go to preschool. That’s \$732,894 in [cost savings](#) per person. Multiply that number by the number of boys who went to the preschool, and what you find is that the Perry Preschool saved taxpayers millions of dollars they would have otherwise spent arresting, prosecuting and locking up black men.



## Part 8: Gold in the Hills

The [HighScope](#) Foundation's first report documenting Perry's positive effect on achievement and commitment to school was published in 1980.

That same year Ronald Reagan was elected president, and things were not looking good for educational and social programs with roots in the civil rights movement and the War on Poverty. Many people thought Head Start would be killed.

But in the fall of 1980, the Carnegie Corporation of New York sponsored a press conference about the Perry study results. And the nation's newspapers overflowed with articles and editorials touting the [value](#) of preschool.

A few weeks later, at one of Reagan's first cabinet meetings, Head Start was placed in what became known as the "safety net" of social programs that would not be cut.

Head Start survived. And a lot of people now thought the Perry Preschool was Head Start. The two programs became inextricably linked in many people's minds.

And by the 1990s, Head Start was under fire once more.

The debate about preschool, and education in general, was becoming increasingly dominated by talk of test results. Officials in Washington were concerned that Head Start was not focusing enough on academic skills and **putting too much emphasis on children's emotional development, their nutritional needs and their health.** Head Start was promoting soft, squishy stuff at the expense of more important pre-literacy skills.

In a world where knowledge was becoming increasingly important, schools in the United States needed to do more to make sure students were prepared. Head Start had better teach the alphabet.

And a testing movement swept the nation. Everyone was focused on test scores and other “measurable results.” And Head Start didn’t seem to have any. Where were the test score gains?

The debate distressed Larry Schweinhart back in Ypsilanti, Michigan. The whole direction of education reform seemed wrong to him. The obsession with test scores was warping education. He says it was leading schools to equate that which is tested with learning itself.

And “the most unfortunate consequence” he says, is that schools started to focus exclusively on achievement and not on “attitudes and commitment.”

“And if we’re only focusing on achievement and not commitment and attitudes, we’re only focusing on half the equation,” he says. “And that’s true whether we’re talking about 3- and 4-year-olds or 10th graders or whatever.”

He thinks Perry proves it.

“People who had the preschool program [were] more successful in school, so they were more motivated, so they did better in school.” It’s a process - a self-fulfilling prophecy. When you do well at something, you tend to like it more. So you do it more. And the more you do it, the better you get at it.

School is like that, he says. Attitude and commitment go together, and they help boost achievement.

Though it’s kind of a chicken-and-egg kind of question when you think about it. Is it important to do well in school right away so that you like it? Or is important to like school right away so that you do well?

It’s really important for children to like school *and* do well, from the beginning, says Schweinhart. That’s why preschool matters so much. It can help children get off to a good start in terms of what they need to know in kindergarten, and it can introduce them to school in a positive way. Children should play and have fun in preschool, and they should learn a lot. That’s what happened at the Perry Preschool, he says. And it changed the children’s lives.

But this argument is complicated. Schweinhart says it got a little lost in the debate about education during the 90s. He and study founder David Weikart both spent a lot of time traveling around the nation, and the world, talking about their study results. There was always lots of interest. But in an education environment dominated by the demand to raise test scores, their message didn’t hit home with everyone.

Schweinhart remembers a meeting he had with some men from Jordan. They were supposed to come to the United States, but this was just after 9/11 and they had trouble getting visas.

**“So we did a video hookup,”** says Schweinhart. He talked about the Perry Preschool findings, showed graphs and charts quantifying all the results. And at the end, says Schweinhart, one of the men asked about the IQ results.

**“And it was like I had said nothing else,”** Schweinhart recalls.

**That’s all they ended up talking about** - IQ and fadeout and how can you say preschool works if it had only a temporary effect on intellectual performance?

Schweinhart thinks we still live in a world obsessed with the idea of intelligence, and the belief that a test can measure it. The Perry researchers **didn’t even collect IQ scores after high school** - the whole notion of IQ seemed flawed and irrelevant to them. The point was that people who had gone to the Perry Preschool performed better in school, and in life, even though they **weren’t any “smarter” as measured by IQ tests**. Now, there were statistically significant differences between the two groups on some achievement tests - but these differences were fairly small, and likely had something to do with the fact that more of the students who had gone to preschool simply got through the whole test, they gave it their all.

The bottom line is this: IQ tests purport to measure pure cognitive ability - how fast you think, how well you do puzzles, how sharp your short-term memory is. On these tests, the children who went to preschool initially did **better than their peers, and then they didn’t**. Achievement tests purport to measure something else - what you learned in school. On these tests, the people who went to preschool did slightly better than their peers, with the most dramatic differences showing up in high school.

When you put it all together, what seems clear is that on skills that tests measure, there were not big differences between the two groups. But on other kinds of educational and social outcomes, the people who had gone to **preschool clearly did better**. So, they weren’t “smarter,” they didn’t even necessarily learn that much more in school. But they were better off in life anyway.

**It’s not all about test scores.**

That's what Larry Schweinhart thinks. He believes the real impact of education is much bigger and longer lasting than a test score. But this message was eclipsed in the 1990s by a standardized testing movement sweeping the nation. Everyone wanted programs proven to raise test scores. And preschool didn't seem to be one of those programs.

"I've sometimes felt like a prospector coming down from the hills and saying 'Hey, we found gold up there,' says Schweinhart. "And everybody is busy doing whatever they're doing. They say, 'We don't have any time to look for the gold.' 'Yeah, but there's gold, why don't you go get the gold? All you've got to do is go there and you can find the gold.'"

## Part 9: Non-Cognitive Skills

But the debate about preschool was about to change in some powerful and surprising ways.

It was the late 1990s. And one of the world's leading economists suddenly became really interested in the Perry Preschool.

Here's how it happened.

"I had spent a lot of time looking at job training programs," says James Heckman. He's at the University of Chicago. "Anybody who looks at that evidence knows that the [job training] programs we've had in place to date have not been that effective."

Heckman's work on job training goes back to the 80s when he was hired to evaluate some programs put in place by the Reagan administration. He became interested in low-skilled young adults who did not have high school diplomas. He wanted to know if job-training programs could help them get them the skills they needed to compete in the economy. And the results were miserable. "We have a lot of [people] who are simply not getting very much out of any of these programs," he says.

He thought maybe the problem was their lack of basic academic skills. Maybe they were tripped up in job training because they never learned the stuff they were supposed to learn in school. So he started looking at programs that focus on academic skills, literacy and remediation programs. And he got really interested in the GED.

The GED is a high school equivalency certificate that a high school dropout can earn to certify that he or she is "equivalent" to a high school graduate. To get a GED, you must pass a series of tests. These tests measure

cognitive ability - how well you can summarize ideas, distinguish facts from hypotheses, synthesize information, draw conclusions, things like that.

To prepare for these tests, people usually take classes. Heckman decided to visit some of these classes to see “where the miracle could be wrought.” It was hard for him to believe that a high school dropout could simply take a class for six weeks and suddenly be “the same” as a high school graduate in terms of cognitive skills. Could someone really master what they were supposed to learn in high school in just six weeks?

Heckman dug into the data on the GED, and he discovered something that surprised him. If you compare people who pass GED tests with people who graduate from high school but do not go on to college, you find that their cognitive skill levels are remarkably similar. In other words, high school dropouts who pass GED tests are just as “smart” as people who just get high school degrees.

This was interesting, so he kept digging, and he came upon another discovery: While people who earn GEDs and people who just graduate from high school are equal in terms of “smarts,” people who earn high school degrees earn more money. One reason may be that employers put a higher value on the high school diploma than the GED. But Heckman thinks it’s more than that. He thinks high school graduates have something that dropouts don’t have.

“GED recipients are the ‘wise guys’ who cannot finish anything,” [writes](#) Heckman. “They quit the jobs and marriages they start at much greater rates than ordinary high school graduates.”

He says GED recipients lack a set of skills that are crucial to succeeding in the workplace, and in life - and these are not the skills that tests like the GED, or IQ tests, are designed to measure.

Heckman calls them “non-cognitive skills.” They are less a set of skills than a collection of traits and abilities that are not about how much you know or how fast you think.

“In an earlier time, these traits were part of what was called ‘character,’” Heckman writes in a [recent paper](#). They are things like motivation, sociability, the ability to work with others, the ability to focus on tasks, self-regulation, self-esteem, even health, and mental health.

These things “all matter,” he writes. Most branches of the US military recognize this in their recruiting strategies: “Until the recent war in Iraq, the armed forces did not generally accept GED recipients because of their poor performance in the military.” The military needs people who are motivated to work hard and know how to get along with other people. That’s not the same as being “smart.”

But American education public policy continues to focus almost exclusively on cognitive test scores.

“No Child Left Behind, the whole emphasis on cognitive skill testing, is insane,” says Heckman. “It’s really misdirected.”

But an education idea Jim Heckman can really get behind is preschool. More specifically, the Perry Preschool.

The way Heckman found out about Perry is an interesting story. He read about it in *The Bell Curve*. You probably remember that book. It was published in 1994 and remains to this day one of the more controversial books of the late 20th century.

*The Bell Curve* argued that intelligence really matters, that how people do in life is primarily a function of how smart they are. It was similar to the argument that motivated David Weikart to set up the Perry Preschool: IQ matters, it never changes. And white people are smarter than black people.

“The average white person tests higher than about 84 percent of the population of blacks,” wrote the authors of *The Bell Curve*.

It’s the part about race that inflamed the nation. The book predicted a future in which knowledge would become so important that a mostly white “cognitive elite” would essentially have to take over the world - though they were pretty much running it already, the authors pointed out. And in this future world where “below-average cognitive ability is increasingly a handicap,” those who were not so smart might have to be sent to live on reservations - literally.

It was a bleak view of the future. And Jim Heckman just couldn’t accept it. So he set out to find another option. He started by reading the Perry Preschool Study, mentioned and quickly dismissed in *The Bell Curve*.

“No significant difference in IQ,” wrote the authors. “Fadeout again.”

But Heckman thought it was interesting that a guy back in the 60s thought preschool could raise IQ.

“So I started reading Perry,” he says. And he was hooked.

“It’s true that IQ wasn’t raised by the study,” he says. “But it is true that achievement was. And I thought that was amazing.”

Soon everything started to click. His work on job-training programs and the GED, and now this Perry study - they were all pointing in the same direction. It’s not all about “smarts.” There’s something else - something in addition to intelligence - that helps people succeed.

Heckman published his [first paper](#) about the Perry results in an obscure Italian journal of economics. It was March of 2000. A few months later he won a Nobel Prize in Economics for some earlier work. And suddenly everyone was reading his papers. And a lot of economists wanted to know more about the Perry Preschool



## Part 10: A New Movement for Preschool

In the fall of 2000, when James Heckman received his Nobel Prize, a new movement for preschool was already underway.

The leaders of this movement wanted it to be different from the movement that had propelled the invention of preschool 40 years earlier.

The original movement was closely associated with civil rights, the War on Poverty, advocacy, political action, the liberal left. Depending on your point of view, those are mostly positive associations - or negative ones. But preschool had some new advocates, who wanted to sell the idea to a bigger, broader audience. They wanted massive expansion, enough money and enough preschools so that every American child could go. They wanted to make pre-kindergarten the new grade in school.

What propelled this movement was research.

“There’s no other education issue that has such a strong foundation in research,” says Libby Doggett. She is deputy director of the [Pew Center on the States](#), an organization funded by the Pew Charitable Trusts, one of America’s wealthiest foundations - and now one of the nation’s biggest advocates for preschool.

Here’s how it happened. Pew has a long history of investing in education reform. But back in 2000 they decided to reevaluate what they were doing in this area, step back and see whether their money was being spent in the most effective way.

**They wanted evidence. What’s proven in education, what works best?**

And the overwhelming and obvious answer was preschool.

It's not just Perry. By this time there was a mountain of evidence - [hundreds of studies](#) - and the evidence is patently clear: children get big benefits from early education.

And so Pew decided to launch an effort to expand preschool so all 3- and 4-year-olds could go, and to use all the research evidence to make their case.

That's what made this effort different from the 60s. Back then preschool was a cause, motivated by beliefs and dreams. The preschool pioneers hoped preschool would work. Now we know it does.

And so the new movement would be based on scientific evidence - cold, hard facts.

The Pew Charitable Trusts invested millions of dollars to build a new advocacy infrastructure to get the message out about the value of preschool. Other foundations joined them.

They created an organization called [Pre-K Now](#) that advocates for the expansion of preschool programs. They helped start the [National Institute for Early Education Research](#) where economist Steven Barnett works. NIEER has become a kind of clearinghouse for facts and information about preschool - things no one knew before.

Like how many children go to preschool, what kinds of programs they go to, whether those programs are any good.

The first time NIEER collected this data was 2002. Back then, NIEER estimated states were spending a total of about \$2.4 billion on preschool.

Just [five years later](#), states spent nearly twice that amount: \$4.6 billion dollars. And more than 80 percent of American 4-year-olds were enrolled in some kind of preschool program.

It's one of the fastest expansions of public education ever in the United States.

And it's happening not just because of the money Pew and other foundations poured into the effort. Something else happened - something more powerful. A guy named Art Rolnick wrote a paper.

## Part 11: An Accident of History

Arthur Rolnick's entrance into the debate about preschool was kind of an accident.

Rolnick is an expert on pre-Civil War banking. He's also a senior vice president and director of research at the Federal Reserve Bank of Minneapolis. Part of his job is to go to community meetings, to stay in touch with the people in his region.

In 2002 he went to a community meeting where the executive director of an organization called [Ready for K](#) was giving a speech.

"[She] was making a pitch for more money for early childhood development, basically making a moral argument, that 'it's the right thing to do,'" he says. "And I naively raised my hand and said I thought that argument wasn't going to take you very far."

Rolnick says moral arguments aren't enough. To survive, every good idea needs an economic argument. And he thought maybe there was an economic argument to be made for preschool. So he offered to do some research, see what he could find.

Two pieces of background here:

Rolnick knew a bit about the Perry Study already. His fellow economist Jim Heckman was writing about it, drumming up interest among economists.

And Rolnick was looking for a good idea, some worthy public program that made economic sense.

Because cities and states were spending a lot of money on something he thought was a really bad idea: huge tax breaks to lure companies and sports teams to their region.

“It was basically an economic bidding war,” he says. “One city, one state trying to rob from another by offering a variety of forms of subsidy.”

Private companies and team owners were getting their hands on huge amounts of public money to build new manufacturing facilities and fancy stadiums. He says taxpayers were getting virtually no return on their investment. To his mind, the public was being robbed.

But when he made the argument that cities and states should not spend money on tax breaks and subsidies for private companies and professional sports teams, people would ask him: “Well if that’s not the right way, if that’s counter-productive, what should cities and states be doing?”

And he didn’t really have an answer.

Until he dug into the data on the Perry Preschool, and came up with gold.

He wasn’t the first to do this, of course. Economist Steven Barnett had done that cost-benefit analysis back in the 80s, and the Perry researchers continued to update it over the years as new data came in.

Rolnick read the cost-benefit reports. He was impressed. But he thought something was missing.

“Nobody had asked a very basic question that businesspeople would ask or economists would ask,” he says. “In today’s dollars, Perry Preschool invested \$10,000 a year for two years - so that’s a \$20,000 investment. And we asked a very basic question: What was the return on the investment?” (The dollar amounts Rolnick cites are rounded and adjusted for inflation into 2008 dollars.)

He was looking for the kind of number you see on a 401k statement. What are you making every year off your investment? Are you making 1 percent? 10 percent? He and a colleague decided to calculate what that number would be for the Perry Preschool. They examined lots of data and came up with a figure: 16 percent.

“That’s well above what you can get in the stock market,” Rolnick says. “That’s well above what most venture capitalists would view as a very high rate of return. And we would argue it’s a very safe rate of return, that [money] invested in high-quality [preschool] is almost a guaranteed return.”

Rolnick and his colleague published a [paper](#) about their findings in a regional Federal Reserve newsletter in 2003. They argued preschool should be seen as economic development.

“Can new stadiums offer a comparable public return on investment?” they asked in their paper. “How does a new stadium reduce crime, increase earnings and potentially break a chain of poverty?”

Their paper was like a shot heard round the world. It was reprinted in a national Fed publication and became the impetus for a big conference with some of the nation’s leading economists and businesspeople.

Six years later, Rolnick says he still gets calls about preschool. He flies all over the world to tell people it’s the best thing money can buy.

And his paper transformed the preschool movement in the United States.

Ten years ago, a conference about the benefits of early childhood education would have attracted educators, social activists, a lot of women. Now, it’s a lot of men in suits.

And the best place to meet these new preschool advocates is the annual conference of an organization called [The Partnership for America’s Economic Success](#).

“Many people want to support children’s programs instinctively, but they need hard data,” says Partnership director Sara Watson. “So we were set up to collect that data and also to engage business leaders to become voices for children.”

Businesspeople like the logic of preschool. It’s more cost-effective to prevent problems than fix them, says Chicago businessman and philanthropist J.B. Pritzker.

“We do that in business,” Pritzker says. “We try to address the issues on the assembly line or in our service by addressing them early as possible. So [preschool] makes intuitive sense to businesspeople. And it turns out many businesspeople have tremendous influence in the political process.”

Indeed they do. And their support of early childhood education gets people’s attention.

“Most legislators are used to children’s advocates asking for investments in children,” says Watson. Politicians know who they are, what to expect. What they don’t expect is that when the lobbyist for the chamber of commerce comes in, he asks for the same thing: preschool. “That raises eyebrows,” she says.

And when lawmakers hear about that 16 percent return on investment, their eyebrows go up even higher.

“I think [preschool] is totally not a partisan issue and shouldn’t be,” says Dudley Goodlette, a Republican lawmaker from Florida. “It’s about educating our children. It’s about giving them a hand up early rather than a handout later.”

Goodlette has a special interest in preschool. As a former Republican lawmaker, he sponsored a bill that amended the Florida Constitution to make preschool a right. In Florida now, every 4-year-old has a constitutional right to attend preschool.

Preschool has become one of the most popular, most universally appealing education ideas around. Everyone loves preschool.

And they all want that Perry Preschool promise - a 16 percent return on investment. It just sounds so good: a big bang for the buck, a slam-dunk for the taxpayers.

But is it?

Will today’s preschools live up to the promise?

## Part 12: How People Learn

The Perry Preschool founders had some intuitions about what might help children learn.

They guessed - and they were right - that early intervention is key.

“The earlier we work with children, the greater opportunities we have to make a bigger difference in their lives,” says Lynda Hayes, a preschool expert affiliated with the [University of Florida](#).

Recent research shows that brain development is the result of an ongoing and complex interplay between a child’s mind and the environment he or she is in.

“Newborn infants are capable of discriminating the speech sounds of all the world’s languages,” [writes](#) Ross Thompson, a professor of psychology at the University of California. “But this potential is gradually lost as brain regions relevant to language become progressively organized to perceive the speech sounds of the language the child hears at home.”

That’s an amazing thing to think about. People are born ready to learn. But what they learn depends a lot on the opportunities they have to learn it, just as the preschool pioneers believed.

And something important is going on developmentally when children are 3 and 4 years old. It’s a critical time for learning. When children don’t go to preschool, huge opportunities to help them learn and develop are missed.

But the brain research suggests there may be a certain kind of preschool that works better than others.

For one thing, it appears that hands-on learning is really important - just as the Perry Preschool founders guessed. They were not just inventing school for 3- and 4-year-olds, they were inventing a new kind of school where learning

was driven by children discovering things for themselves, not listening to lessons all day.

And it turns out that this works.

“The developing brain is not an empty vessel, passively waiting to be filled with knowledge, but rather an active organ that grows through its own activity,” writes Thompson in the brief about brain development. “The experiences that promote growth are those that provoke the brain’s activity, often through the child’s interest and engagement.”

Based on this finding, Thompson recommends “preschools ... embrace educational approaches that encourage child-oriented discovery over adult-initiated instruction.”

Something else that’s important for young children is play. In this era, when test results matter so much, schools face lots of pressure to focus on instruction, to teach and teach and teach. The heat is really on in the upper grades, but kindergarten teachers feel this pressure too.

“Kindergarten has changed radically in the last two decades,” write the authors of a [report](#) about the importance of play. “Children now spend far more time being taught and tested on literacy and math skills than they do learning through play and exploration, exercising their bodies, and using their imaginations. Many kindergartens use highly prescriptive curricula geared to new state standards and linked to standardized tests.”

This pressure to focus on skills is being felt by preschool teachers now too. Some say there’s not much time left for playing. Learning is more important.

But research shows that young children learn best through play.

“Play is where children discover ideas, experiences and concepts and think about them and their consequences. This is where literacy and learning really begins,” says [Anne Haas Dyson](#), a professor of curriculum and instruction at the University of Illinois.

And children talk while they play. They talk to themselves, to their playmates. And talking - lots of talking - matters a lot. Language and vocabulary are the brain’s building blocks for learning.

“If you think about it, vocabulary is your store of concepts for understanding and interpreting the world and expressing yourself,” says Steven Barnett at the National Institute for Early Education Research. “The bigger



that is the earlier, the better off you're going to be in terms of your capacity as an active learner.”

And research shows that children who do not develop strong oral language skills in the early years find it difficult to keep pace with their peers. They [fall behind](#) even before they start school, and they stay behind.

In this area, teachers can really make a difference.

“Children whose teachers talk with them a lot (and many don't!) have higher scores on tests of both verbal and general ability,” write the authors of a [comprehensive national report](#) about the science of early childhood development called *From Neurons to Neighborhoods*. “This is especially the case when the talking consists of the teacher encouraging, questioning, and guiding the children's exploration and learning.”

So there is something about how teachers talk with children that really matters.

In fact, the quality of interactions between teachers and children makes more of a difference than anything else when it comes to the gains children get from preschool, [according](#) to Robert Pianta. He's dean of the Curry School of Education at the University of Virginia and runs the [Center for the Advanced Study of Teaching and Learning](#) there.

Here's an example of what a good, supportive interaction between a teacher and a child looks like, according to Pianta.

“If you were to sit with a teacher of 4-year-olds in a classroom during circle time or during a lesson, you would see the teacher reading each individual child's cues for help and support and responding in a timely and warm fashion to those cues. And that can be different for different kids. So it might be the kid on the edge of the group requires the teacher to lean over and just put her arm around him while he's starting to wiggle a little bit to maintain his attention in the activity and help him be able to focus.”

Pianta says that a child receiving this kind of support is not only more likely to pay attention, but is also “more likely to see that teacher as a source of support under other circumstances.”

And that makes a difference for children. They are building an early impression of what school is all about. They are figuring out who to trust, where they can go for guidance and help.

Something else Pianta and his colleagues look for when they observe classrooms is how teachers ask questions. Are they looking for yes/no answers—that's right, this is wrong—or are teachers asking questions to find out what a child is thinking, to elicit their ideas? “Does the teacher use [an interaction] as an opportunity to stretch the child, have the child practice something new that might be a little bit hard for him?” says Pianta.

And this is where learning really happens, in these interactions where a teacher pushes and challenges a child in a way that is motivating and exciting.

Pianta says these kinds of interactions between teachers and children in preschool classrooms occur unevenly. “But when they happen consistently we see children on average making significantly greater gains than children in classrooms where those features are not present.”

They do better on standardized assessments of early math and literacy skills. They also show gains on measures of social competence. And they're [less likely](#) to be held back in kindergarten.

Pianta's research shows these gains last through kindergarten; it's not clear yet if they last longer than that. But Pianta is convinced if children continued in classrooms where their interactions with teachers were instructionally and emotionally supportive, they would continue to thrive, and do well on tests too.

And Pianta says there's not enough focus on providing teachers with training to help them understand how important interactions are, and what kinds of interactions really help children learn.

As preschool expands and states spend more money, everyone is focusing on typical quality indicators like teacher education level and class size. These things are easy to quantify, but Pianta says they matter much less.

The bottom line is that when children succeed in school, it's because of teachers. More specifically, it's because of the way teachers talk to children and how that supports their intellectual and emotional development.

And it's this connection between intellectual and emotional development that is key.

Back when the Perry Preschool was starting up, there was great debate about whether it was appropriate to focus on intellectual and cognitive development with 3- and 4-year-olds. Many people thought that was too much to ask of children so young; preschools should focus on social and emotional development only. Children could wait to learn the alphabet in kindergarten.

At Perry, they pushed the envelope. Their goal was for children to learn a lot of language, to be ready for math and reading. The Perry teachers weren't going to shy away from teaching the alphabet. Their students needed to know.

But “we had a common understanding that we were going to do that within the context of a nurturing atmosphere,” says former Perry teacher Evelyn Moore.

Her fellow teacher Louise Derman-Sparks agrees. “When I think back we did do a lot of encouraging of social development,” she says. “Because that’s what we knew.”

Focusing on social and emotional skills with 3- and 4-year-olds was a given back then. Teaching cognitive skills was radical.

Now cognitive skills are becoming more and more central. And some early education experts are concerned social and emotional skills are being left behind.

“I think there is worry,” [says](#) Lynda Hayes, a preschool expert at the P.K. Yonge Developmental Research School at the University of Florida. As preschools expand rapidly, many of them inside public schools, she says there’s a conversation going on among “folks in early childhood education” about how to make sure preschool doesn’t become the new kindergarten. She says preschools must “continue to attend to those [social and emotional] aspects of growth in childhood.”

And the brain research is clear here too. Cognitive development and social-emotional development are intertwined. It’s a mistake to focus on one over the other, [according to the committee of experts](#) that reviewed the science of early childhood development for the landmark book *From Neurons to Neighborhoods*.

“The elements of early intervention programs that enhance social and emotional development are just as important as the components that enhance linguistic and cognitive competence,” the authors conclude. “Some of the strongest long-term impacts of successful interventions have been documented in the domains of social adjustment.”

And the Perry Preschool is an example.

## Part 13: So What About IQ?

The preschool pioneers back in the 60s wanted to figure out a way to help poor, African American children do better in school.

They began by focusing on IQ scores. They did this because IQ scores were so important back then. Children were tested and sorted early based on IQ. Children with low scores were in many ways doomed to failure from the start.

So what about IQ? What do we know now?

One thing we know is the argument about whether intelligence is the result of genes or environment is dead.

“The long-standing debate about the importance of nature versus nurture, considered as independent influences, is overly simplistic and scientifically obsolete,” according to the experts in the book [From Neurons to Neighborhoods](#).

“Scientists have shifted their focus to take account of the fact that genetic and environmental influences work together in dynamic ways over the course of development,” the authors continue. “The most important questions now concern how environments influence the expression of genes and how genetic makeup, combined with children’s previous experiences, affects their ongoing interactions with their environments during the early years and beyond.”

It’s not that genes play no role. Scientists say some people are likely born “smarter” than others - they have brains that work faster. But what scientists are learning is that environmental conditions almost completely overwhelm the impact of genes. Environment matters more than genetics - especially if you grow up in a low-income home.

University of Virginia psychology professor Eric Turkheimer demonstrated this phenomenon in a landmark [study](#) published in 2003. What he found is

that the poorer a child's family, the more that environment affects his or her IQ score. It's the opposite with high-income children. Environment has very little effect on their IQ scores. It's almost all about genetics with children in high-income families.

In other words, children from high-income homes get the opportunity to fully express their genetic potential to be smart. But something about low-income environments ends up limiting children's ability to express that potential. Their intelligence, their cognitive capacity, is suppressed by the conditions they grow up in.

What this seems to mean is that while good environments may not necessarily make people "smarter," adverse environments can quash a child's chances to become "smart." A poor environment, and poor schools, might also quash a child's desire to try - to try in school, to try in life - and to try on an IQ test. If there are few rewards for doing well, why exert the effort?

And it turns out incentives make a big difference.

"If I give a disadvantaged kid some M and Ms for each correct answer on an IQ test, I can close big [test score] gaps between advantaged and disadvantaged kids," says economist James Heckman.

IQ tests, and other important tests people take to qualify for the military, for college, for graduate school, these tests are time consuming, and hard. You need a reason to do well; you must be highly motivated.

"Now you're getting into something really deep," says Heckman. "How is it that motivation is affected? What causes motivation? And that's something that I think we still don't really understand."

What he does think is pretty clear: The Perry Preschool program "affected the motivations of the children."

But exactly how and why that happened - he's still trying to figure that out. Heckman is now working with psychologists - something he never imagined - and together they are poring over the Perry data, trying to understand how the preschool may have affected the development of children's "non-cognitive" abilities.

So in the beginning it was all about IQ, smarts, cognition. But it turns out maybe that wasn't it. There was something else those Perry Preschool teachers did. They helped children develop some other set of abilities - crucial abilities - that enabled them to go on and do better in school, and then in life.

And here's the twist. As it turns out, those abilities - those "non-cognitive" skills - may actually contribute to the development of intelligence itself.

A growing body of [evidence](#) from psychology suggests the development of cognitive ability is associated with personality traits, defined by psychologists as "patterns of thought, feelings and behavior."

"What we're coming to learn," says Heckman, "is that traits of young children - like openness to experience, lack of shyness, some agreeableness even - will make the child much more ready to explore the environment."

And here's the kicker. "The act of exploration builds skills; it creates mental capacities, it gives you facts."

It's a dynamic process, says Heckman; the desire to learn, the drive, can't really be separated from learning itself, the process of becoming capable and intelligent.

"So if you discourage a child from learning," says Heckman, "if you end up with a very negative learning environment, that can actually shut down the learning process. On the other hand, success in learning makes individuals more successful in other aspects, maybe more willing to go out and venture in life."

It's sort of like the commitment and achievement loop that Perry researcher Larry Schweinhart talked about. The more committed you are to something, the more you do it. The more you do it, the better you get at it. The better you get, the more committed you are. And this is how people learn. This is how they build knowledge, and it is also how they become "smart."

So why "fadeout"? Why did the Perry children lose the initial gains on those IQ tests?

Schweinhart's answer: school.

The Perry Preschool children went on to poor, segregated public schools. They did not get the kind of attention they got at the preschool. It was not the same kind of learning environment where play and exploration were encouraged and rewarded.

Teacher Louise Derman-Sparks says the preschool children sometimes came back to visit after they'd moved on to kindergarten. And they would complain. They didn't like kindergarten. They had to sit down and be quiet. The teachers were strict. Derman-Sparks remembers one boy in particular:

“He came down every day because he was so bored [in kindergarten]. He said it was more interesting to be in the preschool and that’s what he wanted to do.”

And he was confused. He didn’t understand why kindergarten was so different.

“You know, when he wants to get something he can’t get [it], the teacher has to tell him [it’s OK],” Derman-Sparks recalls the boy telling her. “[Kindergarten] was a totally teacher-directed thing and he just didn’t get it.”

Derman-Sparks says eventually she had to tell him he couldn’t come down to the preschool anymore. He had to get used to kindergarten.

“And it broke my heart to have to tell him that,” she remembers.

She says she still thinks about that boy, wonders how he ended up doing.

It doesn’t surprise Larry Schweinhart that the Perry children were bored in school. And it doesn’t surprise him that the initial IQ gains faded. Schools weren’t really trying to raise IQ. They were teaching facts and information and coping with all the problems children seemed to be having because they had low IQs.

“I sometimes think of intelligence or at least intellectual performance as it’s measured on tests as being sort of like skin temperature as opposed to body temperature,” says Schweinhart. “Body temperature is supposed to be 98.6 degrees Fahrenheit all the time. If it’s not that, then you’re sick.”

On the other hand “skin temperature varies with your environment,” he says. “If you’re in a cold place, your skin temperature is cold. If you’re in a hot place, your skin temperature gets warm. You’re not ill in any way, that’s just the way it works.”

IQ is like skin temperature, he says. It depends on your environment. If you’re in an intellectually stimulating environment, your measured intelligence can go up. “If you’re in an environment that doesn’t do that kind of stimulation, it’ll go back down,” he says.

It’s not clear if this interpretation squares with the research by Eric Turkheimer. Is it that the rich, stimulating environment of the Perry Preschool actually raised children’s intelligence? Or is it that a less stimulating school environment later on dampened it, snuffed out their potential?

The answer to this question may have more to do with IQ tests themselves. What does an IQ test measure? What does an IQ score really say about how

“smart” someone is? Despite all of the ways that IQ has been used and debated and promoted and scorned, no one has yet provided a definition of IQ that’s much more than “the score you get on an IQ test.”

However, it is true that the IQ scores of the Perry Preschool children went up initially. So did the scores of children in Head Start. Something happened.

But Edward Zigler, one of the early leaders of Head Start, thinks those IQ gains were misleading. About the study he published with Earl Butterfield in 1968, Zigler writes in his memoir:

“[We]... concluded that the 10-point gain in IQ we observed among poor children attending a Head Start program had not resulted from an actual improvement in cognitive processes, but rather from motivational factors, such as greater expectancy of success.”

That does not mean those IQ gains were insignificant. Whatever enables a child to do well on an IQ test - or to do better than he would have - may in fact be the very things that help children do well in school: Confidence, motivation, a willingness to try.

“In short,” writes Zigler, “while the Head Start experience had not made the children more intelligent, it had helped them use the intelligence they had.”

This is really important. The question of how “smart” someone is turns out to be a flawed question. Intelligence is not a quantity, it’s a process. A more accurate and useful way to think about intelligence is to consider the opportunities people have to develop and express their intelligence, or not.

This does not mean that knowing the kinds of things that get asked on IQ tests doesn’t matter. When it comes to doing well in school, knowing stuff matters.

“By the time they were 5 and in kindergarten, the children who went to the [Perry] preschool program really did know more,” says Steven Barnett of the National Institute for Early Education research. “They knew more words, they had a bigger vocabulary.” They knew more about math. They knew more about “the way the world worked in general.”

And as a result, says Barnett, they did better in school. “And because they did better in school, school rewarded them for that. And so they liked school more.”

“Success is very motivating,” says Lynda Hayes at the University of Florida.



“Another way to talk about it,” says Larry Schweinhart, “[is] do you go down a positive path or a negative path? And more kids who went to the preschool program started down a positive path.”

This is one explanation for what happened to the Perry Preschool children. It’s the path theory for how preschool works. The Perry preschool children got off to a better start in school.

“And meanwhile you have a control group that comes into school very unprepared,” says Steven Barnett. He’s talking about the children who didn’t go to preschool, the comparison group in the Perry study.

“They don’t know how to behave. They don’t know as many things. Even if they learn a lot, they may still be told that they’re a failure,” he says.

And that’s often when children start acting out. They get frustrated, humiliated. They express it in bad behavior. “And now I’m being told I’m a bad kid,” says Barnett.

That starts a vicious cycle, says Barnett. “And I think that what happens is, as they get older, the two groups spin further and further away from each other because of the continued productivity - or counter-productivity - of where they started out to begin with.”

This path theory about how preschool works has been widely accepted by experts for years. And new knowledge about how people learn and how intelligence develops gives credence to this theory. Learning is a cumulative process. “Skill begets skill” is the phrase economist Jim Heckman uses to describe it.

But it’s not all about acquiring academic knowledge and cognitive skill.

Because “on top of that [cognitive process] the social and emotional skills are feeding in. So if a child is motivated and the child has a secure environment and the child has enrichment in terms of its environment, [the child] is going to be in a stronger position to acquire those skills,” Heckman says.

Now, for a long time, economists weren’t thinking about all of this stuff. How people become smart and skilled wasn’t really their area. Leave that to the psychologists and the educators.

What economists cared about was the result of education, the diploma people get at the end. This is what really mattered. And it does matter. The

more diplomas you have, the more money you make. Economic success has a lot to do with education level.

But it turns out this is not the case with the Perry children.

Overall, the children who went to preschool were more likely to graduate from high school, and more likely to go to college.

If they were girls.

The boys who went to the preschool program were no more likely to graduate from high school than the boys who did not go to preschool.

Preschool had absolutely no effect on educational attainment for the boys.

But the boys who went to preschool still did better in life.

They were more likely to have jobs, they made more money, and they were much less likely to get in trouble with the law.

So one idea about preschool is that it gets children off to a good start in school, thereby increasing their chances of graduating, thus improving their chances in life.

But the boys who went to Perry make you think: maybe there was something about the experience of going to that preschool that changed them in some way.

A lot of experts recoil at the notion that preschool works like this. It's not an inoculation, they say. "We need to invest in our youth all the way through [school]," says Lynda Hayes at the University of Florida. Preschool is the beginning of a process, a first step to a more positive schooling experience.

One reason Hayes doesn't like the inoculation analogy is that it can put preschool in a pickle, the way IQ did. If the initial gains children make in preschool don't last, then it's the preschool's fault. And the schools they go to after preschool end up off the hook.

And what preschool supporters have been saying for years is that preschool can't do it alone. You can't put a child in a great preschool and then send that child to bad schools and expect everything to be fine.

**Preschool can't work miracles.**

But maybe the Perry Preschool did work some small miracle for the children who went there. Maybe they got something from that experience that they held on to, something that helped them go on to do better in life.

## Part 14: The Perry Children Now

There is only one person who has talked to all of the Perry Preschool participants: Van Loggins.

He was hired to do the study interviews when the participants were 19, 27 and 40 years old. He says many of them have fond memories of the preschool. When asked what they remember about it, they say things like they learned to count and learned their colors.

“And what they really remember - who was teaching it,” says Loggins. “You know, you would hear certain names come up, of a teacher that they really liked, and they took that with them.”

And did they ever say that preschool changed their lives?

“Was it a one-to-one correlation of - you think you ended up having a doctorate 'cause you went to preschool?” he says. “Ah, nobody’s going to tell you that. But they’ll tell you it didn’t hurt. They will definitely tell you that.”

One of the study participants apparently did get a Ph.D. But he was the exception, not the rule.

The children who went to the Perry Preschool ended up doing better on average than their peers in many surprising and significant ways. But all of the children in the study started out in very poor families in a segregated world where just about everything was stacked against them.

And amid all of the excitement about the Perry Preschool, it’s easy to lose sight of this reality. The Perry Preschool did not solve the problems of poverty. The children did not all go on to live stable middle-class lives where the benefits of a good education buffered them and the twin obstacles of poverty and discrimination disappeared.

An improved life is not the same as a good one.

For example, while the people who went to the preschool were more likely to be employed, at the age of 40, about a quarter of them didn't have jobs.

And yes, at age 40 they were making more money - but their median income was about \$21,000 a year compared to \$15,000 a year for their peers who did not go to preschool.

And while the preschool group as a whole did get more education, only 9 percent of them had a college degree by the time they were 40.

A lot of the excitement about the Perry Preschool is about the amount of money it saved society - children were not as likely to end up in special education, they were not as likely to go to prison. But is that good enough?

What seems clear from the Perry Study is that preschool - even when it's really, really good - still isn't enough to level the playing field for poor children.

**Preschool can't change the world.**

But it helps. And what the researchers would love to know is whether the children of the preschool participants end up doing better than their parents.

Perhaps it will be the American Dream, in incremental steps, each generation doing better than the next, and so on and so on.

The researchers did collect some data on the children of the study participants, but it's hard for them to draw many conclusions. Some of the study participants don't have children, some have older children, others have kids who are still little. So when you take all that into account, you end up with pretty small sample sizes and comparing the two groups of children with each other is tough.

One thing the Perry researchers do know is that men who went to the preschool program were significantly more likely to be involved in raising their children. This is meaningful. Research shows children do better when they have relationships with both of their parents. It's an important social and economic outcome of the study.

The data on educational outcomes is mixed. The children of the people who went to the preschool program were less likely than the children of the no-preschool group to repeat a grade in school. But grade retention was still pretty high. Among the children of the preschool group, more than 30 percent were held back a grade at some point during their school career.

And in terms of getting a high school diploma, the news is not good. There was no difference between the children of the preschool group and the children

of the no-preschool group. Half of the people - in both groups - did not graduate from high school.

That stunning statistic seems to suggest there may be something about school itself that is still not working for many students.

Fifty years ago, when Perry founder David Weikart noticed that so many poor, African American children were doing badly in school his response was: Change school.

And so he invented a new kind of school.

But it seems schools still have not changed enough.

## Part 15: Preschool Today

The momentum for preschool continues to build. Even in the down economy, many states are expanding their pre-K programs. Business leaders and economists continue to tout the benefits. Lawmakers are impressed with the possibilities.

And there's no doubt that when children go to high-quality preschool programs like Perry, they get a lot out of it. It's worth the money.

But a 16 percent return on investment? Since Art Rolnick wrote his [paper](#), that's what everyone wants.

And we're not going to get that, says Bob Pianta at the University of Virginia.

Just at the level of basic things that can be quantified, today's preschools fall woefully short.

The Perry Preschool had four teachers for 25 children.

A more typical ratio now is two teachers for 20 children. And that's in the nation's better preschools. In some preschools there are more children, and fewer adults. [Some states](#) don't even set maximums on the number of students in a preschool class. And Pianta says that's a problem because it's interactions between teachers and students that make the biggest difference. The more children in a class, the less time a teacher has to interact with each child individually.

Another way to compare Perry to preschools today is to look at spending. The Perry Preschool cost about \$10,000 a year per child in today's dollars. [State spending](#) on preschool now is about \$4,000 per child. And while money does not guarantee quality, most experts will tell you that quality is impossible without it.

Education and training of teachers is another way to judge the quality of a preschool. All of the teachers at the Perry Preschool had graduate degrees and specific training in early childhood development. A lot of preschool teachers today get very little training. Many of them don't have college degrees. Wages for preschool teachers in many states are more on par with what babysitters and day-care providers earn than with salaries paid to public school teachers.

You add all this up, and it's not a positive picture, says Bob Pianta. According to his research, about two-thirds of all 3- and 4-year-olds are in some kind of preschool program now. But he estimates only about 30 percent of them go to a preschool he would consider high-quality.

"The vast majority are in a kind of environment that I consider to be more or less passive with respect to [child] development," he says. "So kids may come in, it's a reasonable place for kids to be hanging out. But that is not the same as spending time with an adult who's oriented toward helping you learn."

When there aren't enough teachers, when there isn't enough money, when preschool directors and teachers do not have training in early childhood development, sending a child to preschool may not be worth it.

"The growing enrollment in state pre-K... is valuable to children and the nation only if program quality is high enough to produce meaningful gains in learning and development," according to a [report](#) by the National Institute for Early Education Research. "There are still many preschool education programs across the country that are of poor or mediocre quality," they write.

And there's some troubling [evidence](#) that poor, African American children are less likely to go to good preschools than higher-income, white children are.

So now that everyone knows how valuable preschool can be, it's wealthy, white children who may be getting the most benefits.

And poor African American children may be getting left behind once more.



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