

Explanation 2

Child Prodigies

- A. It seems normal when Nguyen Ngoc Truong Son wanted to play chess with his parents. However, it was unusual when he revealed that he already knew how to play-before anyone taught him. Apparently the two-year-old had learned all of the rules by watching his parents. After only one month of playing with them, he was winning all of the games. By age 4, he was competing in national tournaments. By age 12, he was Vietnam's youngest champion.
- B. Another two-year-old child, Jay Greenberg, likewise surprised his parents by drawing pictures of musical instruments that he had never seen. They soon discovered that Jay “heard music in his head.” He began to compose music at age 3. By age 10, he was attending the prestigious Julliard Conservatory in New York, composing full symphonies. Jay was noted not only for the quality of his musical work, but also the speed at which he was able to produce it. That is, while talented professional composers normally write five or six symphonies in a lifetime, Jay wrote five by the age of 12.
- C. A third young child, Abigail Sin, was first introduced to piano lessons at age 5 and had what her tutor called an “unstoppable urge to master they keyboard.” She became Singapore’s most celebrated pianist by age 10.
- D. Child prodigies such as these are a mystery to experts and non-experts alike. On the one hand, they attract praise and attention from everyone they meet; on the other hand, they attract criticism and they find it difficult to fit in with the rest of the world.
- E. Child prodigies are highly intelligent, but this is not the only factor that sets them apart. They are considered prodigies because of their exceptional ability in one domain, or area. Experts define prodigy as “a young child who displays mastery of a field that is usually undertaken by adults.” Child prodigies usually appear in structured areas such as language, math, drawing, chess, and music. They are not as likely to appear in less structured domains such as medicine, law, or creative writing, areas that require experience.
- F. Child prodigies can focus their attention for long periods of time, concentrating on tasks that would bore other children of the same age. Abigail Sin practiced piano at least 25 hours a week. Similarly, two-year-old Nguyen Ngoc Truong Son had the concentration to play chess for hours at a time. The distinction of “prodigy” thus goes beyond mere intelligence. For explanations, experts look in two directions: nature, the child's unique biology, and nurture, the child's environment.
- G. When researchers look to *nature* to explain child prodigies, they study innate or inborn qualities. For example, they look at whether the brain structure of a prodigy is different from that of a child with average intelligence. Technology is a great help in answering this question. For instance, scientists utilize imaging technology to see the amount of activity in different parts of the brain. These brain scans reveal that the frontal lobe of a prodigy's brain is very active, unlike children with average intelligence doing the same tasks. Their frontal lobes are virtually inactive. Science has proven that the frontal lobe of the brain controls many aspects of thought and concentration. This may explain how prodigies can focus on a task, solve complex problems, and learn quickly.
- H. When researchers look to *nurture* to explain child prodigies, they focus on the child's environment instead of the child’s biology. The most important factor on the nurture side is the parents. Raising a child prodigy is extremely challenging. It requires considerable patience, creativity, and resourcefulness.

- I. Some parents are delighted by the extraordinary abilities of their children. They make use of all the resources they have or can find to support them. For example, Jay Greenberg's parents bought their 2-year-old son a cello when he requested it and arranged for music lessons.
- J. Other parents are not so supportive of their child prodigy. On the contrary, some parents even see their offspring's gifts as a way to draw attention to themselves and their own interests. Boris Sidis, for example, was a well-known scientist with strong opinions about making the most of one's intelligence and about raising children. When his son Billy was born, Boris saw the child as an opportunity to test his theories.
- K. From Billy's birth, it was clear that he was an exceptional child. His parents utilized every opportunity to teach him language, math, science, and logic. Boris was very poor, but he used his limited resources to buy or acquire toys and books for the young genius. Billy Sidis spoke five languages at age 5. He passed entry exams for MIT and Harvard Medical School at age 9 and was admitted to Harvard at age 11. He was considered a genius in mathematics, physics, and languages.
- L. Boris claimed that his methods of childrearing were responsible for his son's abilities and sought publicity. The press, in turn, focused more on the young Harvard student's odd personal life than on his accomplishments. It was soon clear that Billy was unprepared to relate to other people, function successfully in the real world, or manage the challenges of being different. After college, he lived an isolated life. Despite his intelligence, he died unemployed and in poverty.
- M. When people are unusual, they attract attention. In the case of child prodigies, the attention they receive is both positive and negative. It is positive because most people admire intelligence. It is negative because prodigies are very different from other people. They are a challenge for teachers, who expect 7-year-olds to prefer Batman to Beethoven. They are a challenge to parents, who want to help them but often lack the resources or find their needs and desires difficult to understand and meet. They present a challenge to scientists, who want to study them without further isolating them from normal society. And they challenge the world because they reveal the tendency that people have to reject those who are different from the norm.