

Moonwalking with Einstein: The Art and Science of Remembering Everything

By Joshua Foer

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Moonwalking with Einstein: The Art and Science of Remembering Everything takes readers on author Joshua Foer's journey to the U.S. Memory Championship. While having an average mind and no prior training, he goes from journalist to U.S. Memory champion in a year's time. He shares his remarkable experience through a scientific study of expertise and discusses how to best remember. Foer suggests that anyone can be a mental athlete with time and practice.

The book begins with a paragraph that is difficult to comprehend until the reader re-reads the book. The story begins at the 2006 U.S. Memory Championship when Foer is explaining his mental strategies to each playing card, showcasing how he placed it in his mind and how he was able to recall the card and suit. One year earlier, Foer asked a simple question, "Who is the smartest?"

Foer decided Ben Pridomore might not be the smartest individual but definitely the most interesting. Pridomore was able to memorize the order of a shuffled deck of playing cards in thirty-two seconds. Catching his interest, Foer had to experience it himself by attending the 2005 U.S. Memory Championship. As a journalist and bystander, Foer was intrigued by how normal looking the mental athletes appeared. They did not look much different from him but could perform amazing tasks of memorizing poems, decks of cards, photographs, names and numbers. During discussions, several mental athletes informed Foer that he could become a mental athlete too. In fact, one mental athlete advised him he could be on stage next year competing, if he trained. Skeptical, Foer decided he would train one hour a day, six days a week under mental athlete Ed and journal his experience.

Foer decided initially to be a subject in the experiment of how memory and learning process impacts the mind. He arrived on the campus of Florida State University (FSU) in Professor K. Anders Ericsson's office. Over the span of a few days, Ericsson's team put Foer through several mental pretests. Almost a year later, Foer returned to FSU for his post-tests. At this time, his results were shared. He improved in all tested areas. In fact, his digit span measuring doubled from an above-average 9 to a score of 18.

Foer does an excellent job explaining memory to the layperson and the working parts of the brain while providing up-to-date research to support his claims. He explains, "Memory is the most fundamental physiological level, it is a pattern of connection between those neurons. Every sensation that we remember, every thought that we think, transforms our brains by altering the connections within that vast network. A memory only pops directly into consciousness if it is cued by some other thought or perception—some other node in the nearly limitless interconnected web" (p. 34).

Foer takes readers on his adventure across the country, discovers the most forgetful man, meets a schoolteacher named Raemon Matthews, and shares memorization secrets with the "Rain Man." In California, Foer meets EP, the most forgetful man. EP has been diagnosed with two types of amnesia, anterograde and retrograde. EP lives in the present moment and can comprehend but not hold onto memories. He forgets what he is talking about when moving to the next subject. After a conversation with EP and watching him be tested by professor Larry Squire, Foer concludes that, while people may lose their memories, they are still capable of learning.

Next, Foer visits Matthew, a schoolteacher that teaches his students to learn using different methods. Matthew says, “You can’t have higher-level learning—you can’t analyze-without retrieving information. You can’t learn without memorizing and if done right, you can’t memorize without learning” (p. 195). Matthew is known for taking his students from Samuel Gompers Vocational High School in South Bronx to the U.S. Memory Championship every year. He thinks teaching them these methods will help them achieve great things in life and see this skill as their ticket out of a neighborhood where half of the students do not graduate.

One of his last expeditions before the 2006 Championship, Foer goes to Salt Lake City Utah where he meets Kim Peek, the “Rain Man.” Peek has read more than nine thousand books, reading at a rate of about ten seconds a page. Foer and Peek had conversations on how they both remember. Foer concludes that “maybe we all have remarkable capacities inside of us. If only we bothered ourselves to awaken them” (p. 236).

While Foer learned skills necessary to memorize numbers and poems, the most important lesson he learned from his experience was the importance of practice. Using focus, motivation and time, he was able to train his brain to better process and store information, and although Foer’s brain did not literally grow over the course of the year, he learned to more effectively use it. In his journey, Foer questions what his brain’s capabilities could be given the right approach and noted that practice and patience were successful elements of his training.

One concern with *Moonwalking with Einstein* was the thickness or depth of the book. While the book is not long in length, it is rich and powerful. A reader should stop every few pages to comprehend the author’s point before moving to the next concept. For example, Foer writes,

The principle underlying all memory techniques is that our brains don’t remember all types of information equally well. As exceptional as we are at remembering visual imagery we’re terrible at remembering other kinds of information, like lists of words or numbers. The point of memory techniques is to do what the synesthete S did instinctually: to take the kinds of memories our brains aren’t good at holding onto and transform them into the kinds of memories our brains were built for (p. 91).

Completely understanding the concepts allows readers the opportunity for self-reflection. Overall, information in the book is presented straightforwardly and supported with evidence.

Another concern with the book is the depth of explanation. On one hand, the author provides multiple research studies and articles to support and explain the phenomenon; however, Foer only touches the surface of subject matter and leaves the reader wanting more. To assist with this desire, Foer provides a long reference list that allows readers the opportunity to seek additional information.

Moonwalking with Einstein is divided into separate chapters asking and answering basic memory questions along with stories to illustrate points. One controversial topic is learning versus memorizing. Foer discusses how some educators have students memorize dates, times, and events for a test. He argues that this information is not being learned and applied, but rather being memorized. He explains how one teacher uses mind mapping and visual imagery in the classroom to help students remember. One should be concerned that these “mnemonics [are] decontextualized knowledge.” Foer suggests that it takes knowledge to gain knowledge. When learning information, a student needs to be able to relate it to something in the past or something they understand to be able to recall the information and apply it. Another discussion point is choosing the right approach for the task. Foer learns this concept as he discovers how to store a memory, noting that everything he has ever tried to memorize before now has been done incorrectly. Foer learns about elaborative encoding and *Ad Herennium*. *Ad Herennium* comes from the rhetoric textbook *Rhetorica ad Herennium*, written between 86 and 82 B.C. *Ad Herennium* tells readers to “create a space in the mind’s eye a place that you know well and can easily visualize, and then populate that imagined place with images representing whatever you want to remember”(p. 96). Once Foer learns the new approach, it is easy for him to recall memories. The technique itself is simple, but it takes practice to master.

The same principle can be applied in our everyday lives. Many times people see the big picture and do not have an approach or the tools to achieve their objectives. By taking time to re-evaluate a situation, looking at limitations, and being creative, one can find an appropriate approach. Most times people look for the quick and easy fix to their problem.

Foer is an inspiration to students. He sets a goal and commits to learning and practicing. While he was a victorious winner, Foer showed a great deal of character and commitment. The book demonstrates creating a goal, developing a plan, sticking with the plan, and evaluating it. Goal setting is essential for students through their college experience. Students can relate to Foer's journey of ups and downs, overcoming obstacles, and always asking questions in search of answers.

This was a fascinating and well-accounted book. *Moonwalking with Einstein* can be used for a freshmen read, but be aware of the depth of the material. The reviewer recommends utilizing the book for specific classes such as science, psychology, or critical thinking due to the heavy content and self-analysis on how to learn and memorize. Techniques for incorporating the book into the classroom are to apply approaches Foer learned. Have students test their memories at the beginning of the semester, teach techniques and have students work on them over the course of the semester, and retest at the end. Another application is having students write a self-reflection paper on their thoughts about topics Foer presented in the book. Topic ideas include learning versus memorizing, how students process information, theories used such as *Ad Herennium*, and what approaches students take when faced with a challenge. Yet another application would be goal settings and creating a plan. Lastly, it would be interesting to investigate and research how technology plays a role in memorization.

Foer challenges readers to think how their own mind works and processes memories. He attempts to answer basic questions humans have about their mind's inner workings. His triumphant story demonstrates the importance of goal setting and practice. With dedication, focus, and motivation, Foer is an inspiration to readers and a great example for students.