

Marketing of Rubik's Cube as Educational Tool
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Abstract

As a young teacher, Ernő Rubik was looking for novel, more exciting ways to present information for his students studying geometry at Hungarian College of Arts and Crafts (today Moholy-Nagy University of Art and Design). In 1974, he created a 3D demonstration tool: first he used 8 interconnected wooden cubes to help him explain to his students about spatial relationships. The connecting elastic bands during twisting soon developed a knot and torn. This problem called for different construction so an unprecedented system of clinching and freely moving cubes was created by Ernő. His solid 3x3x3 cube twisted and turned – still it did not break or fall apart. From this demonstration tool a new puzzle, the Magic Cube was born. The Magic Cube presents a seemingly simple task, but one soon realizes that it is a bewildering problem that needs patience and triumphant intelligence to discover the solution.

Putting a brand new product to market in the conservative toy industry was a real challenge. The first big question was if the cube was even a toy or something else? The start was not easy; such a difficult puzzle that hardly anyone could solve did not appeal to those who had presided over toy business those days. The Magic Cube practically had no place on the market to fit into. Furthermore, the cube was a product from behind the Iron Curtain! How to reach out there? That was the question!

In fact the cube is not a toy - it is a twisty puzzle, having its own mathematics. Finally the partnership of a mathematician and a clever businessman succeeded in bringing the "Rubik's Cube" into the focus of the world's attention in 1980. As a novel mechanical construction, it soon gave birth to a new family of puzzles, which we call commonly today the "twisty puzzles". Among the similar constructions one can find many modified and/or reshaped versions of the classic 3x3x3 cube but several original ideas came up as well.

Puzzles have similar marketing history. Difficult start, hype and quick collapse, perhaps long after-life. The craze of Samuel Loyd's 15 puzzle and of Rubik's Cube shows similarities, which will be presented and compared.

The Rubik's Cube also has generated waves in science, films, architecture, engineering, education, social life and in many more fields. It has started art movements and has presented a challenge for the robot industry since long. Speedcubing competitions were launched at the very beginning and have been in held all around the world ever since. The World Rubik's Cube Championships are organised since 1982. What was the common reason behind such a far-flung outreach? This issue will be also discussed.

The educational message of the Rubik's Cube: invent, play and inspire. Few words will tell the audience about the "Beyond Rubik's Cube" exhibition, a STEAM project recently opened at Liberty Science Center in Jersey City, USA this April.