

WHEN THE MIND CLICKS

CONNECTING EUREKA MOMENTS WITH VIDEO GAMES

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IF YOU ONLY HAVE **2 MINUTES**



1 Neuroscience shows that the Eureka moment implies an increase in cerebral activity.

2 Video games stimulate key brain areas for creativity and problem solving.

3 The Eureka moment in video games occurs when we solve a challenge and gain sudden understanding.

4 Gaming triggers the release of dopamine, intensifying the satisfaction and the excitement of achievement.

5 Video games provide an ideal environment for experimentation and the discovery of creative solutions.

6 Each favourable outcome in a game generates a sense of personal victory, promoting learning and self-discovery.

WHEN THE MIND CLICKS



Juan Pablo Veiga

VP Brand Gamification™ at etermax

Welcome to a new edition of insights from **etermax**!

This format has already become a classic for us. Not only does it allow us to reflect on our industry, but we also hope it will be useful for all of us seeking new approaches in a constantly surprising technological landscape.

In this chapter, we explore a fascinating aspect of **interactive entertainment** that transforms how we understand creativity.

Video games have the power to trigger a very peculiar phenomenon: **Eureka moments**, those revealing instances of sudden understanding. But, how do they help spark these insights? The answer lies in how they stimulate our brains, facilitating unexpected connections and innovative solutions.

We invite you to discover with us how **gaming is a powerful tool** to boost inspiration and transform our way of thinking.

THE CLICK MOMENT

The **Eureka moment** (from the Greek: "I found it!") is the instant when an unexpected idea or solution suddenly arises, often accompanied by a sense of **clarity and excitement**.

At that moment, **our mind opens up**, and we can understand what we previously could not.

Neuroscience describes it as an **abrupt shift in mental state** where the perception of reality and neural connections align to create a new interpretation of information, leading to a **sudden discovery or understanding**.

Sources: Archimedes and the first Eureka moment, National Geographic; Insights into conscious cognitive information processing, Ekrem Dere

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**THE INSTANT WHEN A SOLUTION SUDDENLY
ARISES BRINGING WITH IT CLARITY AND
EXCITEMENT.**

EUREKA MOMENT



EUREKA MOMENTS

They happen when you least expect them

They come to solve a problem

They involve familiar information

They create a sense of satisfaction

They are enhanced by relaxation



A COGNITIVE JOURNEY

Insight moments have been extensively studied by neuroscience, psychology, and other areas of knowledge.

At the brain level, they are associated with **bursts of high-frequency electrical activity**, particularly in areas related to problem-solving, information processing, and memory retrieval.

During this phenomenon, **the brain recognizes existing information**, uncovering hidden connections or details that were previously overlooked. As a result, there is **sudden and clear understanding**.

WHAT HAPPENS IN THE BRAIN?

FRONTAL LOBE

Decision-making, planning, and problem-solving.

Activates to integrate information in a novel way, allowing for the **sudden appearance of a solution.**



TEMPORAL LOBE

Information processing and memory access.

Helps combine previous knowledge in unexpected ways, facilitating the **Eureka moment.**

Areas related to **problem-solving** and **creativity**, like the frontal and temporal lobes, are activated, facilitating the sudden synchronization of information and the appearance of a solution.

EUREKA EMOTIONS

During moments of revelation, neurotransmitters like **dopamine** are released, boosting feelings of satisfaction, happiness, and a **sense of accomplishment**.

The emotion of overcoming a challenge is heightened by the contrast between the prior effort and the solution. This satisfaction is further amplified by the **relief** that follows the discovery.

By providing sudden clarity, the Eureka moment generates **surprise** and enriches the experience, stimulating **creativity** and **innovative thinking**.

Fuentes: Insights into conscious cognitive information processing, Ekrem Dere; Ludwig Maximilian University, Munich (Germany).

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EUREKA EMOTIONS

What do we feel about the discovery?

**IT GIVES US A GREAT
SURPRISE**

**WE EXPERIENCE
SATISFACTION**

**WE AWAKEN OUR
CURIOSITY**

**WE RENEW
OUR COMMITMENT**

**WE CHALLENGE OURSELVES
TO GO FOR MORE**

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MORE THAN ENTERTAINMENT

Video games offer **interactive experiences** that present challenges and problems, inviting players to think **creatively**. Each segment is designed to maintain interest and foster **experimentation**.

Their design generally focuses on progression and continuous feedback, allowing players to adjust strategies and learn as they play. This creates an ideal environment for **discovering solutions**.

People choose to play mainly for fun, relaxation, or as a form of recreation. It's a way to enjoy themselves and **unwind** from the challenges of daily life.

Sources: Insights into conscious cognitive information processing, Ekrem Dere; Ludwig Maximilian University, Munich.

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WHAT GAMERS SAY ABOUT VIDEO GAMES ?

73%

of gamers in the USA see video games as a tool for cognitive improvement

77%

believes video games provide mental stimulation

73%

consider video games to improve problem-solving skills

"Video games impact brain plasticity, that is, the brain's ability to change in response to learning through attention control and reward processing."

MORE THAN ENTERTAINMENT

GAMING



- Contributes to generating Eureka moments through cognitive stimulation.
- Activates key brain areas related to attention and visuospatial skills.
- Fosters new neural connections when facing in-game challenges.
- Induces brain reorganization in response to cognitive challenges.
- Leads to changes in the brain, including increased activity in certain regions.
- Facilitates learning through mental leaps associated with Eureka moments.

EUREKAS ON THE SCREEN

Video games, with their complex plots and progressive challenges, become mental mazes where **players constantly seeking an exit.**

Each puzzle solved or level completed represents a small victory that **enhances the sense of achievement.** It is in these moments of sudden clarity, when the solution to a puzzle is revealed before our eyes, that we experience the cognitive ecstasy known as the Eureka effect.

The satisfaction of overcoming an intellectual obstacle is as gratifying as any other reward the game can offer, transforming the gaming experience into a journey of **self-discovery and personal growth.**

Sources: Universidad Abierta de Cataluña, Marc Palaus; Frontiers in Human Neuroscience

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In the entertainment technology industry, **etermax** has been aiming to revolutionize the way people connect, build communities, and co-create value through interactive content since 2009. With the creation of iconic brands like Trivia Crack® and Word Crack®, their team in America and Europe develops playful experiences designed to make knowledge interactive and accessible on a global scale across a wide range of platforms and technologies, including mobile devices, augmented reality, virtual reality, artificial intelligence, streaming services, connected TV, voice devices, wearable technology, and more.

etermax | Brand Gamification™

Brand Gamification™ is the division of **etermax** dedicated to empowering brands to establish deep connections with consumers through 360° gaming solutions, captivating entertainment experiences, and exclusive advertising formats across its network of over 2,200 leading mobile titles. As part of its comprehensive offering, the unit also provides licensing and co-branding opportunities with Trivia Crack®, Word Crack®, and other intellectual properties of etermax, allowing brands to leverage the experiences of the entertainment technology company.



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