

Games

Bernard Suits: “The voluntary attempt to overcome unnecessary obstacles.”

Sid Meier: “Games are a series of interesting decisions.”

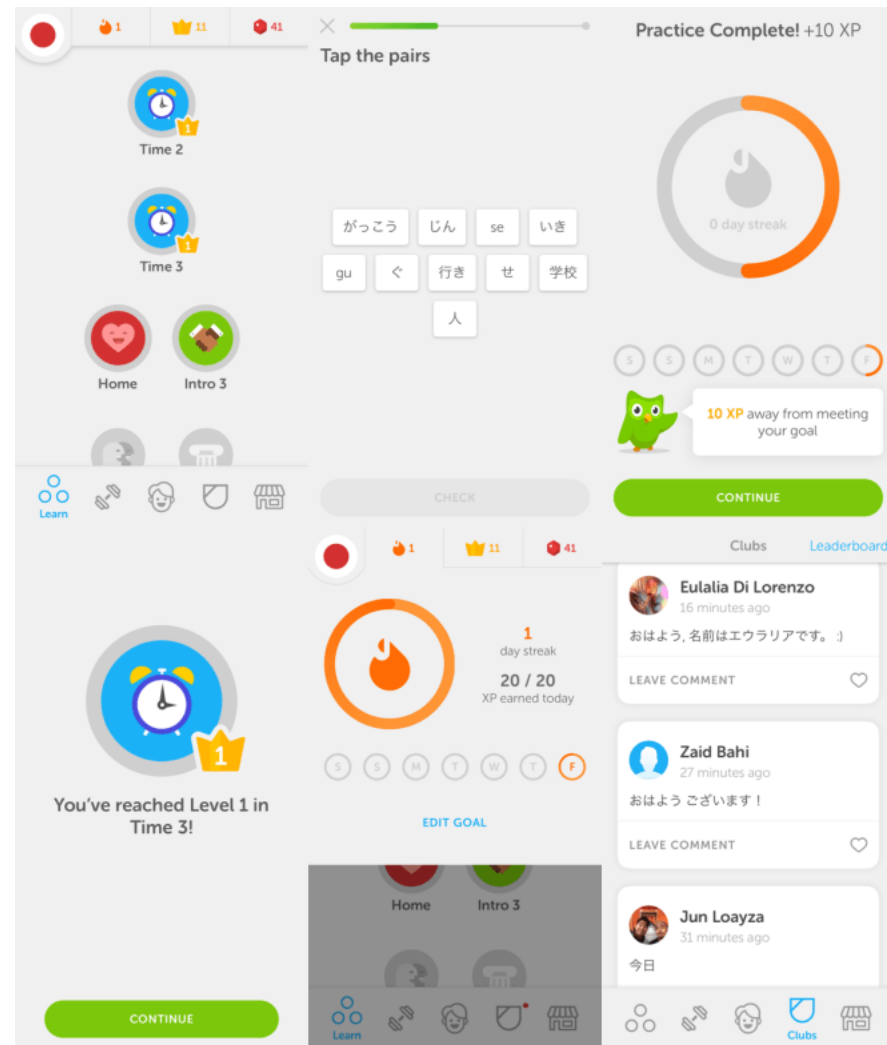
Raph Koster: “That’s what games are, in the end. Teachers. Fun is just another word for learning.”

Fun

Jesse Schnell: “Pleasure with surprises”

Erin Hoffman: “Fun is the cognitive mechanical process by which we convert fear into happiness through surprise.”

Gamification in Education: Duolingo



Gamification in the Workplace: Amazon

“Gamification generally refers to software programs that simulate video games by offering rewards, badges or bragging rights among colleagues.” ([Bensinger, 2020](#))

Gabe Zichermann: “Games are replacing tasks that are otherwise boring... Anything to reduce the drudgery, even the smallest amount, is going to give a bump to workers’ happiness.”

Jane McGonigal: “Competition is only enjoyable for a short time... As soon as workers start underperforming against their colleagues, it becomes less fun and can actually be counterproductive.”

Gamification: Smiderle et al, (2020)

Gamification “Increases engagement, user retention, knowledge, and cooperation (Hakulinen and Auvinen 2014; Tvarozek and Brza 2014). Despite that, some studies have shown uncertain or prejudicial results from gamification (Christy and Fox 2014). They found that ranking affects women in various ways and may guide to unexpected opposite impact. Hanus and Fox (2015) informed that, in addition to not increase the results, gamification **decreases** pleasure and motivation. Haaranen et al. (2014) noticed that some users had **adverse** emotions about the badges.”

Yukai Chou's Octalysis Framework



Fun: Added or Found? Choc-coated Broccoli

[Ian Bogost](#): “We’ve misunderstood fun to be something like enjoyment without effort... Having fun at something is a sign that you’ve given it respect. We fail to have fun because we don’t take it seriously enough. Fun can’t be added to something any more than chocolate turns broccoli into dessert.”



[Erin Hoffman](#) asked school kids to play the computer game Civilisation in class and kids said: “This is pretty fun but we aren’t learning anything so why are you wasting our time?”

Chou's Octalysis and Maslow's Heirarchy



<https://www.youtube.com/watch?v=Rx7NwL5owPE&t=1550>

Chou's Octalysis

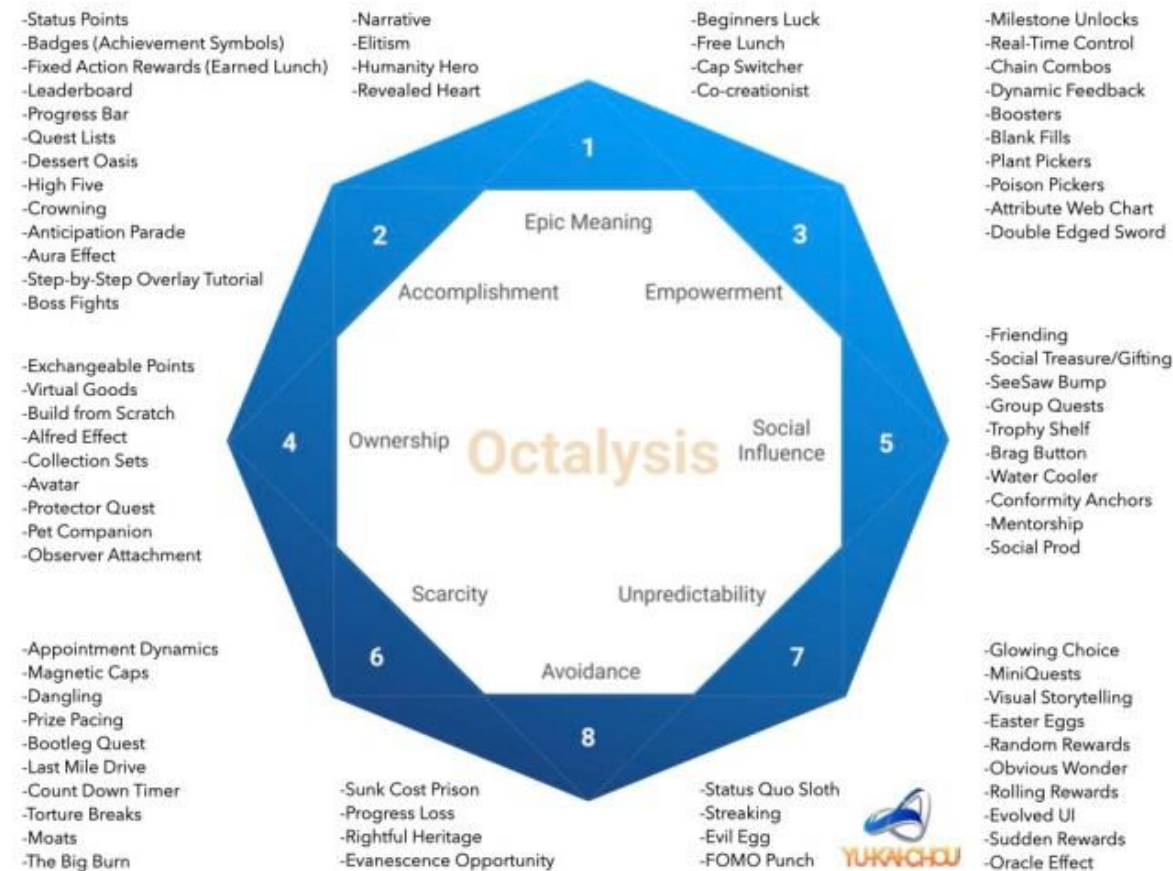
Left: Logic-based, provides short-term motivation.

Right: Emotional, provides long-term motivation.

Bottom: Extrinsic motivation. Targets 'reptilian' or survival-

focused brain. Pursuing these can make you feel empty and disillusioned.

Top: Intrinsic motivation. Meaning and purpose. Pursuing these makes you feel human.



Extrinsic vs Intrinsic Motivation

Use extrinsic motivators as hook:

- Points, badges and leaderboards (PBL's).
- Skinner boxes with randomly timed rewards (operator conditioning);

But soon transition to intrinsic motivators that give meaning, purpose and accomplishment.

Chou's gym trainer analogy

Extra Credits contrasted Skinner boxes with better alternatives used in game development including mystery, mastery, mental challenge, narrative, novelty and flow.

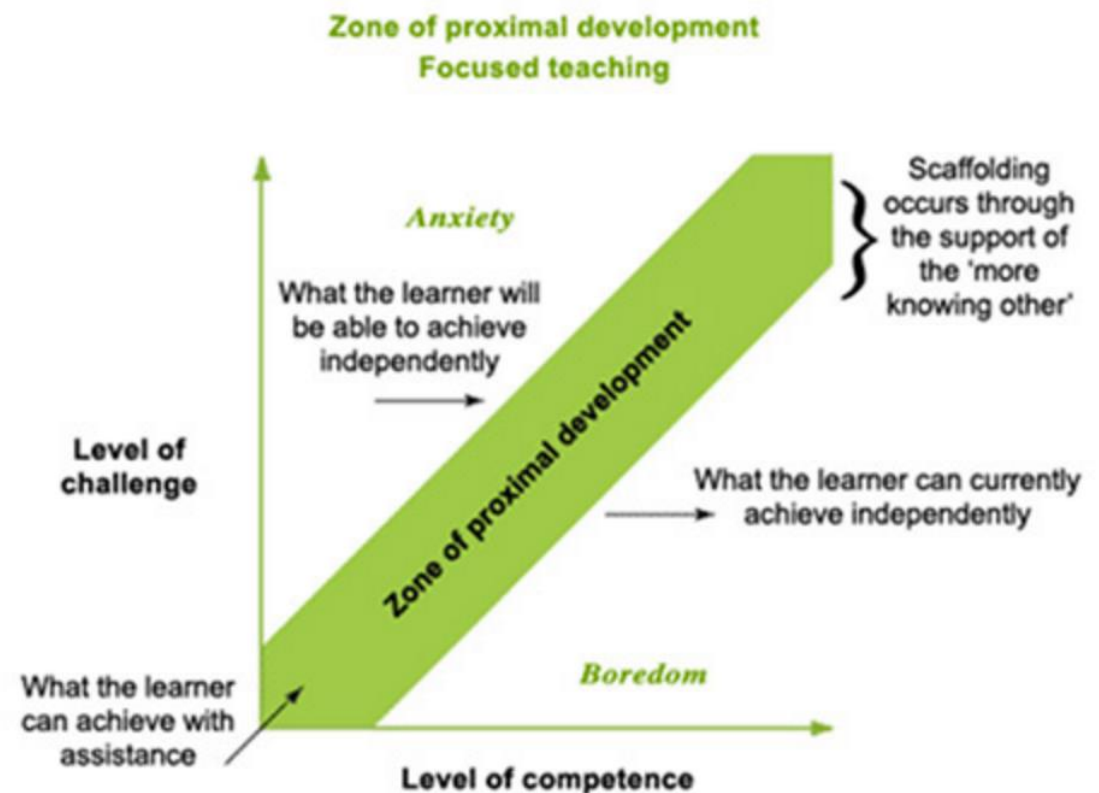
Fear, Anxiety and Vygotsky's ZPD

Erin Hoffman: “Fun is the cognitive mechanical process by which we convert **fear** into happiness through surprise.”

Ian Bogost: “Manual transmissions and knitting are not fun because they make driving and fashion hard rather than easy... There’s a kind of **terror** in real fun, a terror of facing the world as it really is.”

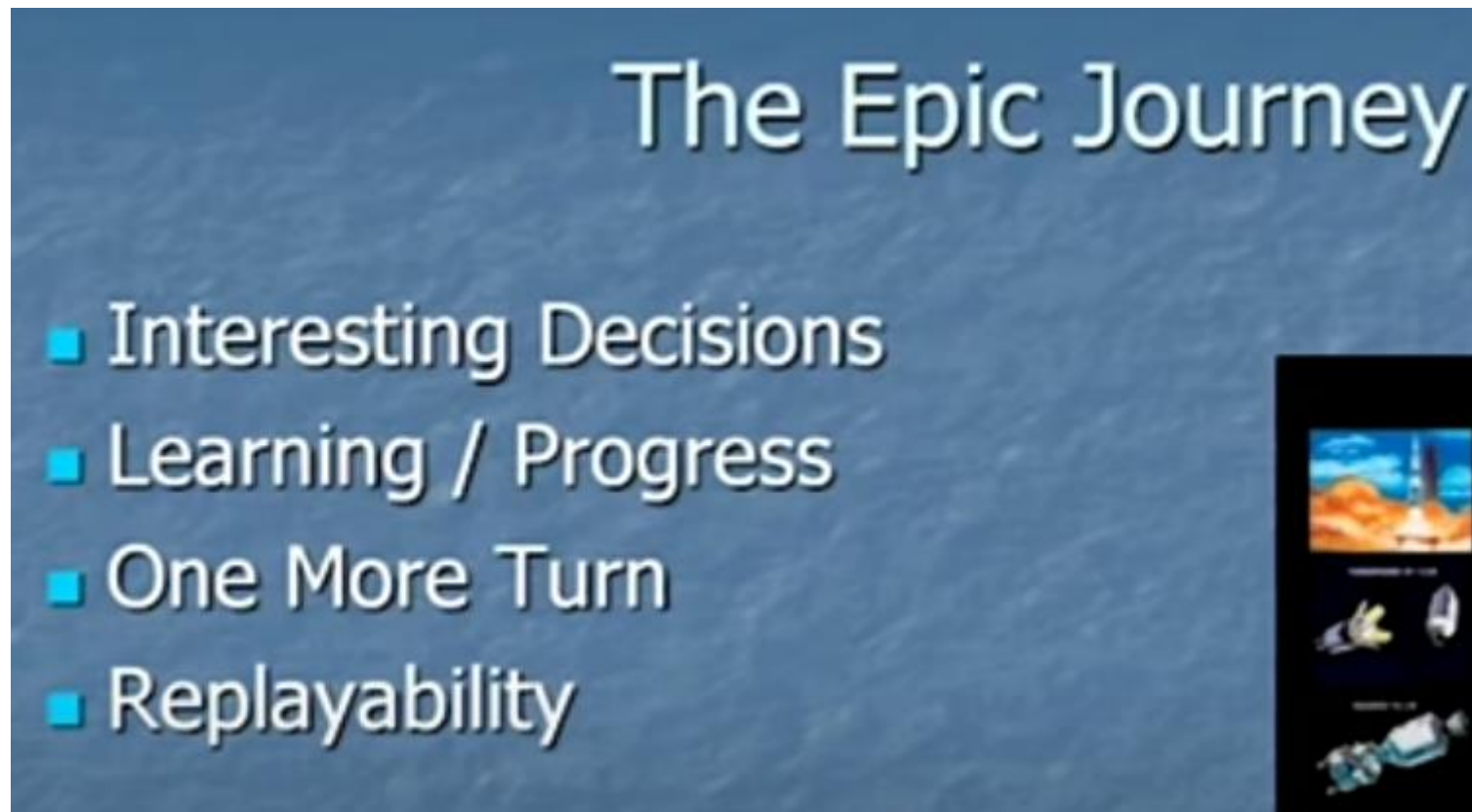
[Chou: A teachers' role.](#)

Graph: Zone of proximal development: Vygotsky



Epic Games and Assessments

Sid Meier's tips on making a great computer game can be applied to writing assignments and tests.



PeerWise

Student-made and rated questions.

Case studies

Beware of meta-gaming: Students took the gaming to a new level by gamifying the assessment system which led to "an overflow of low quality, duplicate questions".

His solution was "At the end of the semester each student selected a portfolio of their best three questions for review by their tutor, and these were marked by the tutor based on the quality and learning level, rather than relying on peer scores. This resulted in a much improved quality of submitted questions, and more positive student feedback."

State of the Art: Playconomics

By UNSW's Alberto Motta and Isabella Dobrescu:

<https://sites.google.com/site/lorettidobrescu/playconomics>

Praise from Prof. Geoff Garrett, Dean of Wharton School:

"Every once in a while, something comes along that is so good and so out of the box that it makes you sit up, pay attention, and just smile. This is one of those rare and precious occasions."

<https://youtu.be/zJkolXlU5Bc?t=9>

<https://youtu.be/OVLyQ7MB0wM?t=67>

Commercial Games: Offworld Trading Co

By [Mohawk Games](#)

The screenshot displays the game interface for Offworld Trading Co. The central area shows a Mars colony with various buildings and a rocket launching. A yellow banner reads "NEWSFLASH: Solar flare!". The top left shows a "Pay Debt" button and a balance of \$312K, with a debt of \$51,676. Below this is a table of resources and their prices.

Resource	Rate	Quantity	Price
⚡	+1.55	-	\$188*
💧	+7.7	- 60 +	\$278
🍏	+2.76	- 206 +	\$530
🌬️	+0.5	- 25 +	\$399
🔥	+3.3	- 335 +	\$380
🌫️	-0.25	- 128 +	\$63
🪨	-0.35	- +	\$100
🏠	+1.65	- 391 +	\$271
📡	-	- 10 +	\$74
🔺	+3.35	- 622 +	\$76
🧪	-	- +	\$389
💎	+2.89	- 293 +	\$422
⚡	+0.28	- 80 +	\$541

The top right shows a stock market interface with a list of shares and their prices. The bottom right shows a news log with various events.

Stock Market:

Share	Price	Action
JAAI	\$55.50	SELL
JAAA	\$25.81	SELL
JAAA Frank	\$68.46	SELL
JAAA Sam	\$45.39	SELL
3	(+\$2)	
5	+\$262	
4	+\$239	SELL
5	(+\$14)	

News Log:

- Sam Moreno bought 1,000 shares of Frank Dawson's stock!
- Sam Moreno was targeted by a **Underground Nuke!**
- Draginol bought out **Silas Crichton**, who is now a subsidiary!
- Draginol receives 2 free claims for buying out **Silas Crichton**.
- Frank Dawson: Lining them up to knock them down.
- Frank Dawson bought out **Paulo Rubini**, who is now a subsidiary!

The bottom right shows a "Black Market" section with various items and their prices.

Item	Price
🚩	\$25K
💀	\$60K
⚙️	\$18K
🛠️	\$18K
💣	\$40K
👊	\$12K
🛡️	\$25K

Black Market

OVERVIEW		Draginol	Paulo Rubini	Reni-6	Joji-5	Frank Dawson	Sam Moreno	Ilana Kamat	Silas Crichton
BALANCE SHEET	Starting Money	+\$6K	+\$2K	+\$2K	+\$2K	+\$2K	+\$2K	+\$2K	+\$2K
PRODUCTION & SALES	Resources	-\$28K	-\$52K	-\$111K	-\$42K	-\$47K	-\$64K	-\$43K	-\$68K
STRUCTURES	Resources Sold	+\$14K	+\$83K	+\$112K	+\$52K	+\$70K	+\$103K	+\$54K	+\$109K
BLACK MARKET	Auto-Purchase	-\$47K	-\$61K	-\$73K	-\$47K	-\$68K	-\$28K	-\$45K	-\$50K
OPTIMIZATIONS	Auto-Sold	+\$49K	+\$3K	+\$1K	+\$28K	+\$23K	+\$39K	+\$2K	+\$7K
PATENTS	Sold Offworld	-	-	-	-	-	-	-	-
STOCK MARKET	Entertainment	-	-	+\$19K	-	-	-	+\$13K	-
RESOURCE PRICES	Misc. Revenue	-	-	-	-	-	-	-	-
	Dividend	-	-	-	-	-	-	-	-
	Interest	+\$0K	-\$2K	-\$14K	-\$2K	-\$2K	+\$0K	-\$2K	-\$3K
	Business Net	-\$5K	-\$27K	-\$63K	-\$9K	-\$23K	\$51K	-\$20K	-\$3K
	Auction	-	-	-\$20K	-\$20K	-	-	-	-\$28K
	Espionage	-	-	-	-	-	-	-	-
	Black Market	-	-\$10K	-\$7K	-\$4K	-\$9K	-\$8K	-\$10K	-\$8K
	Stock	-	-\$23K	-\$15K	-\$13K	-\$15K	-\$42K	-\$15K	-\$24K
	Final Net	-\$5K	-\$60K	-\$106K	-\$47K	-\$47K	\$1K	-\$45K	-\$64K
	Final Money	\$15,887	\$165	\$162	\$234	\$195	\$1,427	\$564	\$219
	Final Net	\$21,576	\$69,555	\$106K	\$17,491	\$17,889	-	\$45,975	-\$64,817

0:54 / 1:12
RETURN

EXIT GAME

