

Gamification

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Subjects to be covered

- What is gamification?
- The promises
- The controversies
- Scientific basis

Definition

Gamification is the use of game design elements in non-game contexts. (Deterding et al, 2011)

Game design elements: concrete to abstract

- Badges, points, leaderboards, levels
- Time constraint, limited resources, turns
- Narrative, enduring play, clear goals, variety of game styles
- Challenge, fantasy, curiosity
- Playcentric design, playtesting, value conscious game design

(Deterding et al, 2011)



Non-game contexts

Vodafone firestarters: Ahead of the game



<https://www.youtube.com/watch?v=y55vxYaJB9U&feature=youtu.be>

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Spanish Fluency



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1
day streak
10
hours left

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15

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The bread

El pan el la

Type in Spanish

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Some of the promises

- Motivation and engagement
- Direct feedback enhancing perceived competence
- Insight in the structure of knowledge (skill trees)
- Immersion and meaning through narrative
- Monitoring/personalised learning

Controversies

Some of the main objections

Degradation?



Gamification

**Game
designers**

Educators

Manipulation?



Applying gamification is hard and complex!

Examples:

- Not just a few game elements slapped together
- Complex interaction between elements
- Small changes might have big consequences
- Game designer AND educator at the same time
- Risks of rewards: Overjustification effect

Scientific basis

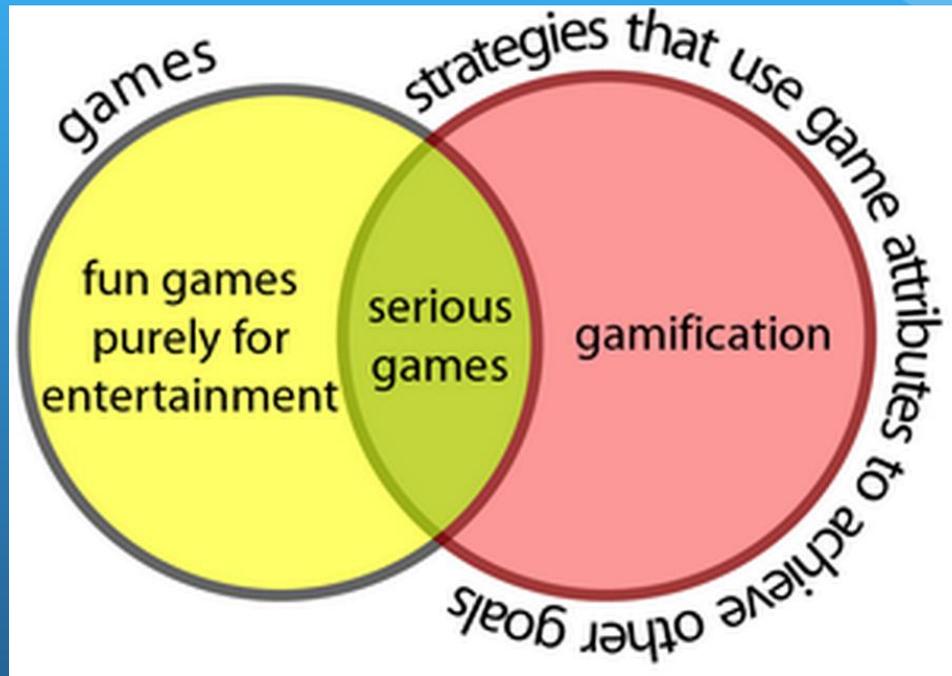
Scientific basis

Strong theoretical support for gamification from motivation- and learning theory,

very little empirical research to back up said support.

Many publications on serious games, which is NOT gamification.

Serious game vs Gamification



Gamification is gameful design,
but not a full-fledged (serious) game!

Source of picture:

<https://community.lithium.com/t5/Science-of-Social-blog/What-is-Gamification-Really/ba-p/30447>

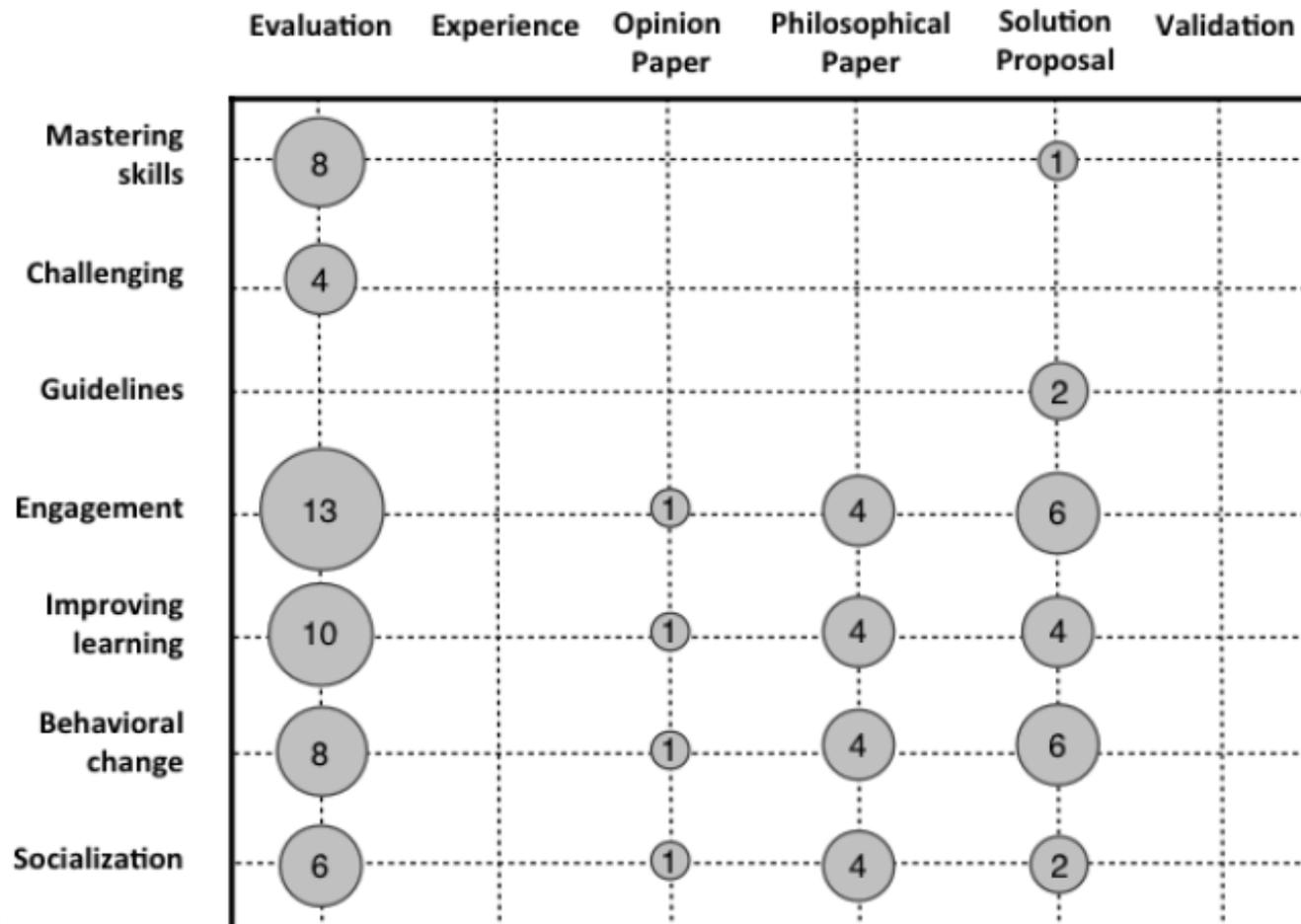
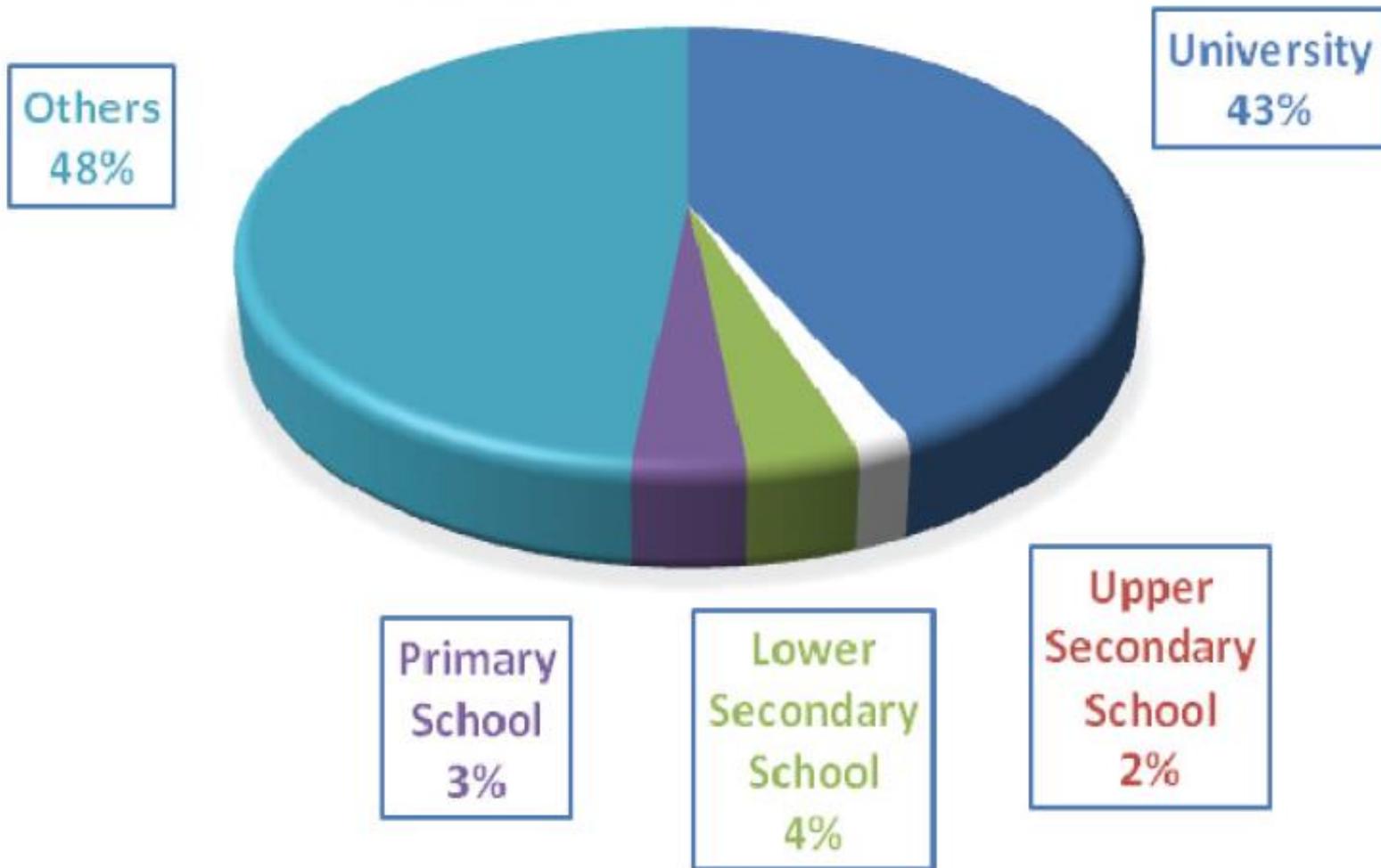


Figure 2. Map containing the distribution of gamification research by study type (x axis) and research objectives (y axis)

(De sousa Borges, 2014)

TARGET POPULATION



(Caponetto et al, 2014)

Resources

Articles:

- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011, September). From game design elements to gamefulness: defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9-15). ACM.
- De Sousa Borges, S. Macedo Reis, H., Durelli, V.H.S., Isotani, S. (2014). A systematic mapping on gamification applied to education. In *SAC '14 Proceedings of the 29th Annual ACM Symposium on Applied Computing* (pp. 216-222). ACM
- Caponetto, Ilaria, Jeffrey Earp, and Michela Ott. "Gamification and Education: A Literature Review." *ECGBL2014-8th European Conference on Games Based Learning: ECGBL2014*. Academic Conferences and Publishing International, 2014.
- Stott, A., & Neustaedter, C. (2013). Analysis of gamification in education. *Surrey, BC, Canada*.

Resources

Books:

- Kapp, K. M. (2012). *The gamification of learning and instruction: game-based methods and strategies for training and education*. John Wiley & Sons.
- Sheldon, L. (2011). *The multiplayer classroom: Designing coursework as a game*. Cengage Learning.

Websites:

- <https://www.learnboost.com/blog/3-reasons-not-to-gamify-education/>
- <http://www.mrdaley.com/wordpress/2011/07/27/education-levels-up-a-newbs-guide-to-gamifying-your-classroom/>
- <https://www.youtube.com/watch?v=7ZGCPap7GkY> (Meaningful Play: Getting Gamification Right)

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2		Wahm Connect <small>from Florida</small>		8	3	8	0	11	14	5	432 points
3		The Link Fairy <small>from Wisconsin</small>		8	1	8	0	13	5	7	383 points
4		The Rock Father <small>from Rock Father HQ, Illinois</small>		7	1	7	0	14	1	6	339 points
		Rhokme <small>from Bristol, VA</small>									

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Introduce the option to purchase additional annual leave posted by sharon.houlton in Shared Services on 28/05/2010 01:24 PM BST

45 Thumbs-Up
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83.82

Many other organisations allow staff the option to purchase up to 2 weeks additional annual leave at cost. The cost is pro-rated over the year. Most staff in other organisations take the full entitlement each year. This would be [...More](#) »

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Performance Passport posted by Austin.martin in Paper Reduction on 16/11/2010 11:32 AM GMT

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Test Check posted by edward.Windkier in Shared Services on 11/11/2010 01:04 PM GMT

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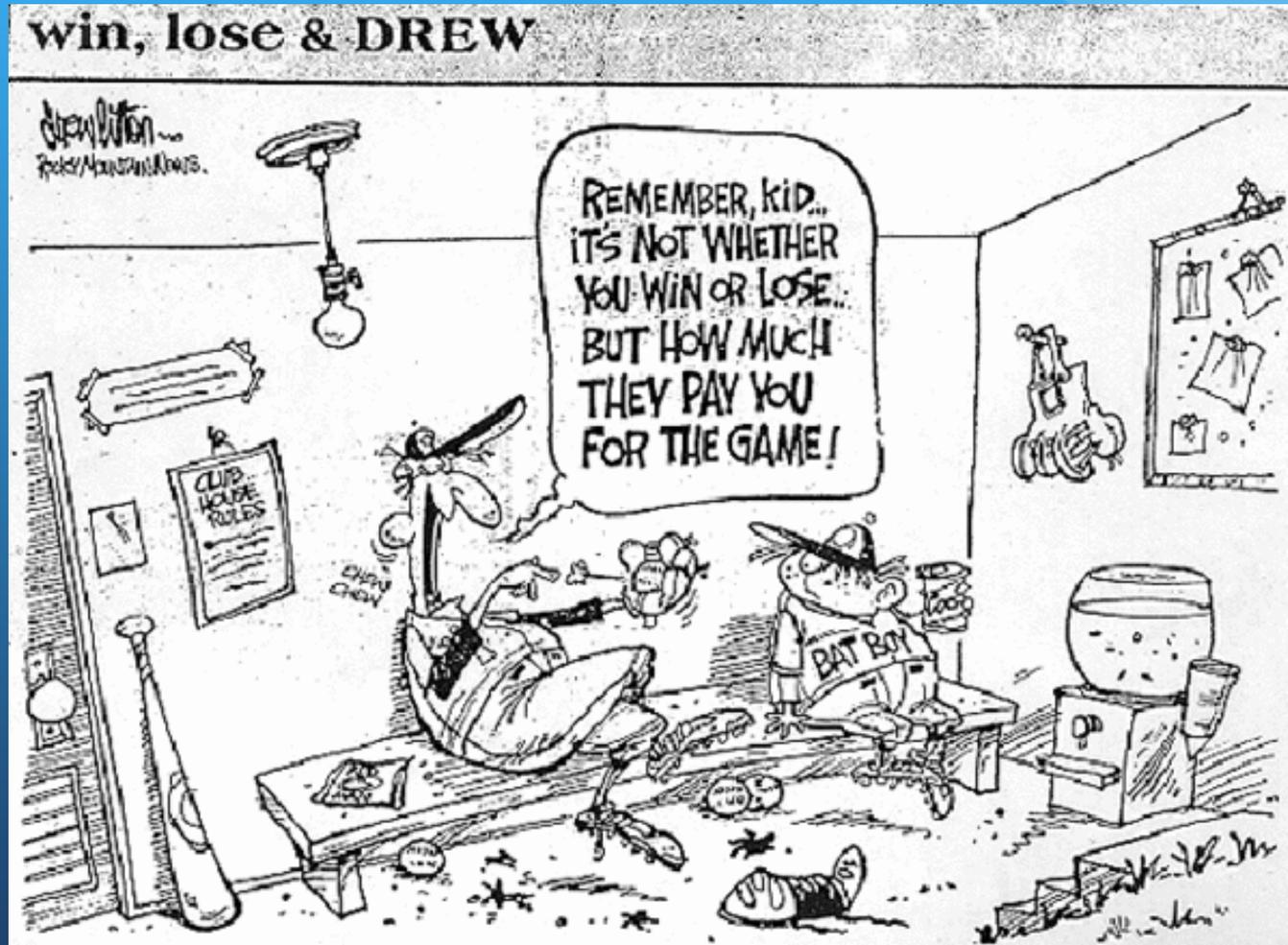
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Overjustification-effect



Education



Not gamification!

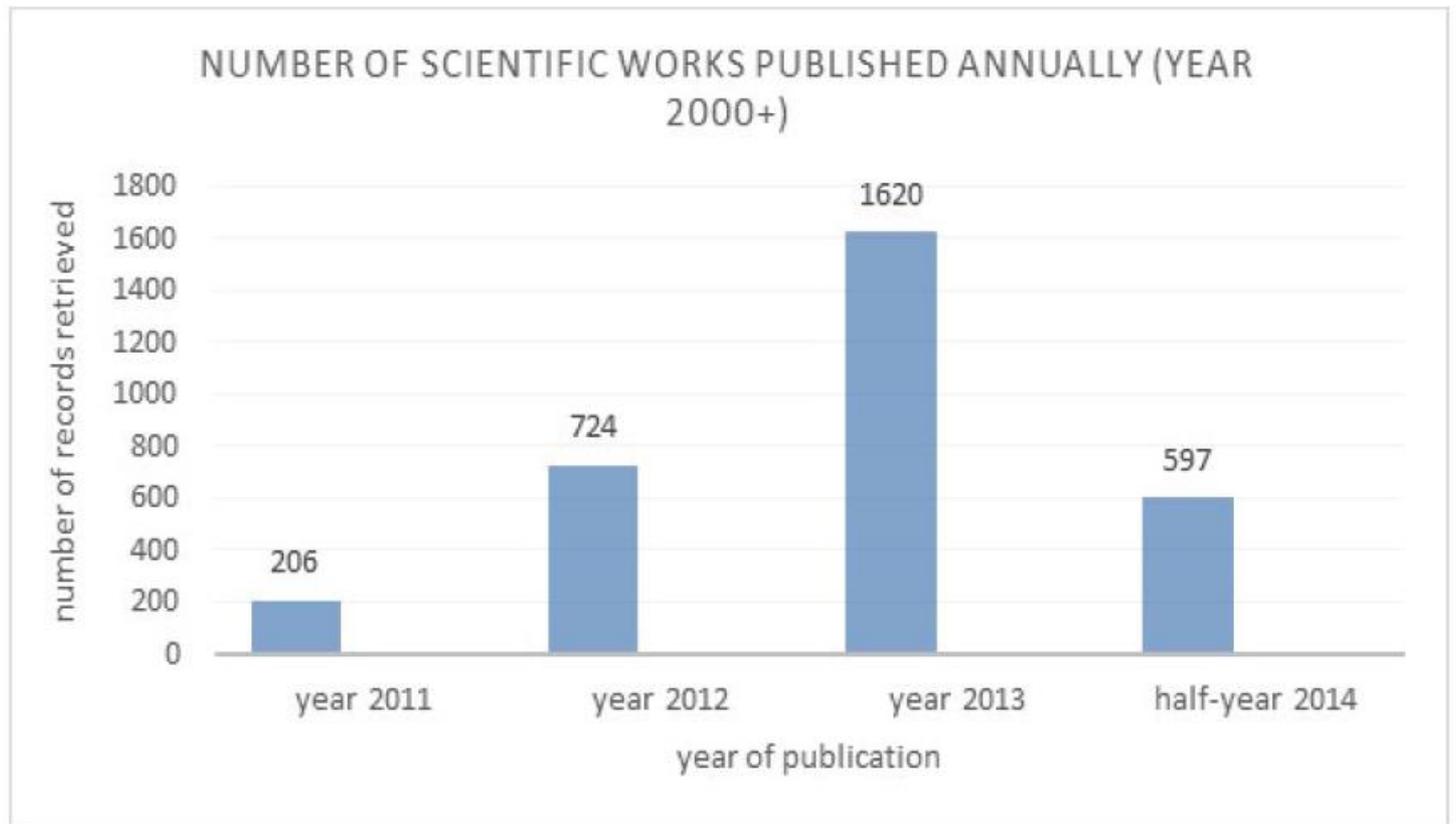


Figure 2: Annual distribution of papers mentioning gamification and education

(Caponetto et al, 2014)