

# Gamifizierung und Wortschatzerwerb



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# Spielen - Play - Game

# Play



Play is a voluntary activity or occupation executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy and the consciousness that it is 'different' from 'ordinary life'.

Huizinga, Johan (1955). *Homo Ludens: A study of the play-element in culture*. Boston: Beacon Press.

# Game

A game is

1. a rule-based formal system;
2. with variable and quantifiable outcomes;
3. where different outcomes are assigned different values;
4. where the player exerts effort in order to influence the outcome;
5. the player feels emotionally attached to the outcome;
6. and the consequences of the activity are optional and negotiable

(Juul, 2005: 6-7).

Juul, Jesper (2005) *Half-Real: Video Games between Real Rules and Fictional Worlds*. Cambridge (MA): The MIT Press.

# Gamification

# Wozu Gamification?

The interest in gamification arises from the idea that it influences behaviour. Games provoke powerful emotional responses, such as curiosity, frustration and joy. People are posited to be more engaged and more productive when playing games

Patrick Buckleya / Elaine Doyle (2014): Gamification and student motivation. In: Interactive Learning Environments, 2014. DOI: <http://dx.doi.org/10.1080/10494820.2014.964263>

# Gamification

- Gamification is to change something that is not a game through a game or its elements
- Gamification is the use of game design elements in non-game contexts
- Gamification is a set of activities and processes to solve problems by using or applying the characteristics of game elements

Sangkyun Kim / Kibong Song / Barbara Lockee / John Burton (2018): Gamification in Learning and Education. Enjoy Learning Like Gaming. Cham: Springer International Publishing.

# Gamifizierung als pädagogisches Konzept

Als pädagogisches Konzept beinhaltet Gamification jedoch nicht notwendigerweise die Verwendung eines tatsächlichen Spiels oder einer Informationstechnologie. Vielmehr handelt es sich um die Integration von Gestaltungselementen oder Aktivitätsmustern, die traditionell in Spielen zu finden sind, in Bildungskontexte.

Patrick Buckleya / Elaine Doyle (2014): Gamification and student motivation. In: Interactive Learning Environments, 2014. DOI: <http://dx.doi.org/10.1080/10494820.2014.964263>



# Elemente von Spielen

# Elemente von Spielen

**Story:** a course of events that gamers can experience while playing a game

**Mechanics:** instruments for player agency within the boundary of formally defined rules

**Dynamics:** underlying concepts and social frameworks that power the game (e.g. simulation, exploration, challenge)

**Technology:** situations, materials, and hardware required for the game

**Aesthetics:** the look and feel that gamers can perceive within a game by audio and visual elements

Schell, Jesse (2014). The art of game design: A book of lenses (2nd ed.). Boca Raton, FL: CRC Press.

Sangkyun Kim / Kibong Song / Barbara Lockee / John Burton (2018): Gamification in Learning and Education. Enjoy Learning Like Gaming. Cham: Springer International Publishing.

# Spielemechanik

"Game mechanics are methods invoked by agents, designed for interaction with the game state."

"Game mechanics are instruments for player agency within the boundary of formally defined rules. Player agency is here defined as a 'method' [...]. In games, methods can be seen as the actions that agents can trigger to interact directly with the game rules in order to alter the game state."

Sicart, Miguel (2008): Defining Game Mechanics. In: Game Studies. The International Journal of Computer Game Research 8(2). Online: <http://gamestudies.org/0802/articles/sicart>

Sicart, Miguel A. (2016). Mechanics. In H. Lowood & R. Guins (Eds.), Debugging Game History: A Critical Lexicon. MIT Press. pp. 297-304.

# Forschung zu Gamification im Fremdsprachenlernen

# Metaanalyse

- Untersuchung von 28 Publikationen aus Scopus, Web of Science und ERIC
- Forschungsinteresse: Trends und Ergebnisse in der Forschung zur Gamifizierung im Fremdsprachenlernen

Hossein Dehganzadeh & Hojjat Dehganzadeh (2020): Investigating effects of digital gamification-based language learning: a systematic review. In: Journal of English Language Teaching and Learning 12 (2020), S. 53-93. DOI: 10.22034/ELT.2020.10676, [https://journals.tabrizu.ac.ir/article\\_10676\\_8e122c05200e2787bb5b363e896bc632.pdf](https://journals.tabrizu.ac.ir/article_10676_8e122c05200e2787bb5b363e896bc632.pdf)

# Forschungsmethoden

- Quantitative Methoden: rund 54% der Untersuchungen aus
- Mixed Methods: 28%
- Qualitative Artikel: 18%

# Lernendengruppen

- 50% Schüler auf Highschool-Niveau
- 35% Universitätsniveau
- 15% Grund- und Mittelschüler

# Welche Sprachränge als Lerngegenstand?

1. vocabulary (n=10)
2. grammar (n=7)
3. speaking (n=6)
4. writing (n=6)
5. reading (n=5)
6. listening (n=4)
7. pronunciation (n=2)



# Gamifizierende Elemente

1. Feedback: 26
2. Reward: 14
3. Point: 12
4. Level: 12
5. Progress bar: 11
6. Challenge: 11
7. Badge: 10
8. Leaderboard: 10
9. Collaboration: 9
10. Competition: 7
11. Clear goal: 6

# Effekte von Gamifizierung

1. enhancing motivation of learners (n=11)
2. increasing learners' engagement (n=7)
3. improving learners' learning performance (n=4)
4. increasing positive attitudes of learners to the language learning activities (n=4)
5. improving learners' grammar knowledge (n=4)

# Herausforderungen / Probleme

1. technology-related problems (n=9)
2. insufficient mobile devices (n = 3)
3. pedagogy related problems (n= 4).

# Gamedesign für effektiven Wortschatzaufbau

# Lerngegenstand und Spielmechanik

Hypothese:

Das Spieldesign ist dann effektiv, wenn die Elemente der Spielmechanik relevante Aspekte des Lerngegenstands abbilden.

Korrespondiert dies der Wahrnehmung von Lerner:innen?

# Welcome to WordMover!

## Wähle dein Start-Level

choose your starting level

beginner

easy

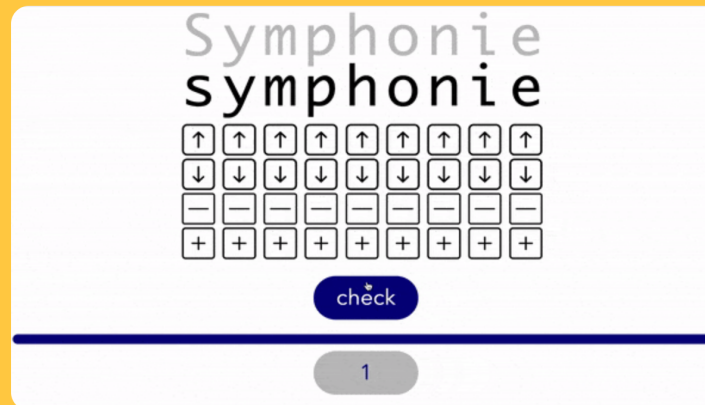
medium

challenging

expert

## How to play

Transform German words into their English siblings by using the control buttons to change or add letters!  
On each difficulty level you will have to transform 12 words. If more than half of your transformations were correct, you will enter the next level. What level can you get to?



developed by [josch](#)

music: "The Spidrman's (nanoloop)" by [UncleBibby \(cc by 4.0\)](#)

# Welcome to Grogger!

## Wähle dein Start-Level

choose your starting level

beginner

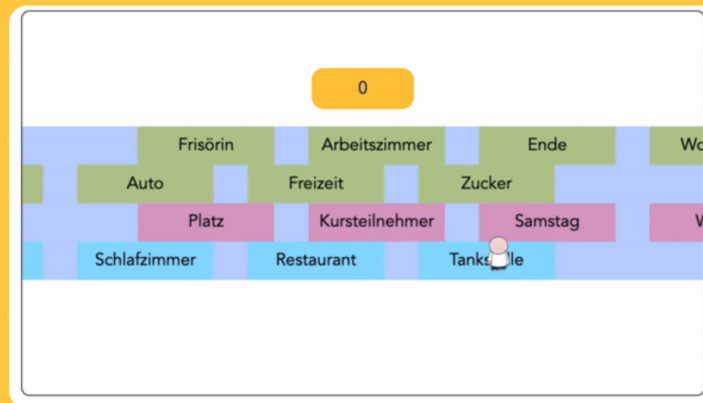
## How to play

Use arrow keys to go to the other side by stepping on words with the same gender.

Decide on the gender by stepping on a word in the first line.

Get 50 points for masculine, 70 for feminine and 100 for neuter words.

Press the h-key for hints.



developed by [josch](#)

music: "The Spidrman's (nanoloop)" by [UncleBibby](#) (cc by 4.0)

Score: 0

Off-topic

Kaffee

Tisch

Cola

Bier

Fenster

dunkel

Abend

Nacht

slower

faster







Level A1.1

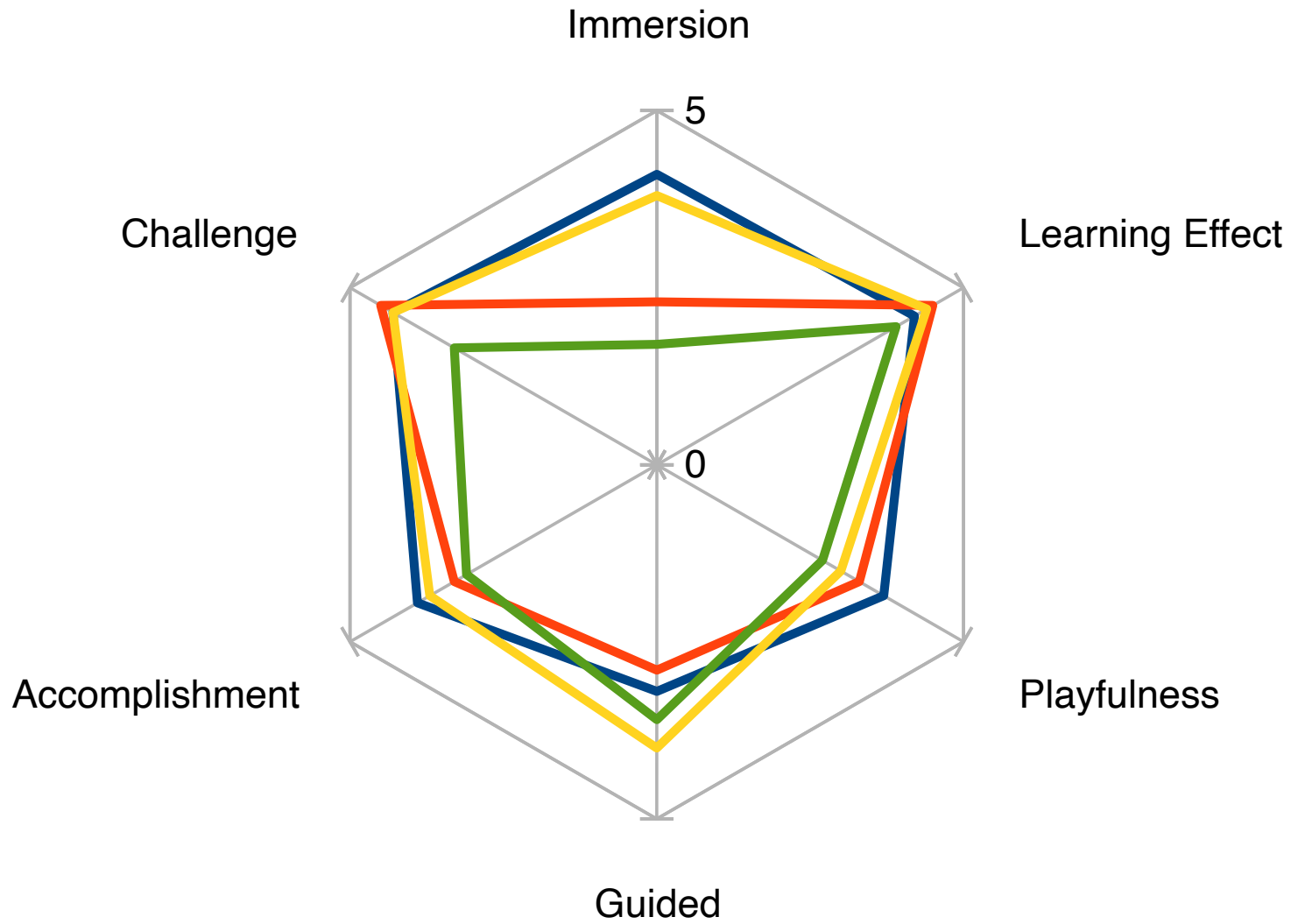
Level A1.2



# Studierendenbefragung (Pretest)

- Sample: 8 Studierende, Intensivkurs
- Fragebogen mit 20 Items aus GAMEFULQUEST (standardisiertes Messinstrument für Gamefulness / Spielhaftigkeit)
- Dimensionen: Immersion, Challenge, Accomplishment, Guided, Playfulness
- ergänzende Dimension: Learning Effect

Högberg, Johan / Juho Hamari / Erik Wästlund (2019): Gameful Experience Questionnaire (GAMEFULQUEST): an instrument for measuring the perceived gamefulness of system use. In: User Modeling and User-Adapted Interaction 29:619-660. <https://doi.org/10.1007/s11257-019-09223-w>



- Grogger
- Offtopic
- Chunks of Doom
- Word Mover

# Hintergrundvariablen

- Empfundene Schwierigkeit bzw. Komplexität des Lerngegenstands
- Begrenztheit des Gegenstandsfeldes (Wortsemantik vs. Grammatik / Transformationsregeln)
- Identifikation (humanoide vs. gesichtslose Spiele)

darüber hinaus:

- Spielerfahrung / Bedienungsfähigkeiten
- Entlastung von monotonem Lernen durch Spiel, unabhängig von der Kongruenz von Lerngegenstand und Spielmechanik

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