# Clearinghouse Unterricht München

**Wie substanziell sind die Effekte?** Die durchschnittlichen Effektstärken liegen nach der üblichen Einteilung nach Cohen (1988) im mittleren Bereich für die Wiedergabe von Wissen ($g = 0.53$) und im kleinen Bereich für den Transfer von Wissen ($g = 0.33$). Die Größe dieser Effekte bedeuten, dass ca. 70 % der SchülerInnen, die mit Lernmaterialien mit Hervorhebungen gearbeitet haben, Lerninhalte besser wiedergeben und 62 % die Lerninhalte besser auf andere Aufgaben anwenden können als der Durchschnitt der Kontrollgruppe.

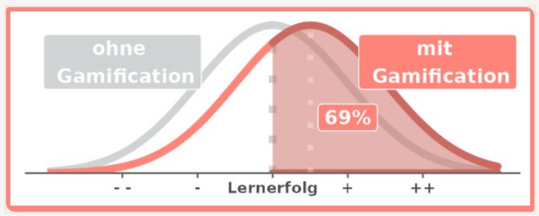
Quelle: Wiesbeck et al., 2018, S. 5

**WAS FAND DIESE STUDIE HERAUS?** Basierend auf den 55 Einzelstudien ergibt die Metaanalyse einen signifikanten positiven Gesamteffekt von *Peer Assessment* auf die Leistung: $g = 0.31$ (Konfidenzintervall $g = 0.18$ bis $g = 0.44$). Auch bei gesonderter Betrachtung von SchülerInnen der Sekundarstufe zeigt sich ein signifikant positiver Effekt von *Peer Assessment* auf die schulische Leistung: $g = 0.44$ (13 Studien).

Quelle: Diery et al., 2021, S. 3

# Tüdibase

**„Fördert ein spielerischer Zugang zu Lerninhalten, d.h. Gamification, die fachliche Leistung von Schülerinnen und Schülern?"**




*Über alle Studien hinweg zeigte sich, dass Lernende mit spielerischen Elementen mehr lernten als Lernende, die ohne spielerische Elemente lernten: 69% der Lernenden mit Gamification werden im Lernerfolg besser als der Durchschnitt der Lernenden ohne Gamification sein.*

Quelle: Backfisch et al. (2021)

# Teaching and Learning Toolkit

## How effective is the approach?

The average impact of metacognition and self-regulation strategies is an additional seven months' progress over the course of a year.

Metacognition and self-regulation strategies can be effective when taught in collaborative groups so that learners can support each other and make their thinking explicit through discussion.

# What Works Clearinghouse

**Table 1. Summary of findings on *Growth Mindset* interventions from studies that meet WWC standards**

| | | Study findings | Evidence meeting WWC standards (version 4.0) | |
|---|---|---|---|---|
| Outcome domain | Effectiveness rating[a] | Improvement index (percentile points) | Number of studies | Number of students |
| Academic achievement | Potentially positive effects | +13 | 5 | 5,301 |
| College enrollment | No discernible effects | +1 | 2 | 8,194 |
| Progressing in college | No discernible effects | -2 | 3 | 8,351 |

Note: The improvement index can be interpreted as the expected change in percentile rank for an average comparison group student if that student had received the intervention. For example, an improvement index of +13 means that the expected percentile rank of the average comparison group student would increase by 13 points if the student received a *Growth Mindset* intervention. The improvement index values are generated by averaging findings from the outcome analyses that meet WWC standards, as reported by Aronson et al. (2002), Bostwick & Becker-Blease (2018), Broda et al. (2018), Fink et al. (2018), Suh et al. (2019), and Yeager et al. (2016). A positive or negative impr
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*Growth Mindset* interventions have **potentially positive effects** on academic achievement

The WWC determined that one study that meets WWC group design standards without reservations (Aronson et al., 2002) showed evidence of a positive and statistically significant effect of a *Growth Mindset* intervention on academic achievement. Two other studies that meet WWC group design standards without reservations (Bostwick & Becker-Blease, 2018 and Suh et al., 2019) showed effect sizes greater than 0.25 of *Growth Mindset* interventions on academic achievement but these findings were not statistically significant. Two studies, one that meets WWC group design standards without reservations (Broda et al., 2018) and one that meets WWC group design standards with reservations (Fink et al., 2018), showed evidence of indeterminate effects of *Growth Mindset* interventions on academic achievement.

**Table 4. Findings by outcome domain from studies of *Growth Mindset* interventions that meet WWC standards**

| | | | Mean (standard deviation) | | WWC calculations | | | |
|---|---|---|---|---|---|---|---|---|
| Measure (study) | Study sample | Sample size | Intervention group | Comparison group | Mean difference | Effect size | Improvement index | *p*-value |
| **Quarter grade point average (GPA; Aronson et al. 2002)[a]** | *Growth Mindset* vs. control pen-pal | 51 | 3.46 (0.30) | 3.19 (0.33) | 0.27 | 0.85 | +30 | <.01 |
| **Final exam score (Bostwick & Becker-Blease 2018)[b]** | *Growth Mindset* vs. fixed mindset | 173 | 80.00 (10.0) | 77.00 (12.0) | 3.00 | 0.27 | +11 | .08 |
| **Semester grade point average (GPA; Broda et al. 2018)[c]** | *Growth Mindset* vs. comparison | 4,357 | 3.18 (0.75) | 3.14 (0.78) | 0.04 | 0.05 | +2 | .09 |
| **Final exam score (Fink et al. 2018)[d]** | *Growth Mindset* vs. comparison | 565 | 64.90 (27.30) | 63.60 (27.20) | 1.30 | 0.05 | +2 | .57 |
| **Course passing rate (%) (Suh et al. 2019)[e]** | *Growth Mindset* vs. laughter/stress | 155 | 64.8 | 32.8 | 32.0 | 0.80 | +29 | .17 |
| **Final exam score (Suh et al. 2019)[e]** | *Growth Mindset* vs. laughter/stress | 74 | 73.68 (12.58) | 74.24 (15.08) | -0.56 | -0.04 | -2 | .94 |
| **Outcome average for academic achievement across all studies** | | | | | | **0.32** | **+13** | |

Quelle: What Works Clearinghouse, 2022, S. 1,4 & 5

**General Mathematics Achievement outcomes—Statistically significant positive effect found for the domain**

| Outcome measure | Comparison | Period | Sample | Intervention mean | Comparison mean | Significant? | Improvement index | Evidence tier |
|---|---|---|---|---|---|---|---|---|
| Grade Point Average in core 9th grade math courses | Online growth mindset intervention vs. Intervention | 9 Months | Full sample; 10,853 students | 2.48 | 2.42 | Yes | 2 (-50, 0, +50) | TIER 1 STRONG |

Quelle: What Works Clearinghouse, 2021