# Individual findings of the meta-analysis at a glance

According to  Schroeder et al. (2017): Studying and constructing concept maps: A meta-analysis.

| Moderator variable | Moderator levels | Effect size $g$ | Number of studies ($k$) |
|---|---|---|---|
| **1. Constructing concept maps and studying existing concept maps** [1] | | | |
| **Comparison treatment** | Discussion/lecture | 1.05* | 37 |
| | Studied or constructed lists | 0.43* | 13 |
| | Studied or constructed outlines | 0.48* | 8 |
| | Studied text | 0.29* | 44 |
| | Constructed text | 0.39* | 13 |
| | Other | 0.57* | 27 |
| **Knowledge domain** | STEM | 0.60* | 118 |
| | Non-STEM | 0.51* | 23 |
| | Not reported | 0.05* | 1 |
| **Concept map type** | Animated | 0.47* | 7 |
| | Interactive | 0.60* | 24 |
| | Static | 0.60* | 105 |
| | Mixed | 0.35 | 6 |
| **Concept map use** | Constructed | 0.72* | 75 |
| | Studied | 0.43* | 67 |
| **Duration of concept map use** | <1 week | 0.36* | 47 |
| | 1–4 weeks | 0.68* | 53 |
| | >4 weeks | 0.72* | 41 |
| | Unknown | 0.06 | 1 |
| **2. a) Constructing the concept maps** | | | |
| **Region of the world** | Africa | 1.44* | 7 |
| | Asia | 0.78* | 9 |
| | Europe | 0.82* | 9 |
| | Middle Easte | 0.75* | 13 |
| | USA or Canada | 0.49* | 33 |
| | Other/not reported | 0.62* | 4 |
| **Knowledge domain** | STEM | 0.73* | 64 |
| | Non-STEM | 0.62* | 11 |
| **Concept map type** | Static | 0.72* | 66 |
| | Interactive | 0.71* | 8 |
| | Mixed | 0.75* | 1 |
| **Comparison treatment** | Discussion/lecture | 1.05* | 32 |
| | Studied or constructed outline | 0.40* | 6 |
| | Studied text | 0.33 | 5 |
| | Constructed text | 0.48* | 10 |
| | Other | 0.47* | 22 |
| **Duration of concept map use** | <1 week | 0.40* | 14 |
| | 1-4 weeks | 0.94* | 23 |
| | >4 weeks | 0.72* | 37 |
| | Unknown | 0.06 | 1 |
| **Grade level** | Intermediate | 0.68* | 22 |
| | Secondary | 0.74* | 25 |
| | Postsecondary and beyond | 0.73* | 28 |
| **Level of collaboration between learners** | Individual | 0.55* | 32 |
| | In groups | 0.91* | 14 |
| | Mixed | 0.91* | 22 |
| | Other | 0.95 | 2 |
| | Unknown | 0.29 | 5 |

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| Moderator variable | Moderator levels | Effect size $g$ | Number of studies ($k$) |
|---|---|---|---|
| **2. b) Studying existing concept maps** | | | |
| **Region of the world** | Asia | 1.04* | 5 |
| | Europe | 0.46* | 3 |
| | Middle East | 0.96* | 2 |
| | USA oder Canada | 0.25* | 51 |
| | Other/not reported | 1.29* | 6 |
| **Knowledge domain** | STEM | 0.44* | 54 |
| | Non-STEM | 0.41* | 12 |
| | Not reported | 0.05 | 1 |
| **Concept map type** | Static | 0.40* | 39 |
| | Animated | 0.47* | 7 |
| | Interactive | 0.54* | 16 |
| | Mixed | 0.27 | 5 |
| **Comparison Treatment** | Discussion/lecture | 1.09* | 5 |
| | Studied or constructed lists | 0.43* | 13 |
| | Studied or constructed outline | 0.72* | 2 |
| | Studied text | 0.29* | 39 |
| | Constructed text | 0.10 | 3 |
| | Other | 0.98* | 5 |
| **Duration of concept map use** | <1 week | 0.34* | 33 |
| | 1-4 weeks | 0.48* | 30 |
| | >4 weeks | 0.70* | 4 |
| **Grade level** | Intermediate | 0.82* | 7 |
| | Secondary | 1.24* | 4 |
| | Postsecondary and beyond | 0.32* | 56 |
| **Level of collaboration between learners** | Individual | 0.41* | 55 |
| | In groups | 0.48* | 10 |
| | Other | 0.75* | 1 |
| | Unknown | 0.47* | 1 |

[1] In *part 1* of the table, all existing studies are used to calculate an average effect size for the respective moderator level. In *part 2*, a distinction is made according to the form of application: In *2a)* only studies in which concept maps were constructed are used and in *2b)* only studies are used in which existing concept maps were studied.

\* means that the difference between the condition with and without concept maps is significant ($p < 0.05$). For example, in the STEM *knowledge domain*, the effect of learning with concept maps compared to the group without concept maps is significant with a medium effect size (0.60).