|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Authors | Year | Strategy | Impact Factor | No. | Grade | Country | Design | Transfer | Domain | Depth | Delay | Ability | ES | No effects | |
| Agarwal & Roediger | 2011 | Practice testing | 2.463 | 72 | Univ | USA | Control-Exp | Far | English | Surface | 2 days | Normal | 0.82 | 5 | |
| Ainsworth & Burcham | 2007 | Self explanation | 4.071 | 24 | Univ | UK | Control-Exp | Near | Science | Surface | < 1 day | Normal | 1.16 | 14 | |
| Aleven & Koedinger | 2002 | Self explanation | 2.496 | 53 | Sec | USA | Control-Exp | Near | Mathematics | Surface | < 1 day | Normal | 1.43 | 1 | |
| Amer | 1994 | Underlining | 1.545 | 99 | Univ | Oman | Pre-post | Near | Gn knowledge | Deep | < 1 day | Normal | 0.39 | 2 | |
| Amlund, Kardash & Kulhavy | 1986 | Re-reading | 1.65 | 120 | Univ | USA | Longitudinal | Near | English | Surface | < 1 day | Normal | 0.93 | 24 | |
| Anderson & Thiede | 2008 | Summarization | 3.016 | 174 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.11 | 4 | |
| Anderson & Hidde | 1971 | Imagery | 2.909 | 24 | Univ | USA | Exp-control | Near | English | Surface | < 1 day | Normal | 2.21 | 2 | |
| Anderson & Kulhavy | 1972 | Imagery | 2.909 | 62 | Sec | USA | Exp-control | Near | English | Surface | < 1 day | Normal | 0.34 | 1 | |
| Annis | 1985 | Summarization | 0.72 | 33 | Univ | USA | Control-Exp | Near | English | Surface | 7 days | High | -0.10 | | 24 | |
| Appleton-Knapp, Bjork & Wickens | 2005 | Distributed practice | 2.783 | 96 | Univ | USA | within-subj | Near | Academic | Surface | < 1 day | Normal | 0.47 | 4 | |
| Armbruster, Anderson & Ostertag | 1987 | Summarization | 1.65 | 82 | Prim | USA | Control-Exp | Near | Humanities | Surface | 11 days | Normal | 0.59 | 1 | |
| Atkinson & Raugh | 1975 | Mnemonics | 0 | 52 | Univ | USA | Exp-control | Near | Languages | Surface | 4 days | Normal | 1.73 | 1 | |
| Balch | 1998 | Practice testing | 0.975 | 45 | Univ | USA | Control-Exp | Near | Science | Surface | 7 days | Normal | 0.38 | 3 | |
| Balch | 2006 | Distributed practice | 0.975 | 145 | Univ | USA |  | Near | English | Surface | < 1 day | Normal | 0.88 | 3 | |
| Balota,Duchek, Sergent-Marshal, & Roediger | 2006 | Practice testing | 2.913 | 29 | Univ | USA | Exp-control | Near | English | Surface | < 1 day | Normal | 1.02 | 2 | |
| Balota, Duchek, Sergent-Marshall, & Roediger | 2006 | Practice testing | 2.913 |  | Univ | USA | Exp-control | Near | English | Surface | < 1 day | Normal | 1.47 | 22 | |
| Bangert-Drowns, Kulik, & Kulik | 1929 | Practice testing | 1.282 |  | Univ | USA |  | Near | Humanities | Surface | 1 day | Normal | 0.23 | 35 | |
| Barcroft | 2007 | Practice testing | 1.433 | 24 | Univ | USA |  | Near | English | Surface | < 1 day | Normal | 0.10 | 3 | |
| Barnett, & Seefeldt | 1989 | Re-reading | 1.101 | 72 | Univ | USA | Exp-control | Near | Humanities | Surface | < 1 day | Normal | 0.58 | 8 | |
| Bean, & Steenwyk | 1984 | Summarization | 1.101 | 41 | Prim | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.98 | 4 | |
| Berry | 1983 | Self explanation | 2.591 | 60 | Univ | UK | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.04 | 1 | |
| Bishara & Jacoby | 2007 | Practice testing | 2.986 | 36 | Univ | USA | Time-series | Near | English | Surface | < 1 day | Normal | 1.25 | 1 | |
| Bloom & Shuell | 1981 | Distributed practice | 1.282 | 56 | Sec | Canada | Control-Exp | Near | Languages | Surface | < 1 day | Normal | 1.00 | 1 | |
| Bretzing & Kulhavy | 1979 | Summarization | 3.159 | 36 | Sec | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.37 | 16 | |
| Brooks, Dansereau, Holley, & Spurlin | 1983 | Summarization | 3.159 | 35 | Univ | USA | Control-Exp | Near | Academic | Surface | < 1 day | Normal | 0.48 | 16 | |
| Brozo, Stahl,& Gordon | 1985 | Summarization | 0 | 49 | Univ | USA |  | Far | English | Surface | 5 weeks | Normal | -0.68 | 4 | |
| Budé, Imbos, van de Wiel & Berger | 2011 | Distributed practice | 1.124 | 64 | Univ | Neth | Time-series | Near | English | Deep | 6 months | Normal | 0.79 | 2 | |
| Butler | 2011 | Practice testing | 3.098 | 48 | Univ | USA |  | Near | English | Surface | 7 days | Normal | 1.15 | 13 | |
| Butler & Roediger | 2007 | Practice testing | 1.21 | 27 | Univ | USA |  | Near | Humanities | Surface | 28 days | Normal | 1.22 | 1 | |
| Butler, Karpicke, & Roediger, | 2008 | Practice testing | 3.098 | 30 | Univ | USA |  | Near | Gn knowledge | Surface | < 1 day | Normal | 1.03 | 2 | |
| Callender & McDaniel | 2009 | Re-reading | 3.159 | 66 | Univ | USA | Longitudinal | Near | English | Surface | < 1 day | Normal | 0.15 | 23 | |
| Callender & McDaniel | 2007 | Elab Interrogation | 2.909 | 56 | Univ | USA |  | Near | Science | Surface | < 1 day | Normal | 0.06 | 14 | |
| Carlson & Shin. | 1996 | Interleaved practice | 3.098 | 45 | Univ | USA | exp-control | Near | Mathematics | Surface | < 1 day | Normal | 1.74 | 12 | |
| Carpenter & DeLosh | 2005 | Practice testing | 1.414 | 62 | Univ | USA | Control-Exp | Near | Academic | Surface | < 1 day | Normal | 0.95 | 2 | |
| Carpenter, Pashler & Cepeda | 2009 | Practice testing | 1.414 | 62 | Sec | USA | Control-Exp | Near | Humanities | Surface | 7 days | Normal | 0.84 | 2 | |
| Carpenter. | 2009 | Practice testing | 3.098 | 59 | Univ | USA |  | Near | English | Surface | < 1 day | Normal | 0.69 | 1 | |
| Carpenter | 2009 | Practice testing | 3.098 | 212 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.84 | 8 | |
| Carpenter & Pashler | 2011 | Practice testing | 2.986 | 52 | Univ | USA |  | Near | Humanities | Surface | < 1 day | Normal | 0.82 | 6 | |
| Carpenter, Pashler, Wixted & Vul | 2008 | Practice testing | 2.021 | 55 | Adult | USA |  | Near | Gn knowledge | Surface | < 1 day | Normal | 0.28 | 21 | |
| Carroll, Campbell-Ratcliffe, Murnane & Perfect | 2008 | Practice testing | 1.21 | 64 | Univ | Aust |  | Near | Science | Surface | 1 day | Normal | 0.24 | 7 | |
| Cashen & Leicht | 1970 | Underlining | 6.261 | 40 | Univ | USA | Control-Exp | Near | Gn knowledge | Deep | < 1 day | Normal | 0.56 | 6 | |
| Cepeda, Pashler, Vul, Wixted & Rohrer | 2006 | Distributed practice | 14.392 | 18 | Univ |  |  | Near | English | Surface | 7 days | Normal | 0.63 | 7 | |
| Cepeda, Vul, Rohrer, Wixted & Pashler | 2008 | Distributed practice | 6.501 | 125 | Univ |  |  | Near | English | Surface | 7 days | Normal | 1.31 | 8 | |
| Cermak, Verfaellie, Lanzoni, Mather & Chase | 1996 | Distributed practice | 3.425 | 26 | Univ | USA | within-subj | Near | English | Surface | < 1 day | Normal | 1.26 | 3 | |
| Chan, Cole & Morris | 1990 | Imagery | 1.44 | 26 | Prim | Aust | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.11 | 12 | |
| Chan | 2010 | Practice testing | 2.463 | 84 | Univ | USA |  | Near | Humanities | Surface | 7 days | Normal | 1.78 | 1 | |
| Chan | 2009 | Practice testing | 5.118 | 96 | Univ | USA |  | Near | Humanities | Surface | < 1 day | Normal | 1.66 | 2 | |
| Chan, McDermott, & Roediger | 2006 | Practice testing | 5.495 | 84 | Univ | USA |  | Near | Science | Surface | 1 day | Normal | 1.10 | 9 | |
| Chi & de Leeuw | 1994 | Self explanation | 2.496 | 14 | Sec | USA | Control-Exp | Near | Science | Surface | < 1 day | Normal | 4.61 | 1 | |
| Coppens, Verkoeijen & Rikers | 2011 | Practice testing | 1.21 | 50 | Univ | Neth |  | Near | Academic | Surface | < 1 day | Normal | 0.98 | 3 | |
| Cranney, Ahn, McKinnon, R., Morris & Watts | 2009 | Practice testing | 1.21 | 75 | Univ | Aust |  | Near | Science | Surface | 7 days | Normal | 0.40 | 6 | |
| Crouse & Idstein | 1972 | Underlining | 2.909 | 66 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 3.26 | 1 | |
| Cull, W. L. | 2000 | Practice testing | 1.414 | 66 | Univ | USA |  | Near | English | Surface | < 1 day | Normal | 0.66 | 12 | |
| Daniel & Broida | 2004 | Practice testing | 0.975 | 86 | Univ | USA | Control-Exp | Near | Academic | Surface | 16 weeks | Normal | 1.68 | 4 | |
| De Beni & Moè | 2003 | Imagery | 1.414 | 47 | Univ | USA |  | Near | English | Surface | < 1 day | Normal | 1.02 | 3 | |
| de Bruin, Rikers & Schmidt, | 2007 | Self explanation | 3.159 | 30 | Univ | Neth |  | Near | Academic | Deep | 14 days | Normal | 0.32 | 4 | |
| de Croock & van Merriënboer | 2007 | Interleaved practice | 3.047 | 34 | Univ | Neth | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.25 | 21 | |
| de Koning, Tabbers, Rikers & Paas | 2011 | Self explanation | 1.414 | 46 | Sec | Neth | Control-Exp | Near | Science | Surface | < 1 day | Normal | 0.22 | 20 | |
| Delaney & Knowles | 2005 | Distributed practice | 5.118 | 128 | Univ | USA | pre-post | Near | English | Surface | < 1 day | Normal | 0.33 | 2 | |
| Dempster | 1987 | Distributed practice | 2.909 | 48 | Univ | USA | Exp-control | Near | English | Surface | < 1 day | Normal | 1.01 | 3 | |
| Denis | 1982 | Imagery | 2.021 | 42 | Univ | France | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.70 | 1 | |
| Di Vesta & Gray | 1972 | Summarization | 2.909 | 10 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.49 | 16 | |
| Doctorow, Wittrock & Marks | 1978 | Summarization | 2.909 | 488 | Prim | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 1.21 | 16 | |
| Dornisch & Sperlng | 2006 | Elab Interrogation | 1.282 | 75 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.29 | 15 | |
| Duchastel & Nungester | 1982 | Practice testing | 1.282 | 83 | Sec | USA | Control-Exp | Near | Humanities | Surface | 1 day | Normal | 0.92 | 4 | |
| Duchastel | 1981 | Practice testing | 3.159 | 57 | Sec | UK |  | Near | Humanities | Surface | 14 days | Normal | 0.11 | 6 | |
| Durgunoglu, Mir & Ariño-Martí | 1993 | Re-reading | 3.159 | 61 | Univ | USA | Control-Exp | Near | English | Deep | < 1 day | Normal | 0.39 | 10 | |
| Dyer, Riley, & Yekovich | 1979 | Summarization | 1.282 | 40 | Univ | USA |  | Near | Humanities | Surface | < 1 day | Normal | -0.10 | 32 | |
| Fass & Schumacher | 1978 | Underlining | 2.909 |  | Univ | USA |  | Near | Science | Surface | < 1 day | Normal | 0.50 | 1 | |
| Fazio, Agarwal, Marsh & Roediger | 2010 | Practice testing | 2.021 | 72 | Univ | USA |  | Near | English | Surface | 7 days | Normal | 3.30 | 3 | |
| Fishman, Keller & Atkinson | 1968 | Distributed practice | 2.909 | 29 | Prim | USA | within-subj | Near | English | Surface |  | Normal | 0.91 | 1 | |
| Foos | 1995 | Summarization | 0.72 | 150 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.30 | 4 | |
| Foos & Fisher, | 1988 | Practice testing | 2.909 | 105 | Univ | USA |  | Near | Humanities | Surface | 2 days | Normal | 0.43 | 2 | |
| Friend | 2001 | Summarization | 3.159 | 294 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.10 | 4 | |
| Fritz, Morris, Nolan & Singleton | 2007 | Practice testing | 2.591 | 60 | Pre school | UK |  | Near | Academic | Surface | 7 days | Normal | 2.00 | 2 | |
| Fritz, Morris, Acton, Voelkel & Etkind | 2007 | Mnemonics | 1.414 | 30 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.58 | 3 | |
| Gagne & Memory | 1978 | Imagery | 1.101 | 64 | Prim | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | -0.02 | 2 | |
| Gajria & Salvia | 1992 | Summarization | 2.943 | 30 | Sec | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Low | 1.78 | 7 | |
| Gambrell & Jawitz | 1993 | Imagery | 1.65 | 60 | Prim | USA |  | Near | English | Surface | < 1 day | Normal | 0.45 | 14 | |
| Glover | 1989 | Practice testing | 2.909 | 60 | Sec | USA | Control-Exp | Near | Science | Surface | 3 days | Normal | 1.91 | 7 | |
| Glover & Corkill | 1987 | Distributed practice | 2.909 | 64 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 1.42 | 2 | |
| Glover, Zimmer, Filbeck, & Plake | 1980 | Underlining | 1.087 | 30 | Univ | USA | Time series | Near | Gn knowledge | Surface | < 1 day | Normal | 1.83 | 7 | |
| Goldstone | 1996 | Interleaved practice | 2.021 | 26 | Univ | USA | exp-control | Near | Academic | Surface | < 1 day | Normal | 0.77 | 2 | |
| Goverover, Arango-Lasprilla, Hillary, Chiaravalloti, & DeLuca, | 2009 | Distributed practice | 2.01 | 25 | Adult | USA | within-subj | Near | English | Surface |  | Low | 0.37 | 2 | |
| Goverover, Hillary, Chiaravalloti, Arango-Lasprilla, & DeLuca | 2009 | Distributed practice | 2.464 | 38 | Adult | USA |  | Near | English | Surface | 5 minutes | Normal | 0.44 | 2 | |
| Green | 1990 | Distributed practice | 3.098 | 60 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.58 | 2 | |
| Green, Symons & Richards | 1996 | Elab Interrogation | 3.159 | 41 | Prim | Canada | Control-Exp | Near | Recall | Surface | < 1 day | Low | 0.43 | 6 | |
| Greene | 1989 | Distributed practice | 3.098 | 48 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.21 | 1 | |
| Griffin & Wiley | 2008 | Self explanation | 2.021 | 150 | Univ | USA | Control-Exp | Near | Science | Surface | < 1 day | Normal | 0.01 | 5 | |
| Griffin, Wiley & Thiede | 2008 | Re-reading | 2.021 | 150 | Univ | USA | Control-Exp | Near | Science | Surface | < 1 day | Normal | -0.04 | 10 | |
| Gyselinck, Meneghetti, de Beni & Pazzaglia | 2009 | Imagery | 2.158 | 43 | Univ | Italy | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.92 | 17 | |
| Hall | 1988 | Mnemonics | 2.909 | 12 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.10 | 5 | |
| Hamilton | 1997 | Elab Interrogation | 3.159 | 40 | Univ | USA | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 0.32 | 24 | |
| Hare & Borchardt | 1984 | Summarization | 1.65 | 32 | Sec | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.70 | 18 | |
| Hartley, Bartlett & Branthwaite | 1980 | Underlining | 1.282 |  | Prim | USA |  | Near | English | Surface | < 1 day | Normal | 0.67 | 2 | |
| Hatala, Brooks & Norman | 2003 | Interleaved practice | 2.705 | 71 | Univ | Canada | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.66 | 2 | |
| Hayati & Shariatifar | 2009 | Underlining | 0 | 40 | Univ | Iran |  | Far | English | Surface | < 1 day | Normal | 2.16 | 1 | |
| Head, Readence & Buss | 1989 | Summarization | 0 | 46 | Sec | USA | Control-Exp | Near | Gn knowledge | Surface | 7 days | Normal | -0.12 | 9 | |
| Helsdingen, van Gog & van Merriënboer | 2011 | Interleaved practice | 4.071 | 36 | Univ | Neth | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.38 | 1 | |
| Helsdingen, van Gog & van Merriënboer | 2011 | Interleaved practice | 2.909 | 120 | Univ | Neth | exp-control | Near | English | Surface | < 1 day | Normal | 0.45 | 7 | |
| Hintzman & Rogers | 1973 | Distributed practice | 2.021 | 27 | Univ | USA | Control-Exp | Near | Academic | Surface | < 1 day | Normal | 3.47 | 3 | |
| Hinze & Wiley | 2011 | Practice testing | 2.463 | 69 | Univ | USA | Control-Exp | Near | Science | Surface | 2 days | Normal | 0.48 | 6 | |
| Idstein & Jenkins | 1972 | Underlining | 1.282 | 79 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.08 | 2 | |
| Jacoby & Dallas | 1981 | Distributed practice | 5.495 | 16 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.70 | 1 | |
| Jacoby, Wahlheim & Coane | 2010 | Practice testing | 3.098 | 40 | Univ | USA |  | Near | Science | Surface | < 1 day | Normal | 0.59 | 4 | |
| Johnson & Mayer | 2009 | Practice testing | 2.909 | 282 | Univ | USA | Control-Exp | Near | Science | Surface | 1 day | Normal | 0.12 | 2 | |
| Johnson, L | 1988 | Underlining | 0 | 46 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.52 | 4 | |
| Kahl & Woloshyn | 1994 | Elab Interrogation | 1.414 | 36 | Prim | Canada |  | Far | Science | Surface | < 1 day | Normal | 0.84 | 4 | |
| Kang & Pashler | 2012 | Interleaved practice | 1.414 | 90 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.75 | 2 | |
| Kardash & Scholes | 1995 | Re-reading | 3.159 | 61 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.53 | 6 | |
| Karpicke & Blunt | 2011 | Practice testing | 34.4 | 40 | Univ | USA | Control-Exp | Near | English | Surface | 7 days | Normal | 1.22 | 5 | |
| Karpicke & Roediger | 2007 | Practice testing | 5.118 | 60 | Univ | USA |  | Near | English | Surface | 7 days | Normal | 0.46 | 3 | |
| Keys | 1934 | Practice testing | 2.909 | 268 | Univ | USA |  | Near | Science | Surface | 15 weeks | Normal | 0.31 | 5 | |
| King | 1992 | Summarization | 3.618 | 38 | Univ | USA | Pre-post | Far | English | Deep | < 1 day | Normal | 0.67 | 6 | |
| King, Biggs & Lipsky | 1984 | Summarization | 1.101 | 55 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | 3 days | Normal | 2.00 | 2 | |
| Klare, Mabry & Gustafson | 1955 | Underlining | 4.367 | 220 | Adult | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.15 | 2 | |
| Kornell & Bjork | 2008 | Distributed practice | 6.501 | 120 | Univ | USA | Control-Exp | Near | Humanities | Surface | < 1 day | Normal | 0.99 | 3 | |
| Kornell | 2009 | Practice testing | 1.414 | 20 | Univ | USA |  | Near | English | Surface | 1 day | Normal | 0.92 | 3 | |
| Kornell & Bjork | 2008 | Interleaved practice | 6.501 | 120 | Univ | USA | within-subj | Far | Humanities | Surface | < 1 day | Normal | 0.99 | 3 | |
| Kornell, Castel, Eich & Bjork | 2010 | Distributed practice | 2.913 | 64 | Univ | USA | Control-Exp | Near | Humanities | Surface | < 1 day | Normal | 1.00 | 2 | |
| Kromann, Bohnstedt, Jensen, & Ringsted | 2010 | Practice testing | 2.705 | 89 | Univ | Denm | Control-Exp | Near | Science | Surface | 6 months | Normal | 0.40 | 1 | |
| Kromann, Jensen, & Ringsted | 2009 | Practice testing | 3.617 | 81 | Univ | Denm | Control-Exp | Near | Science | Surface | 14 days | Normal | 0.93 | 1 | |
| Kulhavy & Swenson | 1975 | Imagery | 2.25 | 47 | Prim | USA |  | Near | Humanities | Surface | 7 days | Normal | 0.29 | 8 | |
| Kulhavy, Dyer & Silver | 1975 | Underlining | 1.282 | 144 | Sec | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | -0.10 | 1 | |
| Lawson & Hogben | 1998 | Mnemonics | 4.071 | 26 | Sec | Aust | Control-Exp | Near | Languages | Surface | < 1 day | Normal | 1.15 | 8 | |
| Leeming, F. C. | 2002 | Practice testing | 0.975 | 192 | Univ | USA |  | Near | Science | Surface | 6 weeks | Normal | 0.33 | 4 | |
| Leicht & Cashen | 1971 | Underlining | 0 | 82 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.12 | 9 | |
| Lesgold, McCormick & Golinkoff | 1975 | Imagery | 2.909 | 44 | Prim | USA | Control-Exp | Near | English | Surface | 27 days | Normal | 0.77 | 5 | |
| Leutner, Leopold & Sumfleth | 2009 | Imagery | 3.047 | 111 | Sec | Germ | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.19 | 1 | |
| Levin & Divine-Hawkins | 1974 | Imagery | 1.101 | 48 | Prim | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.39 | 3 | |
| Levin, Pressley, McCormick, Miller & Shriberg | 1979 | Mnemonics | 2.909 | 70 | Sec | USA | Control-Exp | Near | Languages | Surface | < 1 day | Normal | -0.17 | 8 | |
| Logan & Balota | 2008 | Distributed practice | 1.328 | 190 | Adult | USA | Control-Exp | Near | English | Surface | 1 day | Normal | 1.65 | 2 | |
| Lorch, Lorch & Klusewitz | 1995 | Underlining | 3.159 | 84 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.26 | 3 | |
| Lyle & Crawford | 2011 | Practice testing | 0.975 | 148 | Univ | USA |  | Near | Science | Surface | 12 week | Normal | 1.44 | 1 | |
| Magliano, Trabasso & Graesser | 1999 | Self explanation | 2.909 | 23 | Univ | USA |  | Near | English | Deep | < 1 day | Normal | 1.44 | 1 | |
| Magliano, Trabasso & Graesser | 1999 | Self explanation | 2.909 | 38 | Univ | USA |  | Near | English | Surface | 2 days | Normal | -0.36 | 4 | |
| Maher & Sullivan | 1982 | Imagery | 0 | 78 | Prim | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.02 | 9 | |
| Malone & Mastropieri | 1991 | Summarization | 2.943 | 30 | Sec | USA | Control-Exp | Near | English | Surface | < 1 day | Low | 1.35 | 12 | |
| Marsh, Agarwal & Roediger | 2009 | Practice testing | 2.426 | 32 | Univ | USA |  | Near | Academic | Surface | < 1 day | Normal | 1.65 | 3 | |
| Mastropieri, Scrugs & Fulk | 1990 | Mnemonics | 2.807 | 25 | Sec | USA | Control-Exp | Near | English | Surface | < 1 day | Low | 2.05 | 6 | |
| Matthews | 2008 | Self explanation | 0 | 121 | Prim | USA | Control-Exp | Near | Mathematics | Surface | < 1 day | Normal | 0.52 | 1 | |
| Matthews & Rittle-Johnson | 2009 | Self explanation | 3.353 | 121 | Prim | USA | Control-Exp | Far | Mathematics | Deep | < 1 day | Normal | 0.58 | 2 | |
| Mayfield & Chase | 2002 | Interleaved practice | 1.087 | 66 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.74 | 9 | |
| McDaniel & Donnelly | 1996 | Elab Interrogation | 2.909 | 201 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.53 | 1 | |
| McDaniel & Pressley | 1984 | Mnemonics | 2.909 | 36 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.92 | 12 | |
| McDaniel, Agarwal, Huesler, McDermott & Roediger | 2011 | Practice testing | 2.909 | 184 | Univ | USA | Control-Exp | Near | Science | Surface | 20 days | Normal | 0.75 | 4 | |
| McDaniel, Anderson, Derbish, & Morrisette | 2007 | Practice testing | 1.21 | 68 | Univ | USA | Control-Exp | Near | Academic | Surface | 3 weeks | Normal | 0.40 | 8 | |
| McDaniel, Howard & Einstein | 2009 | Practice testing | 6.501 | 48 | Univ | USA |  | Near | English | Deep | < 1 day | Normal | 0.62 | 18 | |
| McDaniel, Wildman, & Anderson | 2012 | Practice testing | 0.921 | 16 | Univ | USA |  | Near | Science | Surface | 15 weeks | Normal | 1.33 | 7 | |
| Miccinati | 1982 | Imagery | 1.101 | 75 | Prim | USA |  | Far | English | Surface | < 1 day | Normal | 0.49 | 40 | |
| Miller & Pressley | 1989 | Elab Interrogation | 3.353 | 32 | Prim | USA | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 0.08 | 13 | |
| Mitchell, Nash, & Hall | 2008 | Interleaved practice | 3.098 | 24 | Univ | Aust |  | Near | Academic | Surface | < 1 day | Normal | 1.08 | 2 | |
| Morris & Fritz | 2002 | Practice testing | 2.463 | 183 | Univ | UK |  | Near | Academic | Surface | < 1 day | Normal | 0.85 | 2 | |
| Neuschatz, Preston, Toglia & Neuschatz | 2005 | Practice testing | 1.14 | 104 | Univ | USA |  | Near | Academic | Surface | < 1 day | Normal | 1.81 | 3 | |
| Nist & Hogrebe | 2010 | Underlining | 0 | 134 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.39 | 4 | |
| Nungester & Duchastel | 1982 | Practice testing | 2.909 | 97 | Sec | USA | Control-Exp | Near | Humanities | Deep | 14 days | Normal | 0.50 | 2 | |
| Oakhill & Patel | 1991 | Imagery | 1.192 | 44 | Prim | UK | Control-Exp | Near | English | Surface | < 1 day | Normal | 1.06 | 1 | |
| Olina, Reiser, Huang, Lim & Park | 2006 | Interleaved practice | 1.414 | 73 | Sec | USA | Control-Exp | Near | English | Surface | < 1 day | Low | 0.00 | 12 | |
| O'Reilly, Symons & MacLatchy-Gaudet | 1998 | Elab Interrogation | 3.159 | 37 | Univ | Canada | Control-Exp | Near | Science | Surface | < 1 day | Normal | 0.00 | 14 | |
| O'Shea, Sindelar & O'Shea | 1985 | Re-reading | 1.101 | 60 | Prim | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 1.33 | 6 | |
| Ozgungor & Guthrie | 2004 | Elab Interrogation | 2.909 | 119 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.67 | 1 | |
| Peterson, S. E. | 1992 | Underlining | 0 | 44 | Univ | USA |  | Near | Humanities | Surface | < 1 day | Normal | -0.19 | 8 | |
| Pressley | 1976 | Imagery | 2.909 | 54 | Prim | USA | Control-Exp | Near | English | Surface | < 1 day | High | 0.28 | 6 | |
| Pressley & Levin | 1978 | Mnemonics | 3.353 | 36 | Prim | USA | Exp-Control | Near | Languages | Surface | < 1 day | Normal | 0.00 | 6 | |
| Pressley, McDaniel, Turnure, Wood & Ahmad | 1987 | Elab Interrogation | 3.098 | 240 | Univ | Canada | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 0.54 | 4 | |
| Pyc & Rawson | 2010 | Practice testing | 34.4 | 118 | Univ | USA | Control-Exp | Near | Languages | Surface | 7 days | Normal | 4.33 | 3 | |
| Pyc, & Dunlosky | 2010 | Distributed practice | 2.021 | 68 | Univ | USA | Control | Near | English | Surface | < 1 day | Normal | 0.74 | 16 | |
| Pyc, & Rawson | 2012 | Practice testing | 3.098 | 53 | Univ | USA | Control | Near | Languages | Surface | 2 days | Normal | 0.89 | 3 | |
| Pyc, & Rawson | 2014 | Distributed practice | 3.098 | 53 | Univ | USA | Control | Near | Languages | Surface | 2 days | Normal | 0.68 | 8 | |
| Ramsay, Sperling & Dornisch | 2010 | Elab Interrogation | 1.96 | 234 | Univ | USA | Control-Exp | Near | Humanities | Surface | < 1 day | Normal | -0.11 | 2 | |
| Rasco, Tennyson & Boutwell | 1975 | Imagery | 2.909 | 91 | Univ | USA | Exp-control | Near | English | Surface | < 1 day | Normal | 0.57 | 2 | |
| Rau, Aleven & Rummel | 2010 | Interleaved practice | 0 | 108 | Prim | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Low | -0.32 | 12 | |
| Raugh & Atkinson | 1975 | Mnemonics | 2.909 | 40 | Univ | USA | Control-Exp | Near | Languages | Surface | < 1 day | Normal | 0.03 | 3 | |
| Rawson & Kintsch | 2005 | Re-reading | 2.909 | 79 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.38 | 1 | |
| Rawson & Kintsch | 2005 | Re-reading | 2.909 | 168 | Univ | USA | Control-Exp | Near | English | Surface | 2 days | Normal | 0.28 | 14 | |
| Rawson | 2012 | Re-reading | 5.118 | 187 | Univ | USA | Exp-control | Near | Humanities | Surface | < 1 day | Normal | 0.32 | 10 | |
| Rawson & Dunlosky | 2011 | Practice testing | 5.495 | 130 | Univ | USA |  | Near | Science | Surface | 2 days | Normal | 0.53 | 16 | |
| Rawson & Kintsch | 2005 | Distributed practice | 2.909 | 77 | Univ | USA | Control | Near | English | Surface | 2 days | Normal | 0.31 | 13 | |
| Rewey, Dansereau, & Peel | 1991 | Summarization | 3.159 | 47 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.11 | 14 | |
| Reynolds & Glaser | 1964 | Distributed practice | 2.909 | 150 | Sec | USA | Control-Exp | Near | Science | Surface | < 1 day | Normal | 0.63 | 4 | |
| Riches, Tomasello & Conti-Ramsden | 2005 | Distributed practice | 2.68 | 48 | Prim | UK | Control-Exp | Near | English | Surface | < 1 day | Low | 0.22 | 4 | |
| Rickards & Denner | 1979 | Underlining | 1.96 | 21 | Prim | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | -0.24 | 8 | |
| Rinehart, Stahl, & Erickson, | 1986 | Summarization | 1.65 | 60 | Prim | USA | Control-Exp | Near | Gn knowledge | Surface | 2 days | Normal | 0.54 | 16 | |
| Roediger & Karpicke, | 2011 | Practice testing | 6.501 | 120 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.53 | 7 | |
| Roediger & Marsh | 2005 | Practice testing | 3.098 | 24 | Univ | USA |  | Near | English | Surface | < 1 day | Normal | 3.20 | 1 | |
| Rohrer & Taylor | 2006 | Distributed practice | 1.414 | 116 | Univ | USA | Control-Exp | Near | Mathematics | Surface | 28 days | Normal | 0.41 | 2 | |
| Rohrer & Taylor | 2007 | Interleaved practice | 1.96 | 66 | Univ | USA | Control-Exp | Near | Mathematics | Surface | 7 days | Normal | 1.20 | 2 | |
| Rohrer, Taylor & Sholar | 2010 | Practice testing | 3.098 | 28 | Prim | USA | Control-Exp | Near | Humanities | Surface | 1 day | Normal | -0.25 | 6 | |
| Ross, & Di Vesta, | 1976 | Summarization | 2.909 | 52 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | 7 days | Normal | 0.06 | 4 | |
| Runquist | 1983 | Practice testing | 2.021 | 42 | Univ | Canada | Exp-control | Near | English | Surface | < 1 day | Normal | 0.91 | 4 | |
| Schmidmaier, Ebersbach, Schiller, Hege, Hlozer & Fischer | 2011 | Practice testing | 3.617 | 80 | Univ | Germ |  | Near | English | Surface | 7 days | Normal | 0.38 | 2 | |
| Schworm & Renkl | 2006 | Self explanation | 3.242 | 40 | Univ | Germ | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.57 | 10 | |
| Seabrook, Brown & Solity | 2005 | Distributed practice | 1.414 | 40 | Prim | UK | Control-Exp | Near | Mathematics | Surface | < 1 day | Normal | 0.91 | 1 | |
| Seifert | 1993 | Elab Interrogation | 2.909 | 55 | Sec | Canada | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 0.21 | 24 | |
| Shapiro, & Waters | 2005 | Imagery | 1.358 | 56 | Univ | USA |  | Near | Languages | Surface | < 1 day | Normal | 2.98 | 2 | |
| Shriberg, Levin, McCormick, & Pressley | 1982 | Mnemonics | 2.909 | 48 | Sec | Canada | Exp-Control | Near | Languages | Surface | < 1 day | Normal | 0.00 | 7 | |
| Smith, Holliday & Austin | 2010 | Elab Interrogation | 3.02 | 147 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.37 | 6 | |
| Smith & Kimball | 2010 | Practice testing | 3.098 | 103 | Univ | USA | within-subj | Near | Gn knowledge | Surface | < 1 day | Normal | 0.15 | 2 | |
| Sobel, Cepeda & Kapler | 2011 | Distributed practice | 1.414 | 38 | Prim | Canada | Control-Exp | Near | English | Surface | 7 days | Normal | 0.91 | 1 | |
| Spörer, Brunstein, & Kieschke | 2009 | Summarization | 4.071 | 84 | Prim | Germ | Control-Exp | Near | Gn knowledge | Surface | 12 week | Normal | 0.29 | 6 | |
| Spurlin, Dansereau, O’Donnell & Brooks | 1988 | Summarization | 0.72 | 32 | Univ | USA |  | Near | Science | Surface | 5 days | Normal | 0.77 | 4 | |
| Stein & Bransford | 1979 | Elab Interrogation | 5.118 | 60 | Univ | USA | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 1.94 | 2 | |
| Sumowski, Chiaravalloti & DeLuca | 2010 | Practice testing | 3.425 | 16 | Adult | USA | within-subj | Near | English | Surface | < 1 day | Normal | 0.69 | 3 | |
| Taylor & Rohrer | 2010 | Interleaved practice | 1.414 | 24 | Prim | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 1.21 | 1 | |
| Thiede & Anderson | 2003 | Summarization | 3.159 | 52 | Univ | USA | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | 0.38 | 8 | |
| Thomas & Wang | 1996 | Mnemonics | 2.426 | 56 | Univ | USA | Control-Exp | Near | Languages | Surface | < 1 day | Normal | -0.41 | 8 | |
| Toppino | 1991 | Distributed practice | 2.021 | 46 | Pre school | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.95 | 6 | |
| Toppino, & Cohen | 2009 | Practice testing | 1.95 | 12 | Univ | USA | exp-control | Near | English | Surface | 2 days | Normal | 1.30 | 2 | |
| Toppino, Fearnow-Kenney, Kieper, & Teremula | 2009 | Distributed practice | 2.021 | 144 | Prim | USA | Control-Exp | Near | Academic | Surface | < 1 day | Normal | 0.62 | 12 | |
| Tse, Balota & Roediger | 2010 | Practice testing | 2.913 | 64 | Adult | USA |  | Near | Academic | Surface | < 1 day | Normal | 0.32 | 4 | |
| van Hell & Mahn | 1997 | Mnemonics | 1.433 | 36 | Univ | Neth | Control-Exp | Near | Gn knowledge | Surface | < 1 day | Normal | -0.55 | 24 | |
| van Merriënboer, Schuurman, de Croock, & Paas | 2002 | Interleaved practice | 4.071 | 69 | Univ | Neth | Control-Exp | Near | Science | Surface | < 1 day | Normal | -0.02 | 12 | |
| Verkoeijen, Rikers, & Özsoy | 2008 | Distributed practice | 1.414 | 38 | Univ | Neth | Exp-control | Near | Humanities | Surface | 2 days | Normal | 0.70 | 3 | |
| Verkoeijen, Rikers & Ozsoy | 2008 | Distributed practice | 1.414 | 61 | Univ | Neth | Control-Exp | Near | Academic | Surface | 7 days | Normal | 0.64 | 2 | |
| Vlach, Sandhofer & Kornell | 2008 | Distributed practice | 5.088 | 36 | Pre school | USA | Control-Exp | Near | Academic | Surface | < 1 day | Normal | 2.88 | 1 | |
| Vojdanoska, Cranney, & Newell | 2010 | Practice testing | 1.414 | 106 | Univ | Aust | Control-Exp | Near | Science | Surface | 6 weeks | Normal | 1.03 | 6 | |
| Wahlheim, Dunlosky & Jacoby | 2011 | Distributed practice | 2.021 | 48 | Univ | USA | Control-Exp | Near | Academic | Surface | < 1 day | Normal | 1.19 | 3 | |
| Wang & thomas | 1995 | Mnemonics | 2.909 | 34 | Univ | USA | Control-Exp | Near | English | Surface | < 1 day | Normal | 0.81 | 10 | |
| Wang, Thomas, & Ouellette | 1992 | Mnemonics | 2.909 | 79 | Univ | USA | Exp-control | Near | Languages | Surface | < 1 day | Normal | 1.32 | 6 | |
| Weinstein, McDermott, & Roediger | 2010 | Practice testing | 2.426 | 29 | Univ | USA | Within-subj | Near | Academic | Surface | < 1 day | Normal | 0.95 | 6 | |
| Wenger, Thompson, & Bartling | 1980 | Practice testing | 0 | 64 | Univ | USA | Exp-Control | Near | English | Surface | 2 days | Normal | 0.97 | 2 | |
| Wheeler, Ewers, & Buonanno | 2003 | Practice testing | 2.463 | 60 | Univ | USA | Exp-Control | Near | English | Surface | 2 days | Normal | 0.39 | 3 | |
| Willoughby & Wood | 1994 | Elab Interrogation | 4.071 | 32 | Univ | Canada | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 0.81 | 2 | |
| Willoughby, Waller, Wood & McKinnon | 1993 | Elab Interrogation | 3.159 | 40 | Univ | Canada | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 1.40 | 4 | |
| Willoughby, Waller, Wood & McKinnon | 1993 | Elab Interrogation | 3.159 | 40 | Univ | Canada | Control-Exp | Near | Recall | Surface | 28 days | Normal | 1.39 | 5 | |
| Woloshyn, Pressley & Schneider | 1992 | Elab Interrogation | 2.909 | 30 | Univ | Canada | Control-Exp | Near | Humanities | Surface | < 1 day | Normal | 2.72 | 4 | |
| Woloshyn, Pressley & Schneider | 1992 | Elab Interrogation | 2.909 |  | Univ | Germ | Control-Exp | Near | Humanities | Surface | < 1 day | Normal | 1.51 | 4 | |
| Woloshyn, & Stockley | 1995 | Elab Interrogation | 1.414 | 40 | Sec | Canada |  | Near | Science | Surface | < 1 day | Normal | 0.72 | 12 | |
| Woloshyn, Paivio & Pressley, | 1994 | Elab Interrogation | 2.909 | 60 | Sec | Canada |  | Far | Science | Surface | < 1 day | Normal | 0.95 | 48 | |
| Woloshyn, Willoughby, Wood, & Pressley, | 1990 | Elab Interrogation | 2.909 | 36 | Univ | Canada |  | Near | Academic | Surface | < 1 day | Normal | 1.20 | 14 | |
| Wong, Lawson & Keeves | 2002 | Self explanation | 4.071 | 47 | Sec | Aust | Control-Exp | Near | Mathematics | Surface | < 1 day | Normal | 0.72 | 14 | |
| Wood & Hewitt | 1993 | Elab Interrogation | 1.158 | 35 | Prim | Canada | Control-Exp | Near | English | Surface | < 1 day | Low | 0.86 | 2 | |
| Wood, Pressley, & Winne | 1990 | Imagery | 2.909 | 36 | Sec | Canada |  | Near | Gn knowledge | Surface | < 1 day | Normal | 1.01 | 6 | |
| Wood, Miller, Symons, Canough & Yedlicka | 1993 | Elab Interrogation | 1.51 | 120 | Pre school | USA | Control-Exp | Near | Recall | Surface | < 1 day | Normal | 0.28 | 32 | |
| Wood, Willoughby, Bolger, Younger & Kaspar | 1993 | Elab Interrogation | 3.353 | 40 | Prim | Canada | Control-Exp | Near | Recall | Surface | < 1 day | Low | 0.64 | 3 | |
| Zaromb & Roediger | 2010 | Practice testing | 2.021 | 36 | Univ | USA | Control-Exp | Near | Recall | Surface | 2 days | Normal | 0.74 | 8 | |

Table 1. Summary of effects for each learning strategy

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Learning Strategy** | **Dunlosky classification** | **# cases** | **Unique N** | **d** | **SEM** | **q** | **I2** |
| Distributed Practice | High | 150 | 152,952 | 0.85 | 0.053 | 887.0 | 83% |
| Practice Testing | High | 374 | 6,033 | 0.74 | 0.04 | 2613.3 | 86% |
| Elaborative Interrogation | Moderate | 254 | 2,138 | 0.56 | 0.048 | 1172.4 | 78% |
| Imagery | Moderate | 135 | 1,052 | 0.56 | 0.061 | 415.9 | 68% |
| Self Explanation | Moderate | 93 | 804 | 0.54 | 0.092 | 394.0 | 77% |
| Mnemonics | Low | 107 | 580 | 0.50 | 0.104 | 933.9 | 89% |
| Re-Reading | Low | 113 | 1,529 | 0.47 | 0.06 | 792.3 | 86% |
| Interleaved Practice | Low | 104 | 972 | 0.47 | 0.089 | 864.3 | 88% |
| Underlining | Low | 56 | 1,129 | 0.44 | 0.115 | 242.0 | 77% |
| Summarization | Low | 234 | 1,990 | 0.44 | 0.055 | 2063.4 | 89% |
| Average/Total | | 1619 | 169,179 | 0.56 |  | 10,688 | 85% |

Table 2. Effect Sizes moderated by the Learning Domain

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **English** | **General Knowledge** | **Humanities** | **Languages** | **Mathematics** | **Recall** | **Science** | **Unknown** |
| **EFFECT SIZES** |
| Elaborative Interrogation | 0.38 |  | -0.11 |  |  | 0.46 | 0.76 |  |
| Self Explanation | 0.36 |  |  |  | 0.50 |  | 0.63 |  |
| Summarization | 0.39 |  | -0.08 |  |  | 0.59 | 0.77 |  |
| Underlining | 0.42 |  | -0.19 | 2.16 |  | 0.52 | 0.50 |  |
| Mnemonics | 1.17 |  |  | 0.75 |  | -0.34 |  |  |
| Imagery | 0.51 |  |  | 2.98 |  | 1.01 | 0.29 |  |
| Re-Reading | 0.54 |  | 0.44 |  |  |  | -0.04 |  |
| Practice Testing | 0.94 | 0.52 | 0.70 | 1.29 | 0.13 | 0.71 | 0.64 |  |
| Distributed Practice | 0.88 |  | 0.88 | 0.67 | 0.39 | 1.16 | 0.63 | 0.61 |
| Interleaved Practice | 0.10 |  | 0.99 |  | 1.66 | 0.31 | 0.20 |  |
| Average | 0.57 | 0.52 | 0.38 | 1.57 | 0.67 | 0.55 | 0.49 | 0.61 |

Table 3. Effect sizes moderated by grade level

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| s | Prim | | | Sec | | | Univ | | |
|  | Mean | SE | N | Mean | SE | N | Mean | SE | N |
| Distributed practice | 0.57 | 0.11 | 15 | 0.70 | 0.24 | 5 | 0.89 | 0.06 | 115 |
| Elab Interrogation | 0.38 | 0.14 | 28 | 0.71 | 0.06 | 84 | 0.58 | 0.09 | 110 |
| Imagery | 0.38 | 0.06 | 101 | 0.82 | 0.17 | 8 | 1.16 | 0.18 | 26 |
| Interleaved practice | -0.20 | 0.15 | 13 | 0.00 | 0.07 | 12 | 0.65 | 0.11 | 79 |
| Mnemonics | 0.00 | 0.00 | 6 | 0.69 | 0.17 | 29 | 0.20 | 0.13 | 72 |
| Practice testing | -0.25 | 0.56 | 6 | 0.99 | 0.24 | 22 | 0.80 | 0.04 | 278 |
| Re-reading | 1.33 | 0.26 | 6 |  |  |  | 0.42 | 0.06 | 107 |
| Self explanation | 0.28 | 0.09 | 15 | 0.57 | 0.16 | 36 | 0.60 | 0.15 | 42 |
| Summarization | 1.20 | 0.13 | 25 | 0.75 | 0.14 | 58 | 0.19 | 0.05 | 151 |
| Underlining | -0.06 | 0.18 | 10 | -0.10 |  | 1 | 0.57 | 0.14 | 43 |
| Total | 0.42 | 0.05 | 225 | 0.69 | 0.05 | 255 | 0.59 | 0.03 | 1023 |

Table 4. Effect size moderated by Country of first author

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Australia | Canada | Europe | USA | Total |
| Distributed practice |  |  | 0.56 | 0.88 | 0.86 |
| Elab Interrogation |  | 0.76 |  | 0.27 | 0.56 |
| Imagery |  |  | 0.88 | 0.52 | 0.56 |
| Interleaved practice |  |  | 0.21 | 0.62 | 0.47 |
| Mnemonics |  |  | -0.44 | 0.56 | 0.33 |
| Practice testing | 0.46 |  | 0.67 | 0.78 | 0.76 |
| Re-reading |  |  |  | 0.47 | 0.47 |
| Self explanation | 0.72 |  | 0.57 | 0.38 | 0.54 |
| Summarization |  |  | 0.29 | 0.44 | 0.44 |