

Field	Value
Meta title	Mind Mapping and Student Study Statistics (2026)
Meta description	45+ statistics on mind maps, concept maps and how students study, from meta-analyses covering 11,814 students, peer-reviewed studies, HEPI and Ofqual. Every figure is sourced and linked.
Slug	research/mind-map-statistics
Web version	https://mindmapi.ai/research/mind-map-statistics
Published	29 October 2026, Mindmapi.ai Research

Do Mind Maps Work? 45+ Mind Mapping and Student Study Statistics (2026)

By [Kashish Mustafa](#), Co-founder, Mindmapi · Last reviewed 29 October 2026

Across [142](#) controlled comparisons involving [11,814](#) students, learning with concept maps (the research family that mind maps belong to) beat other ways of learning, with an average effect size of [\$g = 0.58\$](#) . Students who drew their own maps gained the most.

Few students study this way. Only [15%](#) of US undergraduates in one survey regularly made diagrams, charts or pictures to study, while [84%](#) in another reread their notes or textbook, a technique rated “low utility” in a major review of the evidence.

This report brings together the research on mind maps and concept maps, how students really study, the “visual learner” myth, and the latest UK data on study time and AI use. Each figure links to the original study or report.

Mind Mapping by the Numbers

The headline findings on mind maps, study habits and UK students.

DOES MAPPING WORK?

$g = 0.58$

Average benefit of learning with concept maps, across 11,814 students

$g = 0.72$

Benefit when students build their own maps, against 0.43 for studying ready-made ones

$g = 1.05$

Benefit of concept maps over lectures and class discussion, across 37 studies

HOW STUDENTS STUDY

84%

of students reread their notes or textbook to study

11%

practise recalling what they have learned

15%

regularly make diagrams, charts or pictures

THE VISUAL LEARNER MYTH

93%

of UK teachers surveyed believed students learn better in their preferred learning style

58%

of students believe they have a specific learning style

UK STUDENTS IN 2026

11.1 hrs

of independent study a week, the lowest on record

94%

of undergraduates use generative AI for assessed work

Sources: Schroeder et al. (2018); Karpicke, Butler & Roediger (2009); Hartwig & Dunlosky (2012); Dekker et al. (2012); Morehead et al. (2016); HEPI and Advance HE (2026); HEPI and Kortext (2026).

Top Picks

Does mind mapping work?

- **Learning with concept maps (meta-analysis of 142 effect sizes):** [\$g = 0.58\$](#) , a moderate, statistically significant benefit
- **Making your own map vs studying a ready-made one:** [\$g = 0.72\$](#) against [\$g = 0.43\$](#)
- **Maps used for more than four weeks:** [\$g = 0.72\$](#) , double the [\$g = 0.36\$](#) for less than a week
- **Medical students recalling facts a week later (mind maps):** [10%](#) more than students using their usual method

How students study

- **Students who reread their notes or textbook:** [84%](#), and [55%](#) say it is their main strategy
- **Students who practise recall:** [11%](#), and only [1%](#) as their main strategy
- **Students who regularly make diagrams, charts or pictures:** [15%](#) to [24%](#)

- Students who cram the night before a test: [66%](#)

Beliefs and UK students

- Educators worldwide who believe in teaching to learning styles: [89.1%](#) of 15,405 in 18 countries
- UK undergraduates' independent study: [11.1 hours](#) a week, down from [15.7](#) in 2021
- UK undergraduates using AI for assessed work: [94%](#), up from just over half in 2024
- Students who received GCSE results in England in 2026: [1,047,750](#)

Do Mind Maps Work for Studying?

Yes, on average. The largest review of the evidence, a meta-analysis by Schroeder, Nesbit, Anguiano and Adesope in *Educational Psychology Review*, pooled [142](#) effect sizes from studies involving [11,814](#) students. Learning with concept and knowledge maps produced a moderate, statistically significant benefit of [g = 0.58](#), in both STEM and non-STEM subjects.

In plain terms, an effect of 0.58 means the average student who learned with maps scored higher than about 72% of students who learned another way.

How students use the maps matters. Building a map yourself does more than reading one somebody else made:

How students used concept maps	Effect size (g)	Studies (k)	Students
All uses	0.58	142	11,814
Built their own maps	0.72	75	6,880
Studied ready-made maps	0.43	67	4,934

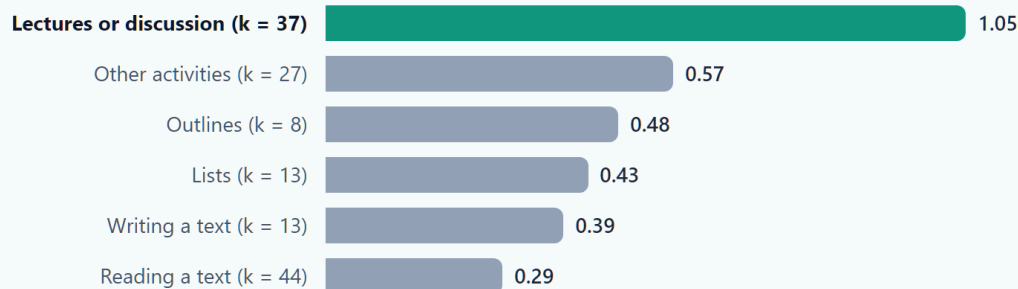
An earlier meta-analysis by Nesbit and Adesope in the *Review of Educational Research* found the same pattern across [55](#) studies and [5,818](#) participants: [g = 0.82](#) for making maps and [g = 0.37](#) for studying them.

What mind maps were compared against

The size of the benefit depends on what the maps were compared with. It was largest against lectures and class discussion and smallest against reading a text:

Learning with concept maps, compared with other methods

Effect size (Hedges' g) by comparison method; higher favours concept maps



Source: [Schroeder, Nesbit, Anguiano & Adesope \(2018\), Educational Psychology Review, Table 1](#)

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Concept maps beat lectures and class discussion by $g = 1.05$ across 37 studies, the largest gap in the review.

A note on mind maps and concept maps

Most research uses *concept maps*, where every line between two ideas is labelled with how they are related. A *mind map* branches out from one central topic, usually with keywords, colour and images. Both are node-and-link diagrams, and research on mind maps specifically (below) points the same way, but the evidence base for mind maps alone is smaller.

Do Mind Maps Work Better the Longer You Use Them?

Yes. Studies that ran for more than four weeks found an effect of $g = 0.72$, double the $g = 0.36$ in studies lasting under a week.

The longer students used concept maps, the bigger the benefit

Effect size (Hedges' g) by how long students used concept maps



Source: [Schroeder et al. \(2018\), Educational Psychology Review, Table 4](#)

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For students building their own maps, the benefit peaked at $g = 0.94$ in studies lasting one to four weeks. That fits a term of revision better than a single night before the exam.

Which Students Benefit Most From Mind Maps?

Building concept maps helped students at every stage of education about equally. Studying ready-made maps helped school pupils far more than university students:

Stage of education	Built their own maps (g)	Studied ready-made maps (g)
Intermediate (school grades 4 to 8)	0.68	0.82
Secondary (school grades 9 to 12)	0.74	1.24
University and beyond	0.73	0.32

The secondary-school figure for ready-made maps comes from only four studies, so treat it with care. By subject, the benefit was [g = 0.60](#) in STEM (118 effect sizes) and [g = 0.51](#) in other subjects (23 effect sizes).

Working with others helped too. Students who built maps in groups saw an effect of [g = 0.91](#), against [g = 0.55](#) for those working alone, although the review did not find the difference statistically significant.

What Does Research on Mind Maps Specifically Show?

Studies of mind maps on their own are smaller and more mixed than the concept map research, but they lean positive.

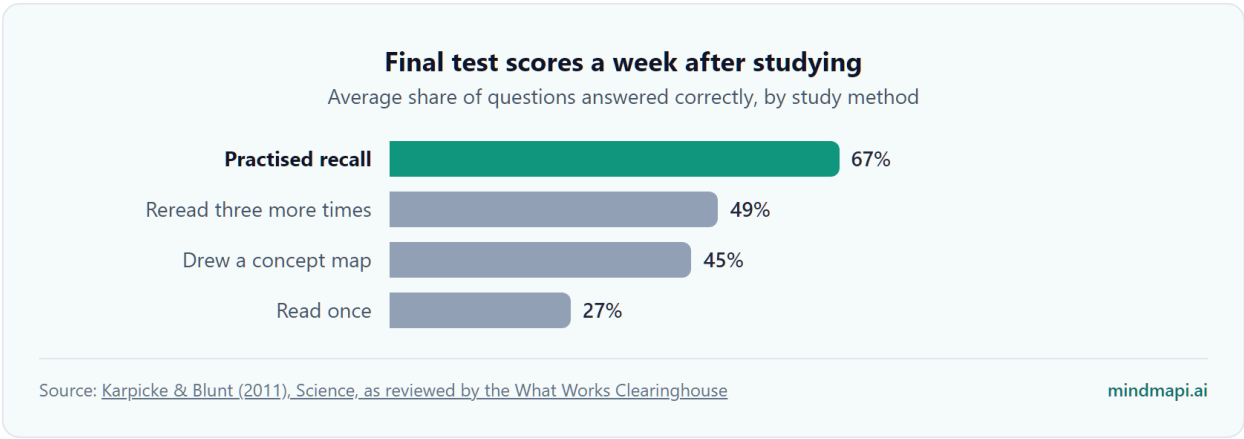
Study	Who	Finding
Shi, Yang, Dou & Zeng (2023)	Meta-analysis of 21 studies	Mind map-based teaching beat traditional teaching, especially for younger students and in STEM subjects
Liu, Zhao, Ma & Bo (2014)	Meta-analysis, 40 studies, 5,213 students	Effect size of 0.63, as listed in the Visible Learning MetaX database
Farrand, Hussain & Hennessy (2002)	50 medical students, London	10% better recall of facts a week later than students using their usual methods
D'Antoni, Zipp, Olson & Cahill (2010)	131 first-year medical students, US	No difference in short-term recall or critical thinking against standard note-taking, after a brief introduction to mind mapping

In the London study, the [10%](#) advantage came with a wide margin of error (95% confidence interval: -1% to 22%). Students who used mind maps also reported lower motivation, and the authors estimated the advantage would have been [15%](#) (95% CI: 3% to 27%) if motivation had been equal.

The Visible Learning MetaX database lists Shi and colleagues' meta-analysis with an effect size of [0.99](#) across [1,602](#) students.

Is Self-Testing Better Than Mind Mapping?

In a head-to-head test, yes. In a study published in *Science*, Karpicke and Blunt had students read a short science text and then study it in different ways. A week later, students who had practised recalling the text scored [67%](#), against [45%](#) for those who drew a concept map:



In a second experiment, [84%](#) of 120 students did better after practising recall than after concept mapping, yet [75%](#) believed mapping would work as well or better.

That matches a [review of 10 study techniques](#) in *Psychological Science in the Public Interest*. Dunlosky and colleagues rated two techniques as high utility and five as low:

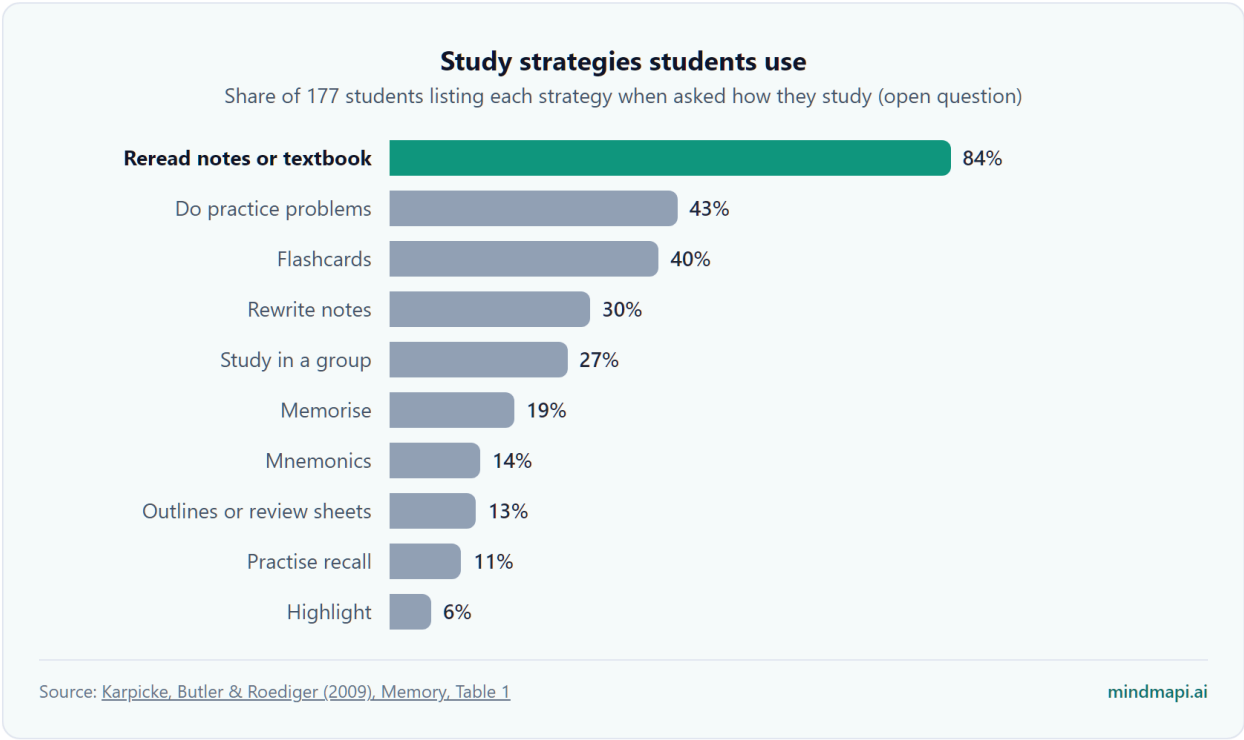
Utility rating	Techniques
High	Practice testing; spreading study out over time (distributed practice)
Moderate	Elaborative interrogation; self-explanation; interleaved practice
Low	Summarising; highlighting; the keyword mnemonic; imagery for text; rereading

The two can be combined. A map gives students a structure to recall from: they can cover a branch, try to rebuild it from memory, then check against the map.

The two highest-rated study techniques, practice testing and spaced study, can both be done with a mind map.

How Do Students Actually Study?

Mostly by rereading. When [177](#) university students were asked to list their study strategies, rereading came first by a wide margin. Mind maps and concept maps were not among the 11 strategies the answers fell into:



[55%](#) said rereading was their main strategy; only [1%](#) said that of practising recall. Asked what they would do after reading a chapter once, [57%](#) would reread it and only [18%](#) would test themselves. The students were at Washington University in St. Louis, a highly selective university.

How many students study visually?

Few. Asked which strategies they use regularly, [15%](#) of undergraduates in Hartwig and Dunlosky's survey, and [24%](#) of 300 in a later survey by Morehead, Rhodes and DeLozier, said they make diagrams, charts or pictures. Their teachers were keener: [34%](#) of the 146 university instructors surveyed recommend it.

Regular study strategy	Hartwig & Dunlosky (2012)	Morehead et al. (2016)
Test yourself with questions or practice problems	71%	72%
Reread chapters, articles or notes	66%	67%
Cram the night before the test	66%	53%
Use flashcards	62%	54%
Recopy notes	33%	33%
Make diagrams, charts or pictures	15%	24%

Most students who quiz themselves do it to check what they know, not to learn: [68%](#) gave that reason in Kornell and Bjork's 2007 survey, and only [18%](#) said they quiz themselves because they learn more that way.

Are Some Students “Visual Learners”?

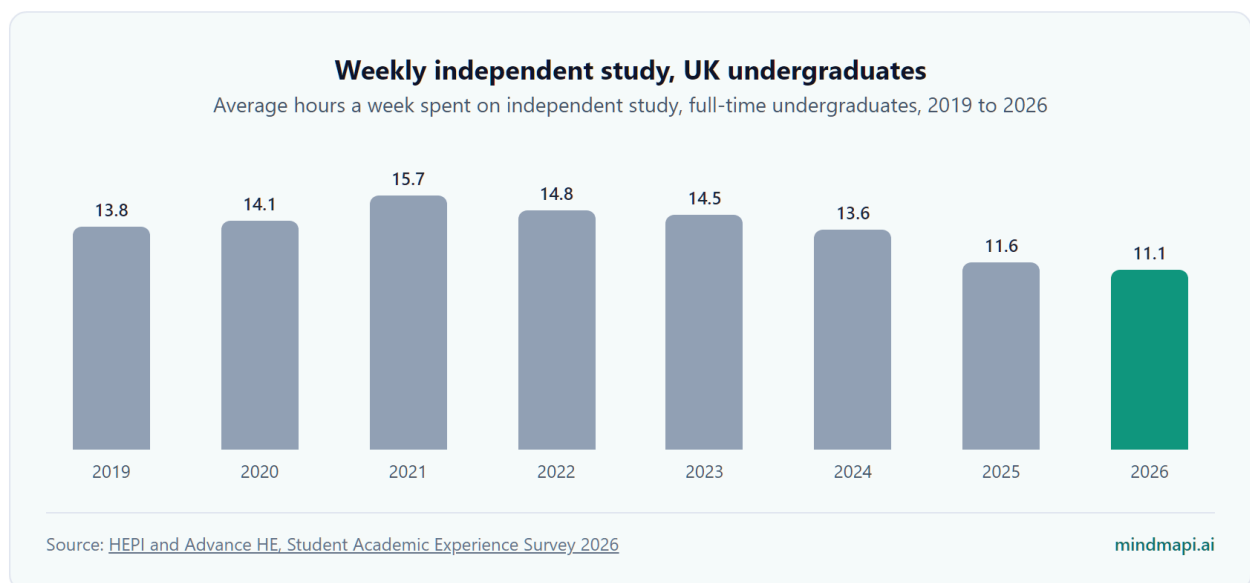
The research says no. Reviews going back to 2004 have found no evidence that matching teaching to a student's supposed learning style, such as “visual” or “auditory”, improves learning. Belief in it remains widespread:

- **UK teachers who believe students learn better in their preferred learning style:** [93%](#) of 137 teachers in Dorset, and [96%](#) of 105 teachers in the Netherlands
- **Educators worldwide who believe in teaching to learning styles:** [89.1%](#), across 37 studies of 15,405 educators in 18 countries
- **Trainee teachers who agree:** [95.4%](#), so the belief is not dying out
- **University students who believe they have a specific learning style:** [58%](#)
- **Fall in belief after teachers are shown the evidence:** an average of [37%](#)

Mind maps do not depend on being a “visual learner”. The meta-analyses above measured their benefit for students in general, not for one type of learner.

How Much Do UK Students Study?

Less than ever recorded. Full-time UK undergraduates spent [11.1 hours](#) a week on independent study in 2026, the lowest since the Student Academic Experience Survey began measuring it this way. The survey, from HEPI and Advance HE, is based on [10,065](#) students.

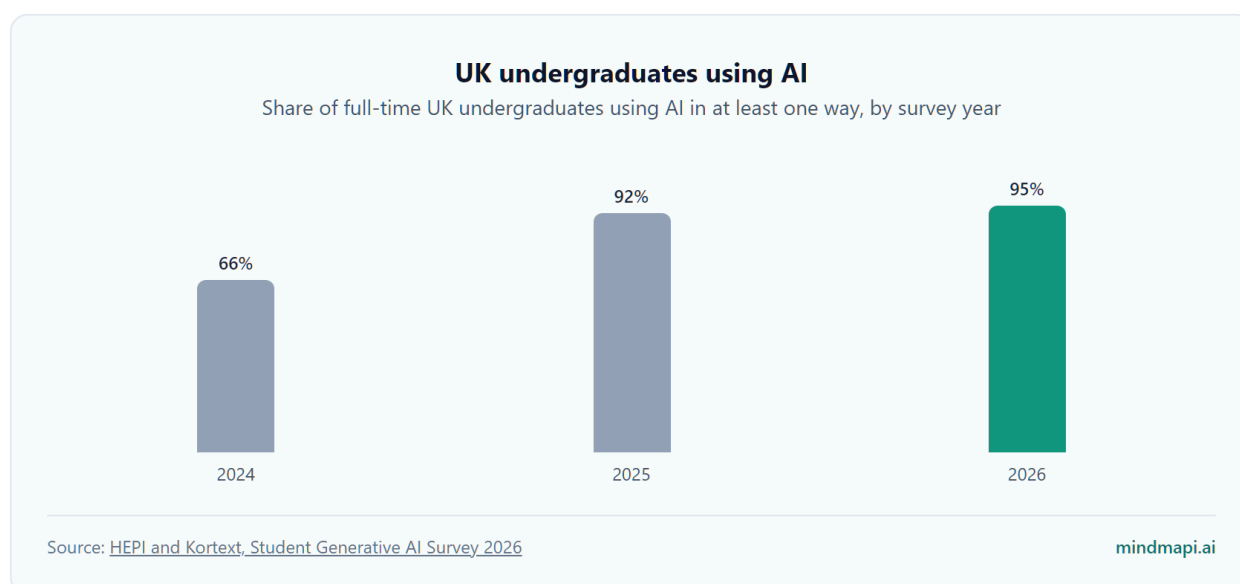


Paid work is part of the reason. [65%](#) of full-time undergraduates had a paid job during term time in 2026, after [68%](#) in 2025. Five years ago, it was fewer than four in ten. Those in work averaged just under [14 hours](#) a week, and around [9% to 10%](#) of students worked more than 20 hours.

Year	Independent study (hrs/week)	Timetabled contact (hrs/week)	Total workload (hrs/week)
2019	13.8	13.9	30.8
2021	15.7	12.4	29.9
2023	14.5	16.0	33.4
2024	13.6	16.1	33.5
2025	11.6	15.8	30.8
2026	11.1	15.5	29.4

How Are Students Using AI to Study?

Almost all UK undergraduates now use it. In the HEPI and Kortext Student Generative AI Survey 2026, based on [1,054](#) full-time undergraduates, [95%](#) used AI in at least one way and [94%](#) used generative AI to help with assessed work.



What students used generative AI for when preparing assessed work:

- **Explaining concepts:** [61%](#)
- **Summarising an article:** [49%](#)
- **Suggesting ideas for research:** [40%](#)
- **Structuring their thoughts:** [39%](#)
- **Putting AI-generated text straight into their work:** [12%](#), up from 8% in 2025 and 3% in 2024

[49%](#) said AI had improved their student experience, and [65%](#) said assessment had changed significantly in response to it.

How Many Students Sit Exams in England?

In summer 2026, [1,047,750](#) students in [6,040](#) schools and colleges in England received GCSE results, and [320,505](#) received A level results, according to Ofqual.

Qualification (England, summer 2026)	Students	Results issued
GCSE	1,047,750	5,720,045
A level	320,505	835,950

Conclusion

The evidence supports mind mapping as a study method, with three conditions. It works best when students build the map themselves, use it over weeks rather than the night before, and test themselves from it rather than just reading it back. Few students study this way: most reread their notes, a technique the evidence rates poorly.

For students: make your own map of each topic, cover a branch and try to rebuild it from memory, and come back to the same map over several weeks.

How to cite this page

You are welcome to use these statistics and charts. Please credit Mindmapai.ai and link to this page:

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For the original data, please also cite the study or report linked from each figure. The full report, with every chart, is also available as a [PDF](#).

How We Put This Together

Every figure on this page was checked against the original study, report or official statistics, not a summary of it. Effect sizes are Hedges' g, the difference between groups in standard deviations: around 0.2 is usually called small, 0.5 moderate and 0.8 large. The conversion of an effect size into the share of students outscored assumes normally distributed scores. Where a figure comes from a database rather than the paper itself, we say so.

Sources

- [Schroeder, N. L., Nesbit, J. C., Anguiano, C. J., & Adesope, O. O. \(2018\). Studying and constructing concept maps: a meta-analysis. Educational Psychology Review, 30, 431–455.](#)
- [Nesbit, J. C., & Adesope, O. O. \(2006\). Learning with concept and knowledge maps: a meta-analysis. Review of Educational Research, 76\(3\), 413–448.](#)
- [Shi, Y., Yang, H., Dou, Y., & Zeng, Y. \(2023\). Effects of mind mapping-based instruction on student cognitive learning outcomes: a meta-analysis. Asia Pacific Education Review, 24,](#)

[303–317.](#)

- [Visible Learning MetaX. Concept mapping \(influence database, accessed October 2026\).](#)
- [Farrand, P., Hussain, F., & Hennessy, E. \(2002\). The efficacy of the 'mind map' study technique. Medical Education, 36\(5\), 426–431.](#)
- [D'Antoni, A. V., Zipp, G. P., Olson, V. G., & Cahill, T. F. \(2010\). Does the mind map learning strategy facilitate information retrieval and critical thinking in medical students? BMC Medical Education, 10, 61.](#)
- [Karpicke, J. D., & Blunt, J. R. \(2011\). Retrieval practice produces more learning than elaborative studying with concept mapping. Science, 331\(6018\), 772–775.](#)
- [What Works Clearinghouse \(2011\). Quick Review of 'Retrieval Practice Produces More Learning Than Elaborative Studying With Concept Mapping'. US Department of Education.](#)
- [Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. \(2013\). Improving students' learning with effective learning techniques. Psychological Science in the Public Interest, 14\(1\), 4–58.](#)
- [Karpicke, J. D., Butler, A. C., & Roediger, H. L. \(2009\). Metacognitive strategies in student learning: do students practise retrieval when they study on their own? Memory, 17\(4\), 471–479.](#)
- [Hartwig, M. K., & Dunlosky, J. \(2012\). Study strategies of college students: are self-testing and scheduling related to achievement? Psychonomic Bulletin & Review, 19\(1\), 126–134.](#)
- [Morehead, K., Rhodes, M. G., & DeLozier, S. \(2016\). Instructor and student knowledge of study strategies. Memory, 24\(2\), 257–271. \(Also reports the Kornell & Bjork, 2007, and Hartwig & Dunlosky, 2012, survey results.\)](#)
- [Dekker, S., Lee, N. C., Howard-Jones, P., & Jolles, J. \(2012\). Neuromyths in education: prevalence and predictors of misconceptions among teachers. Frontiers in Psychology, 3, 429.](#)
- [Newton, P. M., & Salvi, A. \(2020\). How common is belief in the learning styles neuromyth, and does it matter? A pragmatic systematic review. Frontiers in Education, 5, 602451.](#)
- [Neves, J., Stephenson, R., & Armstrong, C. \(2026\). Student Academic Experience Survey 2026. HEPI and Advance HE.](#)
- [Stephenson, R., & Armstrong, C. \(2026\). Student Generative AI Survey 2026 \(HEPI Report 199\). HEPI and Kortext.](#)
- [Ofqual \(2026\). Qualification results in England: summer 2026.](#)

About the author

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Kashish was predicted 3s and 4s in her GCSEs. Studying on her own, she mind mapped everything, maths included, and came out with 7s and 8s. She went on to graduate with a 2:1 in Business Management and now works in marketing. She co-founded Mindmapi to give every student the study method that worked for her.

[Kashish on LinkedIn](#)