

#	Year	First Author	Study Title	Context (Individual / Team)	Key Finding	Key Quantitative Data	Link
1	2025	D.U. Ashurova	The Role of Mind Mapping in Visual Thinking	Individual — 214 university students, 32 participants (eye-tracking sub-sample), 18 instructional designers	Mind-mapping practice significantly improves the originality of solutions and creative ideation. This effectiveness is supported by empirical evidence from an experimental study and qualitative insights from instructional designers.	- An experimental study was conducted with 214 university students. - Eye-tracking data was collected from a sub-sample of 32 participants. - Semi-structured interviews were conducted with 18 instructional designers. - Mind-mapping practice significantly impro...	DOI
2	2024	Narayanan Geethanjali et al.	Exploring the application of mind map to enhance students' creative thinking / Jin Ruixuan ... [et al.]	Individual — students in higher vocational colleges and universities	Mind maps can help structure information, stimulate and link new ideas, and thus improve creative thinking. The study found that students with more knowledge, represented by more branches on their mind maps, exhibited more creative thinking by adding branches different from the norm.	No quantitative data reported.	DOI
3	2025	Georgiev, Danko D. et al.	Dynamic semantic networks for exploration of creative thinking	Team/Group — Not available in metadata.	This study found that dynamic semantic networks, used to quantify convergence or divergence of design ideas, can predict the success of design ideas. This enables real-time computer-assisted detection of critical events during creative problem solving, with the goal of augmenting human creativity.	No quantitative data reported.	DOI
4	2024	Li He et al.	Connector hubs in semantic network contribute to creative thinking.	Individual — Not available in metadata.	Research indicates that connector hubs (C-hubs) within a modular structured semantic network facilitate creative thinking by generating more novel and remote ideas compared to provincial hubs (P-hubs). This effect is predominantly observed in the early stage of creative thinking, relying on stronger interactions between...	Not available in metadata.	DOI

5	2025	Sapto Wibowo et al.	The Potential of Mind Mapping Learning Model on Students' Creative Thinking Skills	Individual — students	The mind mapping learning model has a significant positive impact on students' creative thinking skills. Its effectiveness is shown by increased student activity, facilitated visualization of concept connections, and improved information retention.	No quantitative data reported.	DOI
6	2025	Rafat Rezapour-Nasrabad	Investigating the impact of mind mapping and speech on creativity in nursing students	Individual — first-year nursing students	Mind mapping and problem-solving training have a stronger impact on boosting nursing students' creativity than conventional and text-based training ($P < 0.05$). Developing problem-solving abilities through mind maps will help nurses perform their serious tasks.	- $P < 0.05$	DOI
7	2025	Kalimatul Maghfiroh et al.	ReCODE integrated collaborative mind mapping to improve students' creative thinking skill	Team/Group — high school students	The ReCODE-CMM learning model, which integrates collaborative mind mapping, significantly improved high school students' creative thinking skills in biology. This improvement is attributed to the model's components, which integrate into the learning syntax processes like reading, linking concepts, and organizing inform...	- Data collected from 106 students. - ANCOVA at 5% significance level. - The ReCODE-CMM learning model had an effect on students' creative thinking skills.	DOI
8	2026	A H M Shafiul Azam	Mind Mapping for Critical Thinkers: A Blueprint to Solve Complex Problems	Both — educators, leaders, and professionals.	This guide bridges creativity and logic, offering a structured approach to complex problem-solving. It blends theory, cognitive science, and real-world applications to clarify problem-solving and foster innovation.	No quantitative data reported.	DOI
9	2024	Wei Shi et al.	Effectiveness Study on Mind Mapping Approach to Students' Operation Position Performance and Creativity on Tra...	Individual — art major students of a university in China	The research results show that the mind mapping approach would positively affect creativity. Furthermore, operation position performance, which is positively affected by mind mapping, shows significant and positive effects on creativity.	- 202 art major students as experimental subjects. - 18-week experimental teaching research. - 2 hours per week for total 36 hours.	DOI

10	2025	Mohammad Amin Arabbaygi et al.	Effectiveness of the Concept Mapping Teaching Method on the Creativity Components of Second Grade Elementary S...	Individual — second-grade elementary students	The Concept Mapping teaching method significantly enhanced creativity components—fluency, flexibility, originality, and elaboration—in second-grade elementary students, with the experimental group showing significant improvements compared to the control group. This suggests that visually organizing and connecting ideas...	- Sample size (N): 40 second-grade elementary students - Experimental group size (n): 20 - Control group size (n): 20 - p-values for all creativity components: less than 0.01	DOI
11	2025	—	PANDAVA: Semantic and Reflexive Protocol for Interdisciplinary and Cognitive Knowledge Synthesis	Not addressed in this paper.	PANDAVA combines semantic mapping with concept maturity assessment, clustering, and hypothesis generation to enable researchers to identify strong/weak concepts, construct knowledge maps, and develop new hypotheses. This approach fosters the transition from representing facts to designing new scientific paradigms by re...	No quantitative data reported.	DOI
12	2024	Clin K.Y. Lai et al.	Fostering Creativity in Science Education Reshapes Semantic Memory	Both — middle- and secondary-school students	The key finding is that the SCIP intervention restructured students' semantic memory networks, making them more highly connected with lower average shortest path length (ASPL), greater clustering coefficient (CC), and less modularity (Q), which are characteristics of flexible, "small-world" networks associated with hig...	Sample Size (N): N = 176 students participated in the study (page 2, 5). Control group N = 78, intervention group N = 89 (page 8). 9 students' data was lost, resulting in a sample of 167 students (page 5). Gender distribution: $\chi^2(2, N = 167) = 0.237, p = .24 \dots$	DOI

13	2025	Wida Wulandari	Improving creative thinking skills through a mind map	Individual — students	Using the mind-mapping learning model influenced students' creative thinking abilities and resulted in higher average creative thinking power compared to traditional learning models. The study found that the mind-mapping model significantly improves abilities, whereas traditional learning models had little effect.	No quantitative data reported.	DOI
14	2025	Ferry Irawan et al.	Pelatihan Model Pembelajaran Reading Concept Map (Remap) dalam Melatih Keterampilan Berpikir Kreatif dan Keter...	Both — junior high school students	The Remap learning model, which requires students to conduct reading activities and then pour information into a concept map, can accommodate and help students create new ideas and think creatively from different perspectives. This model aims to develop creative thinking skills by enhancing problem-solving and innovati...	No quantitative data reported.	DOI
15	2024	Solaiman Afroughi et al.	Effects of computerized group drawing and implementation of conceptual diagrams on divergent thinking among th...	Team/Group — nursing students	Computerized group drawing and conceptual diagrams significantly improved divergent thinking among nursing students, showing an upward trend in scores after the intervention. This education method had a positive, significant effect on students' divergent thinking.	Sample size (N) for case group: 51 Sample size (N) for control (comparison) group: 51 P-value for upward trend in divergent thinking scores in the case group: <0.0001	DOI
16	2024	Menglin Fang et al.	Collaborative AI-enhanced digital mind-mapping as a tool for stimulating creative thinking in inclusive educat...	Both — students in inclusive educational groups (including students with neurodevelopmental disorders and students witho...	Collaborative AI-enhanced digital mind-mapping significantly improved indicators of creative thinking (Fluency, Originality, Elaboration, and overall creativity score) as measured by the Torrance Figural Creativity Test. This improvement was observed in both students with and without neurodevelopmental disorders, with ...	- Study involved 163 participants. - 28 participants had neurodevelopmental disorders. - Statistically significant p-value: p = 0.05.	DOI

17	2024	Nur Lina Safitri et al.	Enhancing students' creativity in problem-solving through online reading-concept mapping-group investigation	Both — college students from three Biology Education classes	The analysis results suggested that students attending the Remap-GI class showed the most significant increase in creativity, with a 104.99% increase, outperforming GI-only and conventional learning methods. This finding reinforces the theory that creativity can be improved by associating initial knowledge (through Rem...	Sample Size: 60 college students participated in the study, divided into three classes of 20 students each (Remap-GI, GI, and conventional learning). Creativity Variable - Pretest Scores: Remap-GI class (Class A): 46.33 (SD=2.25) GI-only class (Class B): 45.71...	DOI
18	2025	D. P. Sari et al.	Generating scientific creative ideas in case-based blended learning through digital mind mapping: a case study...	Team/Group — 3rd semester science education students	The study found that high-performing groups engaged more in divergent thinking, utilization of digital mind mapping, and regulative discussion, associating these activities more closely with idea development. Digital mind maps facilitate both the generation and organization of scientific creative ideas, helping student...	- The inter-rater reliability for group task performance assessment showed an intraclass correlation coefficient (ICC) of 0.998 with $p < 0.001$. - In group conversations, the category "Use of Technology" (Mind map (Mapping)) had a frequency of 208 utterances, r...	DOI

19	2025	Ting Liu et al.	Mind Mapping Training's Effects on Divergent Thinking Skills: Detection Based on EEG Data	Individual — university students learning foreign languages	Mind mapping training enhances students' divergent thinking skills, as evidenced by greater elevations in alpha band power within the anterior frontal lobe, frontal lobe, frontocentral lobe, and temporal lobe, and significantly greater alpha band activity in the right cerebral hemisphere. The empirical results indicate...	Anterior frontal lobe alpha band power: M = 0.582, SD = 0.301 Frontal lobe alpha band power: M = 0.312, SD = 0.103 Frontocentral lobe alpha band power: M = 0.183, SD = 0.256 Temporal lobe alpha band power: M = 0.205, SD = 0.176 Right cerebral hemisphere alpha ...	DOI
20	2026	Mochamad Tazkiya Fuadi et al.	Pengaruh Bimbingan Kelompok Teknik Mind Mapping terhadap Peningkatan Kreativitas Belajar Siswa SMP	Team/Group — eighth-grade students of SMPN 6 Malingping	Group guidance using the mind mapping technique significantly increased students' learning creativity, as evidenced by a statistical difference between pretest and posttest scores. This finding supports the effectiveness of integrating mind mapping into guidance services for enhancing creative thinking skills.	No quantitative data reported.	DOI
21	2024	Chenhan Jiang et al.	Generative AI Enabled Conceptualization: Charting ChatGPT's Impacts on Sustainable Service Design Thinking wit...	Individual — novice designers	The study found that network-based cognitive maps reveal distinct shifts and styles influenced by ChatGPT, providing references for novice designers to enhance inspiration and design fluency. ChatGPT specifically enhances design concept novelty and systematicity and fosters thinking divergence and fluency.	Not available in metadata.	DOI

22	2024	Edith Haim et al.	**The Word-sentence construction (Woseco) task versus the verbal fluency task: Capturing features of scientific **...	Individual — 169 students enrolled in middle schools and academic secondary schools in Austria	The Woseco task, which generates semantic networks, showed more prominent features of creativity than verbal fluency networks, including higher node clustering, lower network distances, and lower network modularity. Additionally, students who participated in a creativity training program (SCIP) exhibited more interconn...	Woseco vs. Verbal Fluency Networks for "school" (Table 1): ASPL: t-statistic = -9.95, p-value < .001, lower CI = -0.18, upper CI = -0.12, d = 0.44 CC: t-statistic = 14.88, p-value < .001, lower CI = 0.00, upper CI = 0.00, d = 0.66 Q: t-statistic = -23.93, p-value...	DOI
23	2024	Xiao-Fan Lin et al.	**A concept mapping-based mobile storytelling approach for promoting students' creative agency: An experimental **...	Individual — 102 sixth-grade primary school students	A quasi-experimental study found that a concept mapping-guided mobile storytelling approach significantly outperformed a storyboard scaffolding-guided approach in promoting creative agency, EFL performance, creative self-efficacy, agentic engagement, self-regulation, and motivation to learn English. This suggests that ...	- Sample size: 102 sixth-grade primary school students	DOI
24	2024	Rubiah Rubiah et al.	The effect of problem-based learning assisted with concept mapping founded on cognitive style on the creativ...	Both — students of the second-semester Islamic religious education study program from the Islamic Senior High School Din...	Concept mapping, involving higher-order thinking skills, stimulates students to continue to involve imagination in their creative process. The research found that the use of media mapping was evident in fostering writing creativity.	- Sample size (experimental class): 30 people - Sample size (control class): 30 people - Total sample size: 60 students	DOI

25	2024	Théophile Bieth et al.	Changes in semantic memory structure support successful problem-solving and analogical transfer	Individual — native French speakers aged between 18 and 38 years old (mean age = 26 years, SEM = 2.60 years; 69 women an...	The paper found that problem-related semantic memory networks (SemNets) restructuring may be associated with successful riddle solving and subsequent analogical transfer. Specifically, successful problem-solving was linked with a local increase in efficiency and weight in the edges between words relevant to the solutio...	- Study 1 (problem-solving - naive condition): - Interaction between Δ Metric and impact rating on problem-solving for weight: $\beta = 0.07$, $p = 0.01$, CI95 = [0.02;0.13] - Interaction between Δ Metric and impact rating on problem-solving for efficiency: $\beta = 0.09$, $p \dots$	DOI
26	2024	Siti Anjar Priyadi et al.	Pengaruh metode mind mapping terhadap hasil belajar dan kreativitas siswa kelas xi mipa	Both — students of class XI MIPA at SMA Negeri 1 Siantar.	The paper found that there is an influence of mind mapping on student creativity, with students using mind mapping exhibiting better creativity compared to those who did not, based on an average creativity questionnaire score of 15.94 in the experimental class versus 7.24 in the control class.	Rata-rata nilai angket kreativitas di kelas eksperimen (menggunakan mind mapping) adalah 15,94. Rata-rata nilai angket kreativitas di kelas kontrol (tidak menggunakan mind mapping) adalah 7,24.	DOI
27	2024	Min-Chi Chiu et al.	Enhancing students' critical thinking and creative thinking: An integrated mind mapping and robot-based learni...	Not available in metadata.	The paper proposes an integrated mind mapping and robot-based learning approach (MM-R) to enhance students' critical and creative thinking. The study found that the experimental group used the GitMind system to draw mind maps, addressing creative thinking development.	Not available in metadata.	DOI
28	2025	Rian Fitriansyah et al.	Exploring the learning effect on serial concept mapping with expert map sharing approach	Individual — Not available in metadata.	The method of using expert-shared concept maps encourages creativity and individual exploration. This finding stems from a comparative experiment conducted over three weeks.	No quantitative data reported.	DOI

29	2025	Zia A. Z. Putra et al.	Revealing the effect of problem-based learning combined with the use of digital mind map on students' creative...	Both — students	This study aims to elucidate the impact of Problem-Based Learning (PBL) combined with digital mind maps on students' creative thinking, indicating that the experimental group using this approach showed an effect on creative thinking skills.	No quantitative data reported.	DOI
30	N/A	J Dong et al.	**Semantic Network Simulation vs. Traditional Brainstorming: Enhancing Architectural Design Conflict Resolution **...	Team/Group — Not available in metadata.	The paper investigates semantic network simulation (SN) as a method to enhance architectural design conflict resolution and innovation. It suggests that SN, compared to traditional brainstorming, can improve creative problem-solving.	No quantitative data reported.	—
31	2024	SHC Cheng et al.	Facilitating creativity, collaboration, and computational thinking in group website design: A concept mapping...	Teams/Groups Setting: High school Context: Group website design	Not available in metadata.	—	DOI
32	N/A	Y Yang et al.	Thinking beyond boundaries: Epistemic curiosity predicting creative problem finding through semantic networks	—	- Uses semantic networks to predict creative problem finding. - Links semantic network structure to creativity. - Mentions CC and ASPL of empirical semantic networks. - Mentions producing empirical sampling distributions.	—	—
33	N/A	Masaki Ishizaka et al.	Sparkit: A mind map-based mas for idea generation support	—	Not available in metadata.	—	DOI
34	N/A	A Elhital	Digital conceptual mapping for enhancing mathematical concept formation and creative mathematical problem-solv...	—	- The employment of Creately's Concept Map Maker led to outperformance in creative problem-solving skills compared to a control group.	—	—

35	N/A	Z Wang et al.	Developmental dynamics of children's creative thinking following knowledge-structure interventions: Longitudin...	- Population: Individual learners (children) - Setting: Not specified - Participant characteristics: Children	Uses semantic-network metrics to track the developmental trajectory of children's creative thinking after knowledge-structure interventions. Links semantic mapping to creativity.	—	—
36	2024	Edith Haim et al.	The word-sentence-construction task versus the verbal fluency task: Capturing features of scientific creativit...	—	- Expected distinct differences in semantic network structure due to the Woseco. - The intervention group received explicit training in creativity methods, divergent thinking, and ideation.	—	DOI
37	N/A	XF Lin et al.	A concept mapping-based mobile storytelling approach for promoting students' creative agency	Individual learners: Students. Setting: Educational. Participant characteristics: Students were divided into an experime...	Not available in metadata.	—	—
38	2024	Hümeýra Uysal et al.	So easy to write a story with a mind map: an experimental study	Individual learners. - The study group consisted of a total of 86 third-grade students. - Participants included 33 stude...	Mind mapping improved students' writing skills. Homework exercises also improved students' writing skills. There was an increase in the post-test writing skill scores of the experimental and control 1 groups.	- Total of 86 third-grade students - Experimental group: 33 students - Control 1 group: 23 students - Control 2 group: 30 students	DOI
39	2024	Dimitrios Lappas et al.	Fostering creativity in order to develop mental model templates for planning in national emergencies	Not specified. The study mentions "stakeholders" in the context of national emergencies, but does not specify if these a...	Not available in metadata.	—	DOI
40	2025	R. Ibrahim et al.	The role of digital mind maps in boosting creativity and critical thinking among nursing students: A quasi-exp...	Individual learners Setting: Educational Participant characteristics: Nursing students	Uses digital mind maps to enhance creativity and critical thinking among nursing students. The study is quasi-experimental. In the absence of a control group, it cannot be confirmed that improvements are a result of the digital mind map intervention.	—	DOI

41	N/A	S. Bouschery et al.	Artificial intelligence-augmented brainstorming: how humans and AI beat humans alone	Teams/Groups: The snippet mentions "common group size used in previous research on group creativity". Setting: Not speci...	Not available in metadata.	—	DOI
42	N/A	HH Hwang	Perceived Creativity in Children's Stories by Generative AI and Human Authors from an I...	Not specified. The study focuses on perceived creativity in children's stories and involves experts.	Experts perceive a deeper level of creativity using semantic network structures. The study utilizes AI as a practical tool for creativity education and collaborative creation.	—	—
43	2025	Chen-Chen Liu et al.	Facilitating pre-service teachers' instructional design and higher-order thinking with generative AI: an integ...	- Population Type: Individual learners - Participant Characteristics: Pre-service teachers - Setting: Educational	The experimental group showed increased creative thinking and innovation tendencies. The study used concept maps with generative AI to boost pre-service teachers' design skills.	—	DOI
44	N/A	ES Xujanovich	Effective Methods OF Developing Creative Thinking in Students	Population Type: Individual learners (students) Setting: Educational Participant Characteristics: Not specified beyond b...	Mind mapping is effective in fostering creativity. The methods allow students to approach problems with originality and adaptability.	—	—
45	2026	Zhang et al.	**How Knowledge Structure and Form Shape Scientific Divergent Thinking: Evidence from Semantic Network Analysis **...	Individual learners. - Undergraduate students. - Educational setting.	- Knowledge structures predict scientific divergent thinking. - Knowledge form shapes creativity through its effects on these structures. - The study examined these relationships across two experiments.	—	DOI
46	2024	Meiliana Dwi Cahya et al.	Exploring Students' Creative Thinking Skills When Learning Biology Through the Reading Concept Mapping Team Qu...	Individual learners Setting: Educational (one state senior high school in Jember, East Java, Indonesia) Participant char...	The Remap-TQ model improved students' creative thinking more than the TQ model and conventional learning. The posttest mean value for Remap-TQ learning was 85.89. The posttest mean value for TQ learning was 78.64. The posttest mean value for conventional learning was 68.03.	Respondents came from three randomly selected classes, totalling 105 students.	DOI

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47	2026	Chen et al.	Cognitive mechanism of creative thinking: Integrating the semantic network and spreading activation model.	Individual learners. The study involved "each participant" and "individuals' performance" in the context of the Chinese ...	Greater network efficiency and higher modularity were associated with higher item pass rates. Larger network size was associated with lower item pass rates. Target-activation metrics (mean maximum activation, mean activation, and mean activation retention duration) correlated positively with empirical item pass rate an...	—	DOI
48	2025	Yujie Yao et al.	Pseudo-creativity and authentic creativity differ in conceptual boundaries	—	- Experiment 2 constructed semantic networks for three groups using free association. - The pseudo-creativity group exhibited a de-structured and hyperconnective semantic network.	—	DOI
49	2024	Vinna Natasya Putri et al.	Physics teaching materials based on the creative problem-solving model with concept maps: The effect on studen...	Individual learners Setting: Educational (SMA Pertiwi 1 Padang) Participant Characteristics: Physics students in class X...	The use of physics teaching materials based on the creative problem-solving model with concept maps has a significant effect on student learning outcomes in the knowledge aspect. The average physics learning outcome for the experimental class was 82, which was higher than the control class average of 76. Hypothesis tes...	Experiment group: 37 students Control group: 34 students	DOI
50	2025	Yang Zhang et al.	Applying machine learning to intelligent assessment of scientific creativity based on scientific knowledge	Not specified.	Not available in metadata.	—	DOI
51	2025	Melissa Mustika et al.	The Effect of Mind Map as a Prewriting Activity in Third Grade Elementary Students' Descriptive Narrative Crea...	Individual learners: Third Grade Elementary Students Setting: Educational Participant Characteristics: Third Grade Eleme...	Not available in metadata.	—	DOI
52	2025	Jing Teng et al.	Semantic memory and associative ability as predictors of divergent thinking and visual artistic creativity: An...	- Population Type: Both - Participant Characteristics: The study involves an "expert novice comparison". The snippet men...	- The semantic network structure of the design group was different from the non-design group.	—	DOI

53	N/A	FE Asih et al.	Is the Creativity of First-Year Students in Stoichiometry Learning Affected by Their Chemistry Scholastic Abil...	Individual learners: The study focuses on "First-Year Students" and mentions "individual students". Setting: Educational...	- The paper uses mind maps as a form of FAC creativity. - The research integrates abilities into individual students without providing an intervention.	—	—
54	N/A	Ferry Irawan et al.	The correlation between science literacy skills and scientific explanation on creative thinking skills through...	Individual learners Setting: Educational (SMAN 4 Malang) Participant Characteristics: 85 eleventh-grade students in the ...	There was a significant correlation between scientific literacy skills and creative thinking skills. There was a significant correlation between scientific explanation skills and creative thinking skills. There was a significant correlation between scientific literacy skills and scientific explanation skills that had a...	The sample in this study involved 85 eleventh-grade students.	DOI
55	N/A	M Sun et al.	Impact of visual stimuli on mind mapping-supported creativity task performance and experience	- Population Type: Individual learners (students) - Setting: Educational - Participant Characteristics: Students using m...	Students using both mind mapping and visual stimuli achieved better performance on creativity tasks. Improved performance was observed in flexibility, fluency, and originality.	—	—
56	N/A	SK Chiu et al.	Virtual Reality-Facilitated Creative Thinking Mapping to Enhance Performance Skills, Choreographic Creative Ex...	Not specified.	Mind mapping supports creative performance in performing arts. Creative performance is characterized by fluency, originality, and flexibility.	—	—
57	2024	Jennifer L. Heyman et al.	Supermind Ideator: How scaffolding Human-AI collaboration can increase creativity	—	- Supermind Ideator, a system combining an LLM with prompts, fine-tuning, and a specialized user interface, significantly increased innovative ideas. - People using Supermind Ideator generated significantly more innovative ideas than those using ChatGPT or working alone. - Scaffolding designed for creative problem-solv...	—	DOI
58	2025	Tim Dwyer	Putting Our Minds Together: A New Model for Collaborative Thinking	Not specified.	The study introduces a novel model for collaborative thinking. This model leverages collective thought mapping to generate innovative ideas. It highlights the importance of interdependent thinking and social cognition in idea generation and problem-solving processes.	—	DOI

59	2025	Thomas Sandholm et al.	Semantic Navigation for AI-assisted Ideation	The population studied consisted of innovators, specifically volunteers solicited from employees of the authors' company...	Semantic exploration was preferred over traditional prompt-output interactions, with 2.1x more generations performed using semantic exploration. Semantic navigation options were preferred to traditional prompt editing explorations (p-value of 6×10^{-6}). The fine-tuned models can maintain semantic fidelity when travers...	- Phase 1: 15 innovators were recruited. - Phase 2: 15 users were split into three groups of five, each assigned to a Slack channel with one of three LLM fine-tuning conditions.	DOI
60	2025	Ewelina Rzońca	Mind Maps and Convergent Thinking of Second-Grade Students – Reports from a Pilot Study	Individual learners. - Second-grade primary school students. - Educational setting (primary school, early school educati...	Mind maps were tested for effectiveness in developing convergent thinking in second-grade primary school students. Initial levels of convergent thinking were low in most students in both experimental and control groups. After implementing mind maps in the experimental group, the number of students with a medium and hig...	—	DOI
61	2025	Z. C. Zhou	Group-AI collaboration enhances creativity performance: The roles of perspective-taking and AI utilization str...	Teams/Groups. The study involved 96 university students. The setting was educational, simulating open-ended learning sce...	Not available in metadata.	96 university students	DOI
62	2024	Belski Iouri	Evaluating idea generation heuristics by means of schemata and search	Individual learners: first-year engineering students. Educational setting.	Not available in metadata.	—	DOI
63	2024	Ahmed A. Karim et al.	Intra and interindividual Connectivity Analyses (IICA) A neuropsychological method to improve creativity in te...	Population Type: Teams/Groups. Setting: A role-play scenario simulating a company (e.g., a psychiatric clinic). Particip...	The study found that Intra- and interindividual Connectivity Analyses (IICA), a metacognitive training method, led to significantly higher fluency and originality rates compared to traditional brainstorming. Specifically, in a within-subject design (Experiment 1): Fluency of own ideas: IICA resulted in significantly hi...	- Experiment 1: 19 subjects (13 women and 6 men) in a within-subject design. - Experiment 2: 36 subjects (25 women and 11 men) in a between-subject design.	DOI

64	2024	Luke Dubec et al.	Enhancing creative divergent thinking in older adults with a semantic retrieval	- Individual learners: Older adults - Participant characteristics: Older adults - Setting: Not specified.	The semantic retrieval strategy enhances idea novelty in the Alternate Uses Task (AUT). Participants who initially scored lowest on the AUT showed the greatest increase in AUT performance.	—	DOI
65	2024	Aydan Aytekin et al.	Improving 6th grade students' creative problem solving skills through plugged and unplugged computational thin...	- Individual learners: 6th-grade students. - Setting: Educational, specifically within the Turkish middle school science...	Not available in metadata.	—	