Solving Novel Authentic Problems using the SNAP Method®

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INNOVATION-DEPENDENT ORGANIZATIONS NEED A NEW METHOD FOR CREATIVE PROBLEM SOLVING

You have been trying to solve a problem, but existing solutions have not solved it → You have not been able to generate effective solutions yourself → You need to think differently about the problem and use a method for creative problem solving → Existing methods require extensive training or are non-systematic, producing ineffective ideas → You need to find a method for creative problem solving that is systematic and does not require prior training

IMPLEMENTING THE SNAP METHOD TAKES FIVE HOURS WITH NO TRAINING

Stage I (team)
- Describe the core of the problem by its 5Ws: why, what, where, when, why

Stage II (team)
- Formulate usefulness criteria for evaluating solution ideas
- Assign a weighting to each criterion

Stage III (individual)
- Generate original ideas via exercises for reconfiguring the mental model of the problem

Stage IV (team)
- Identify underlying solution concepts
- Combine similar ideas and refine for usefulness

Stage V (team)
- Score combined ideas by usefulness criteria
- Rank ideas by total usefulness score

STAGE III GENERATE ORIGINAL IDEAS

Cognitive Exercises for Reconfiguring the Mental Model of the Problem

- Express implicit assumptions
- Create a reversed narrative
- Find analogies
- Create metaphors

Generate prompts for reconfiguring mental model → Share prompts with team → Use prompts to think differently about problem → Generate original ideas through creative synergy

"At Gvahim's hackathon-style Aliyathon event, forty participants from six organizations used the SNAP Method to tackle challenges faced by new immigrants to Israel. Rea's guidance and his unique method helped everyone feel energized and think creatively about their challenges. We ended up producing a surprising amount of great, implementable ideas! We would be happy to have Rea and his method back for next year's event."

~ Limor Schwartz
Community Manager at Gvahim

CASE STUDIES OF IMPLEMENTING THE SNAP METHOD

Technion – Israel Institute of Technology

Healthcare – Engineering Design

Mosquitos Disturbing the Sleep of Toddlers
Teaching Science and Technology for All – 216006 (S 2018)

The Team
The inventor of SNAP Method, an algorithm developer, and a product designer.

Preparation
The inventor conducted and in-depth interview with toddlers' parents about the problem and existing solutions, and summarized literature on the host-seeking behavior of mosquitos.

Stage I. Describe the core of the problem
A short description of the problem: who, what, where, when and why.

Stage II. Formulate usefulness criteria
(1) Effect on child's health and safety, (2) effectiveness of solution, and (3) cost of ownership over five years.

Stage III. Generate original ideas
The team conducted three creative thinking exercises. Each participant generated three original ideas per exercise, 15 ideas per participant and 45 ideas overall.

Stage IV. Combine and refine ideas
The team identified an underlying solution concept for each one of the 45 ideas – seven in total: (1) attract and deflect (female mosquitos), (2) attract and eliminate, (3) deflect, (4) detect and eliminate, (5) detect and prevent, (6) evade, and (7) prevent. Ideas belonging to the same solution concept were combined into one detailed idea, resulting in seven combined ideas.

Stage V. Rank refined ideas by usefulness
Each participant scored the seven combined ideas, based on the usefulness criteria from Stage II. Scores were then summed and averaged across participants. The top scoring idea, based on 'attract and eliminate', was selected for prototyping.

Education – Pedagogical Design

Teaching High School Maths to a Heterogeneous Class
Effective Creative Thinking – 216008 (F 2019)

The Team
Two high school mathematics teachers and electrical engineers who were formerly working in the high technology sector.

Preparation
The team conducted literature research into the problem and existing solutions.

Stage I. Describe the core of the problem
A short description of the problem: who, what, where, when and why.

Stage II. Formulate usefulness criteria
(1) Improvement to student progress, improvement to teacher motivation, (3) improvement to student satisfaction, (4) improvement to student motivation, and (5) improvement to teacher satisfaction.

Stage III. Generate original ideas
The team carried out four creative thinking exercises. Each participant generated three original ideas per exercise, 12 ideas per participant and 24 ideas overall.

Stage IV. Combine and refine ideas
The team identified an underlying solution concept for each one of the 24 ideas – four in total: (1) synergistic differentiation, (2) multilayered interaction, (3) pedagogical transformation, and (4) boundary extension. Ideas belonging to the same solution concept were combined into one detailed idea, resulting in four combined ideas.

Stage V. Rank refined ideas by usefulness
Each participant scored the four combined ideas, based on the usefulness criteria from stage II. Scores were then summed and averaged across participants. The top scoring idea, based on 'synergistic differentiation', was selected for designing a pilot curriculum. View a poster detailing the selected solution at https://bit.ly/2VrKDRG

Interested in a SNAP Method workshop for your problem?

Scan the QR code on the right, or go to https://bit.ly/2VHD4eM

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