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Held by Japan TRIZ Society
Session of Special Interest Lectures

TRIZ シンポジウム 2012
The Eighth TRIZ Symposium in Japan

What Should We Do for TRIZ to Penetrate into Younger People?

-- Education and Training of Problem Solving with TRIZ for Younger People –

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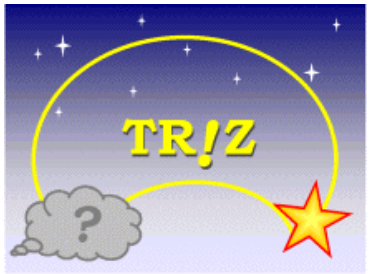


What Should We Do for TRIZ to Penetrate into Younger People?

Japan TRIZ Society recognizes now the importance of penetrating TRIZ into younger people.

- TRIZ leaders in Japan are typically of age around 65 years old.
- We need powerful TRIZ promoters among managers of age around 40 - 60.
- We need many active TRIZ practitioners among people of age 25 – 40.
- We want to hand on TRIZ to young employees of age 22 – 30.
- We want to educate TRIZ/creative thinking to university & graduate students of age 18 – 28.
- We want to educate creative thinking to middle & high school students (12- 18).
- We want to extend/educate creativity for children (3 - 12).

Why TRIZ has not penetrated into younger generations?

Then, What should we do?

This issue forms one of the main pillars of Japan TRIZ Symposium 2012.

Viewpoint (a): “Difference in historical background“ makes it difficult.

In 1960s-70s, when the baby boom generation was young, Japan was in the apid growth era, when government, industries and people were eager to become rich by accepting various new things/thoughts.

In 1980s, the manufacturing industry of Japan became at the top level in technology in the world.

Since 1990s Japan was at the position of driving the leading edge of technologies. Thus the necessity of creativity was recognized, but was not achieved so easily.

Economy in Japan has been in a long-term stagnation since 1990.

The younger generations are now in the mixed situations of “abundant enough for living” and “long-term difficulty in finding employment, instability in economic life, and a sense of stagnation”.

Some of them are active/aggressive, but many are living for the moment and are too busy for their jobs and living.

From this viewpoint alone, we cannot find solution directions.

Viewpoint (b): "Young people do not have enough background to understand TRIZ. "

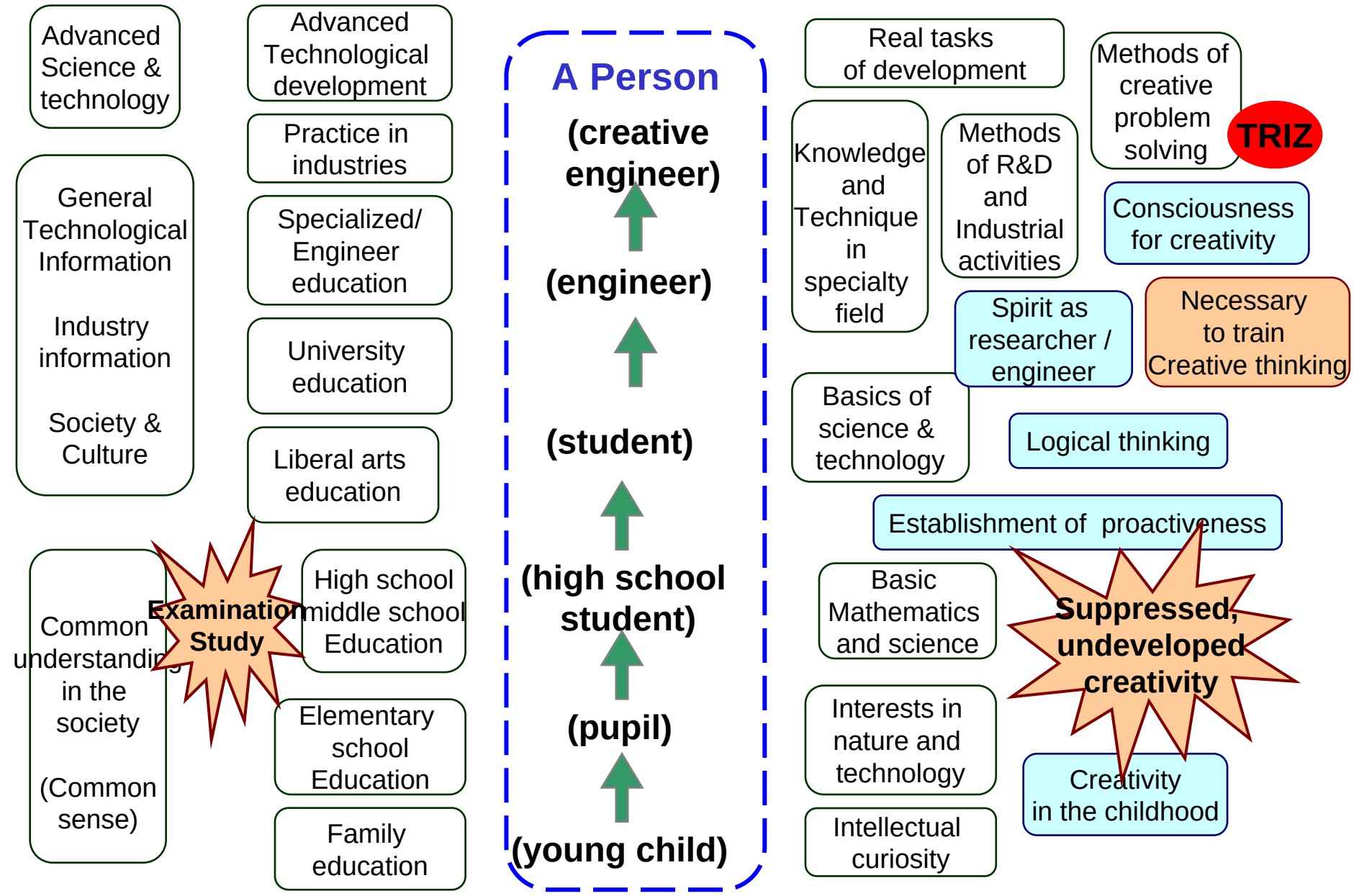
Mature engineers who understand TRIZ well have many experiences,
much knowledge in technology, and widescopes of interests.
Younger people are usually short in these aspects.
They do not have enough background to accept TRIZ thinking,
which requests much wider, universal and abstract thinking.

★ However, younger people are often flexible, sensitive to new things, and able to work actively in new areas/fields.

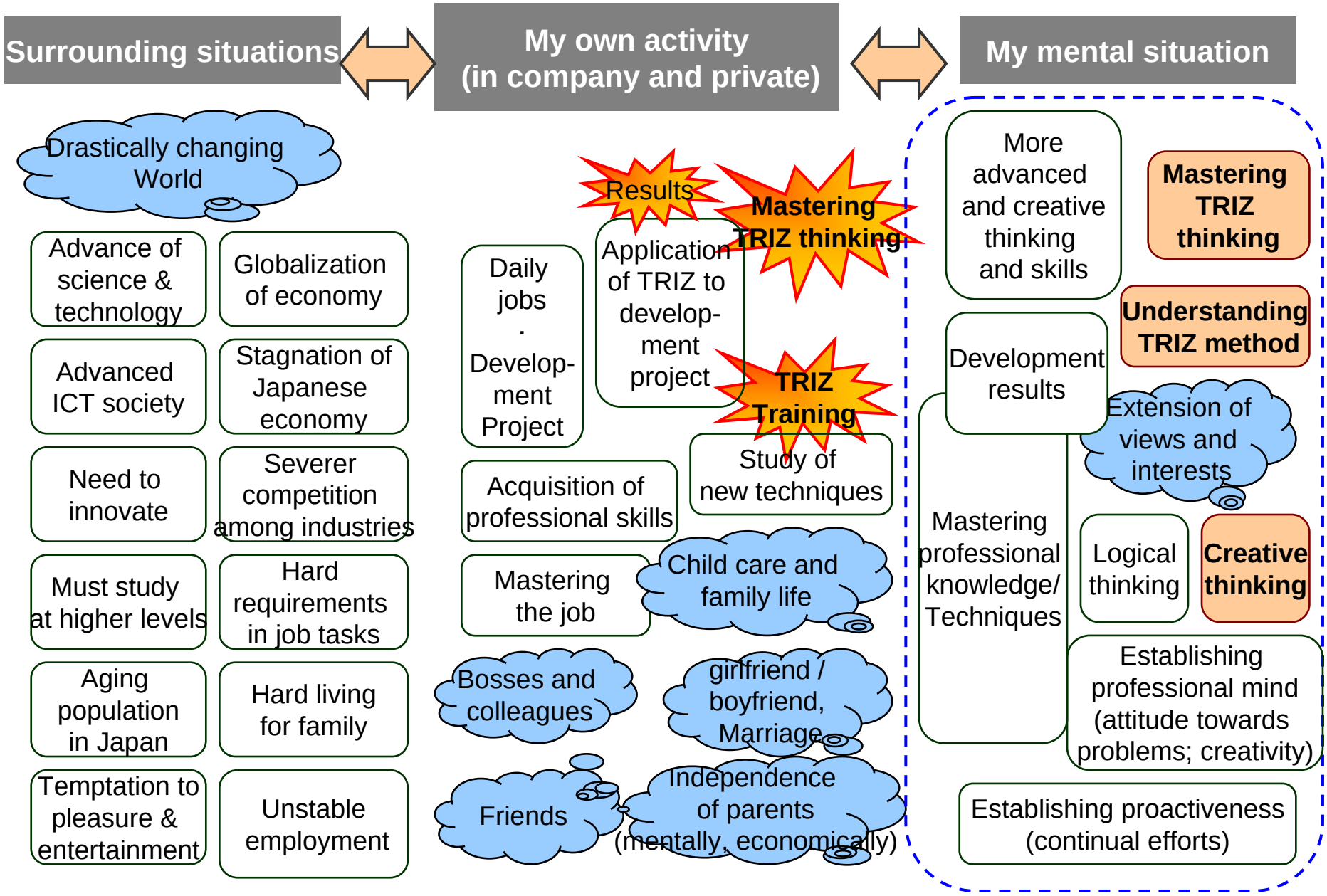
⇒ **If we introduce TRIZ appropriately, younger people will certainly understand it.**
Then, how can we motivate them and how should we introduce TRIZ?

⇒ **We should introduce TRIZ in a way acceptable for younger people, depending on the audience.**

[A-4] Model of a person to learn and master TRIZ



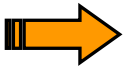
[A-5] Model of positioning (in life) of studying TRIZ (Part 2) Young engineers



Viewpoint (c): “The system of TRIZ is huge and too complex. "

- TRIZ has huge knowledge bases, and many techniques.
- ARIZ, as the overall process for problem solving, too complex.
- Main problem solving techniques in TRIZ require the use of handbooks, knowledge bases, or software tools.

  E.g., Inventive Principles, Contradiction Matrix, Standard Solutions, Laws of Technology Evolution, etc.
- TRIZ concepts are abstract and difficult to understand.



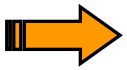
"Let's make TRIZ simple, easy to understand, and effective to use. "

- Let's make TRIZ ‘simple’.
- Let’s make TRIZ ‘unified and easy to understand’.
- Let’s make TRIZ ‘friendly and familiar’.
- Let’s create ‘TRIZ in the next generation, usable by everybody’.
- Let’s write and study ‘comprehensible textbooks of TRIZ’.

These approaches are applicable to any type of audience: advanced engineers, businesspersons, young engineers, students, pupils, young children, home keepers, etc.

Viewpoint (d): "TRIZ should not be taught as Knowledge."

- If you teach TRIZ knowledge in lectures, seminars, talks, and books, etc., TRIZ would not be understood and mastered.
- TRIZ technique is a ‘way of thinking’, and need to be learned in practice.
- We should teach the thoughts and the way of thinking in TRIZ.

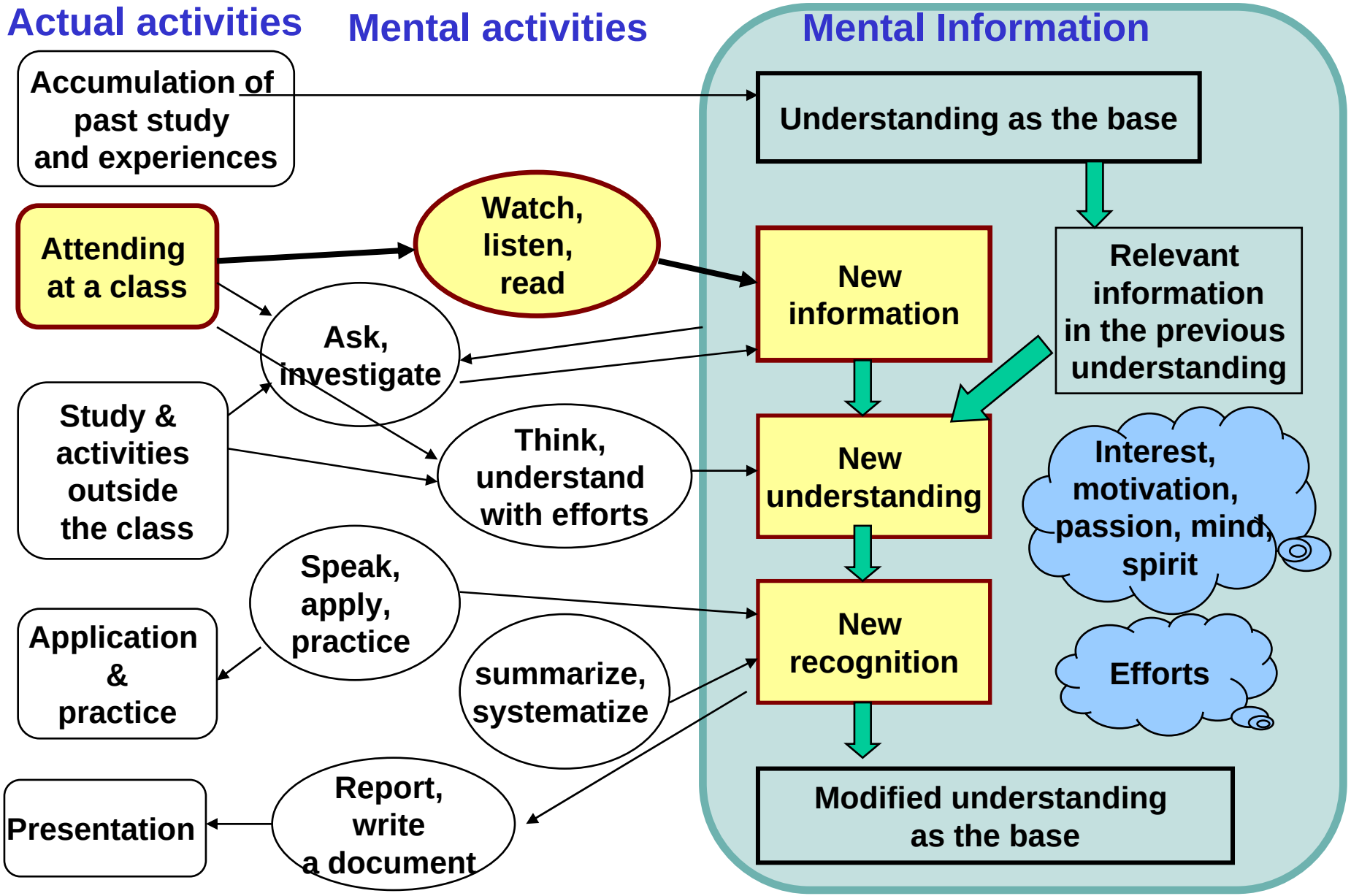


“We should better teach TRIZ practically in practice and in real application jobs. "

- In the class, let’s make exercises and practices.
  Try to apply a technique in individual practice, and discuss in a group.
- In training seminars, try to solve real problems with TRIZ, (group exercises)
- In real projects, (external/internal) TRIZ consulting is carried out.
- Collect application cases and learn the processes of TRIZ application.
- In presentation meetings, study groups, and conferences, study other people’s application cases.

[A-3] Model of mental activities to learn and understand

Toru Nakagawa: OGU
Lecture material (2007)



Viewpoint (e): The idea "TRIZ for technology" narrows the spreading.

- TRIZ started from the technical field.
  Most of explanations and examples are based in the technical field.
- Even in the technology fields, TRIZ application has extended from problem solving to technology prediction, product planning, IP network construction, etc.
- TRIZ is also applicable to the issues related to humans, business, society, rtc.

⇒ **We should try to spread TRIZ into much wider application fields.**

- To expand the TRIZ application fields to the issues involving business, management, human relationships, society, etc.

⇒ More basically,

We should promote a methodology of 'Creative problem-solving and task-achieving.

In this framework, we can teach it to younger people (students, pupil, and young children).

The present session:

- Toru Nakagawa: Introduction as the coordinator (15 min.)
- Akihiko Ikeda (Sony & Kanagawa I.T.): Creativity training in a graduate school (20 min.)
- Shigeomi Koshimizu (AIIT): A class with practices in a graduate school (5 min. introduction) ➔ Oral presentation J24 (Second day afternoon)
- Shigeru Kasuya (Yamaguchi Univ. & Pro-engineer): A class with practices in a university (5min. Introduction) ➔ Oral presentation J19 (Second day afternoon)

--- Discussions (15 min.)

Relevant sessions and presentations in the Symposium

- Special Invited Lecture (First day): Kenichi Yumino (Shizuoka Univ.) “Education of Creativity "
- Group discussion (First day): Group (C): “Education and TRIZ” group
- Special Invited Talk (Second day morning): Jeongho Shin (Korea) “How to learn TRIZ with ease and fun" (also Song of inventive principles)
- Presentations: Y. Takagi (Sony): “Symbolizing 40 Inventive Principles”
- E.S. Yoo (Korea): “Reforming engineering education with TRIZ”
- R. Ishii (IdeaPlant) “Idea generation workshops”
- T. Nakagawa (OGU): “Consideration with multiple modeling”
- TRIZ society "Education and TRIZ" Study group meeting (Third day, lunch time).
- Closing discussion (Third day afternoon): “TRIZ for younger people”