How Do We Continue Career of Primary Care and Produce Evidences

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How To Promote Motivation for Working as a Physician

- One uncle was running a hospital.
- He said that “he started to be tired of working as a physician x years after he became it…”

How Should We Make Our Career?

- How to balance physician's work – (1) clinical service, (2) education, (3) research, (4) administrative work
- How many years do we need to become confident in each area?
- How is each factor connected with savings? – money, human relations, respect, belief…

Why Should We Do Research?

- Intellectual curiosity
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Research in Wikipedia

- Observations and formation of the topic
- Hypothesis
- Conceptual definition
- Operational definition
- Gathering of data
- Analysis of data
- Data Interpretation
- Test, revising of hypothesis
- Conclusion, reiteration if necessary

What I Have Done…

- EBM? Other issues are important too!
  - Education for clinical reasoning
  - Communication skill training
  - Clinical ethics and professionalism
  - Education for primary care/ family medicine/ general practice
  - Developing community-based integrated care
  - How to improve interprofessional practice

2008-2009: Chair of Research Committee for Japan Academy for Family Medicine

- No one was leading the research in this area.
  - I was doing annual workshops…
- Research fellow has started
  - Several residents in Center for Family Medicine Development participated in the study group of Primary Care research in Jikei University.
  - Jikei University had a researcher in clinical epidemiology.
  - The director is always reading new papers.

Primary Health Care

- All people, everywhere, have the right to achieve the highest attainable level of health. This is the fundamental premise of primary health care (PHC).
- Primary health care is a whole-of-society approach to effectively organize and strengthen national health systems to bring services for health and wellbeing closer to communities. It has 3 components:
  - Integrated health services to meet people's health needs throughout their lives
  - Addressing the broader determinants of health through multisectoral policy and action
  - Empowering individuals, families and communities to take charge of their own health.

Choose a Topic and Define a Research Questions

- Essential goals
  - Ask a question that is researchable.
  - Design a study that is doable.
  - Produce results that are publishable.
  - Create a sustainable programme of inquiry

Goodyear-Smith and Mash (eds), How to do primary care research. WONCA, 2019

Life cycle of a research question

Find	➢ Identify problems or questions from patient care, teaching, reading, research, practice organisation. ➢ Elicit problems or questions from patients, communities, colleagues, managers, networks. ➢ Find existing data or research programmes that you could use or join. ➢ Consider why your problem needs to be addressed in a primary care setting and how it fits into the typology of primary care research
Refine	➢ Review literature and answer three key questions: What is known? What knowledge gaps exist? What gap will this study fill? ➢ Focus the specific question and articulate it in researchable form.
Define	➢ Define each key word in the question. ➢ Consider using the PICOTT* model to build a specific answerable question. ➢ Consider the need to identify secondary questions that are closely related to and aligned with the primary question (can also be expressed as aim and objectives).

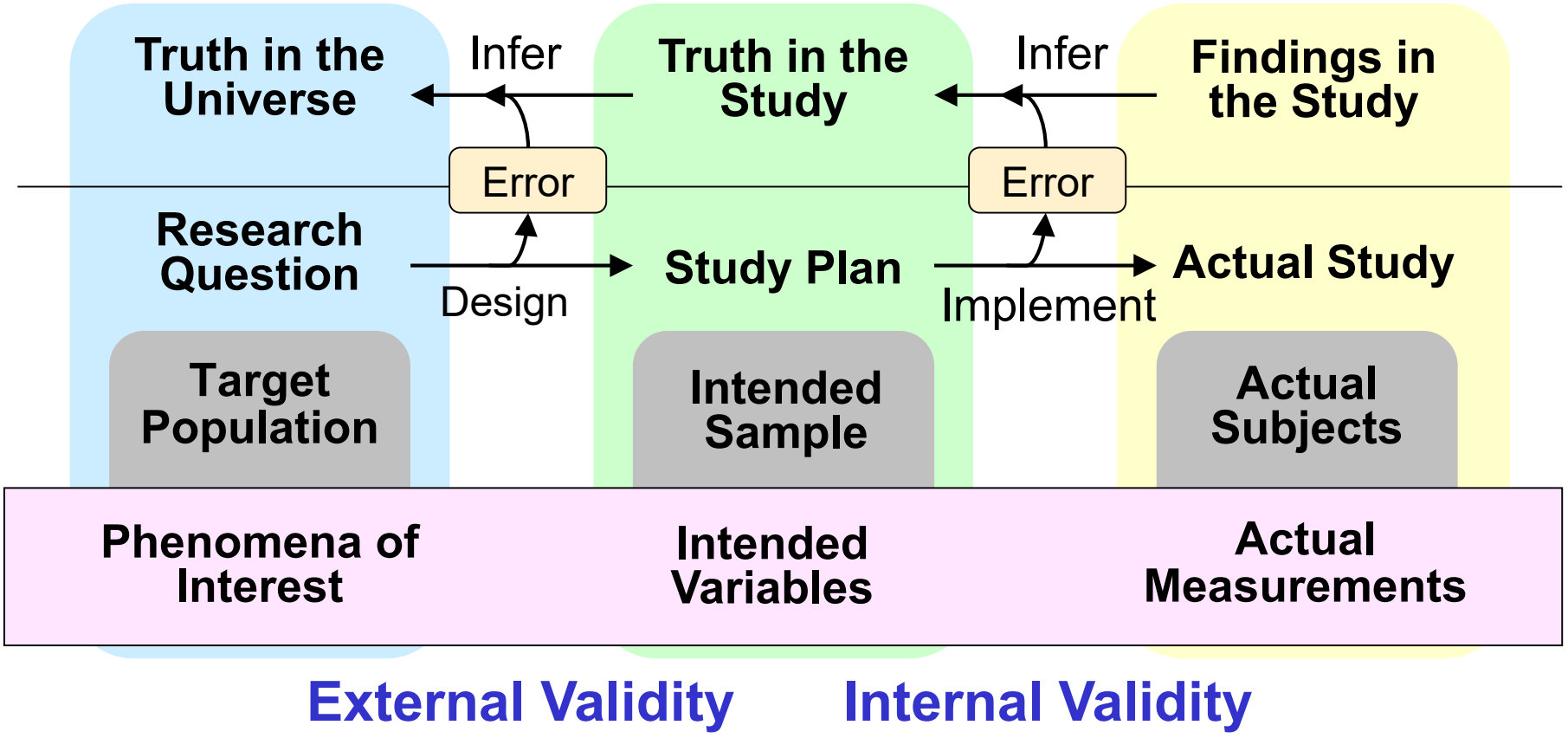
Life cycle of a research question (cont'd)

Design	➢ Use the research question(s) to determine the appropriate research methods and study design(s). ➢ Outline the key issues regarding the setting, selection of participants, any interventions, data collection and data analysis. ➢ If necessary, design methods for each secondary question in the study. ➢ Review FINER criteria to assess success of the study plan.
Align	Before finalising the proposal, check again: • Does this study have social value? So what? Who cares? Why? • Does this study have scientific value? Will this study fill a critical gap in knowledge to help improve patient care, learning, research or policy? • How does this research leverage what is special about primary care? • How well does the proposed work align with the needs of all involved?

PICOTT model for formulating clinical questions

P	Patient, Population or Problem What patients or population are of interest? What problem do they have? What are the key characteristics, inclusion and exclusion criteria?
I	Intervention, Exposure, Prognostic Factor What intervention to test? What risk factor, exposure or prognostic factor to examine?
C	Comparison What are the main alternatives to the intervention, etc.?
O	Outcome What to measure, improve or affect? What outcome is the desired goal of the intervention?
T	Type of Question Examples: diagnosis, risk factors, prognosis, therapy, natural history, prevention, harms
T	Type of Study Systematic review, RCT, cohort study, case control, qualitative

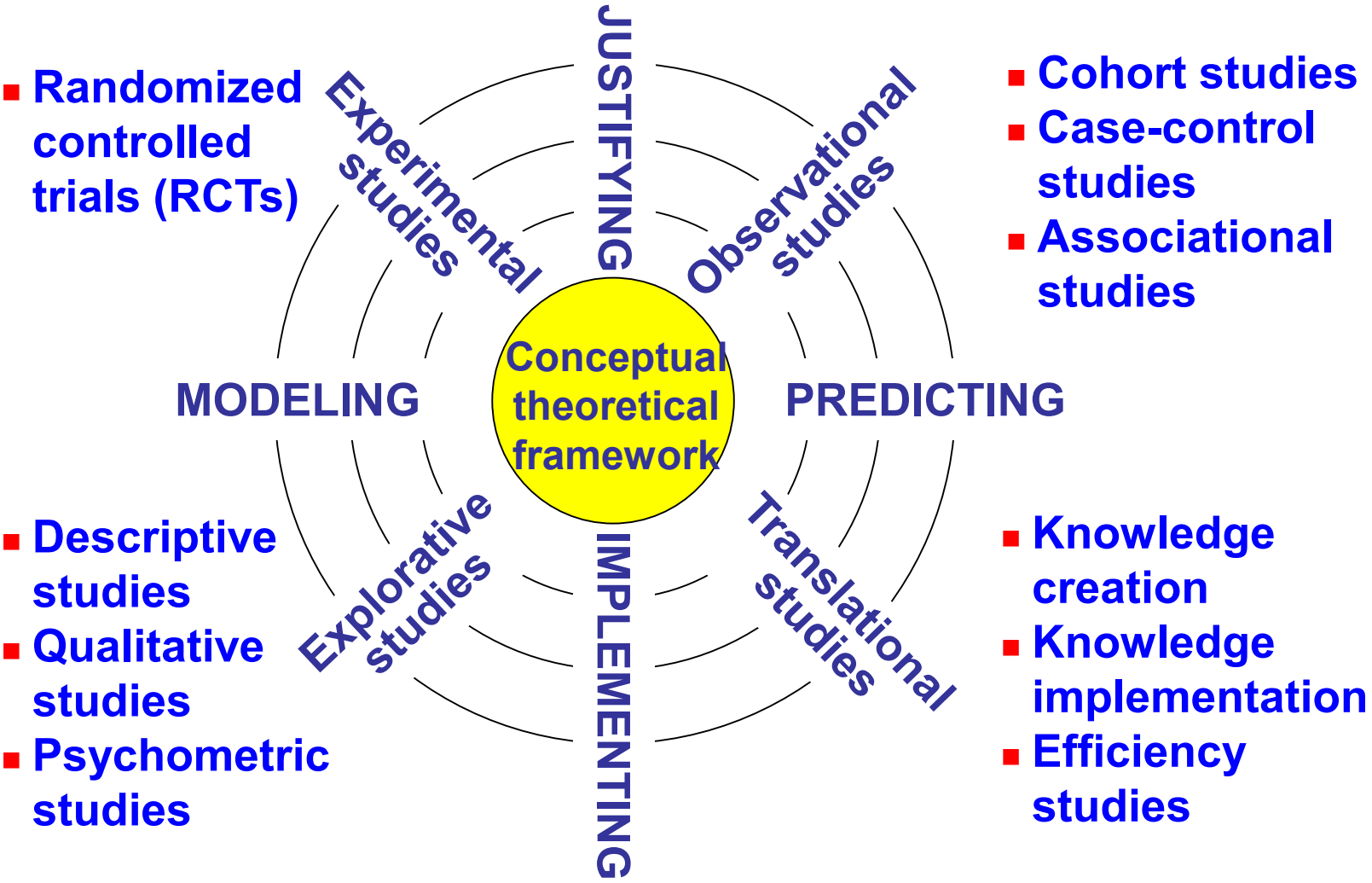
Relationship Among Design, Conduct, and Reasoning



(Hurry SB, et al. Designing Clinical Research, 2007)

Research Compass

AMEE Guide No.56 (Ringsted et al)



- Randomized controlled trials (RCTs)

- Cohort studies
- Case-control studies
- Associational studies

- Descriptive studies
- Qualitative studies
- Psychometric studies

- Knowledge creation
- Knowledge implementation
- Efficiency studies

Quantitative vs Qualitative

- Differences are in aim for research and relationship between researchers and participants

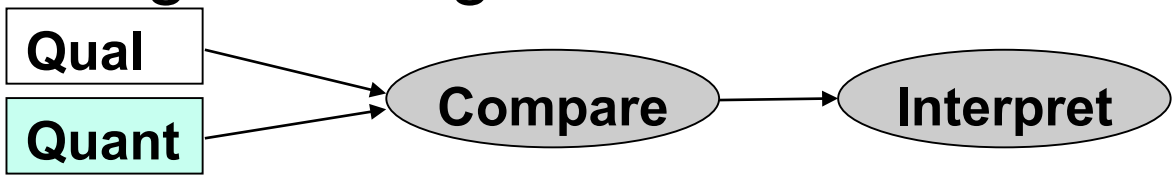
Quantitative	Qualitative
How many X? How much is X related with Y?	What is X? How is X related with Y?
Researchers are independent from the subject	Researchers use their subjective views as analyzing tools
Mainly used for hypothesis testing	Used for deeper understanding of the subject

Mixed Methods Research

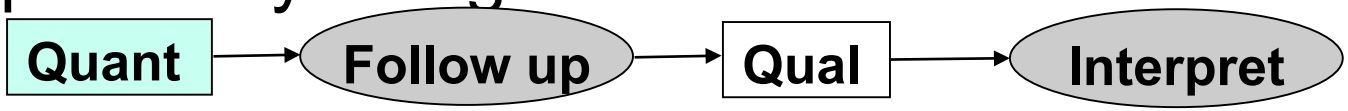
- Previously researchers say quantitative research and qualitative research must not be mixed due to difference in philosophical viewpoints.
  - Quantitative: pragmatism
  - Qualitative: constructivism, constructionism, neopragmatism, phenomenology
- In late 2000s mixed methods res became popular.
  - Which has priority?
  - Independent or interactive
  - Timings of data collection
  - Mixture process

Many Types

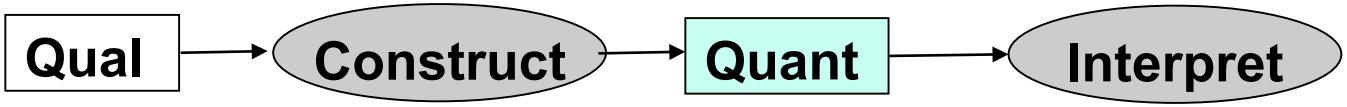
1. Convergent design



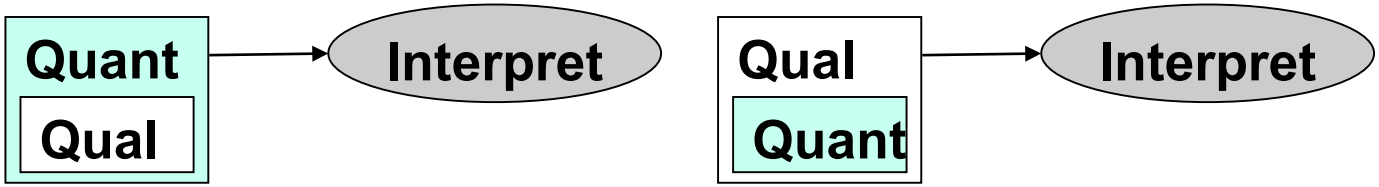
2. Explanatory design



3. Exploratory design



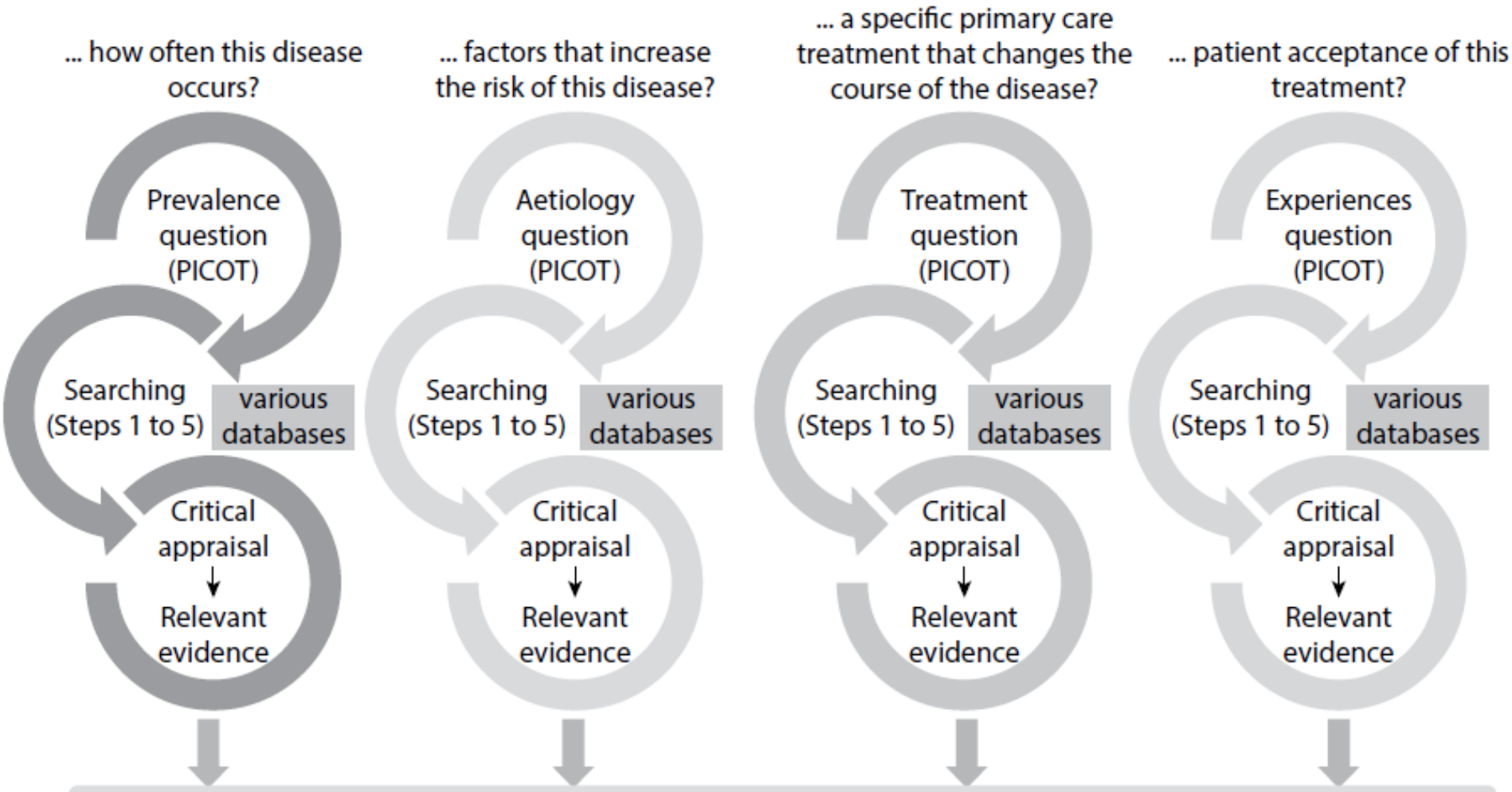
4. Embedded design



Difficulty in Measurement in Education/Psychology Field

- A **construct** in the philosophy of science is an ideal object, where the existence of the thing may be said to depend upon a subject's mind. This contrasts with a real object, where existence does not seem to depend on the existence of a mind.
- In a scientific theory, particularly within psychology, a hypothetical construct is an explanatory variable which is not directly observable. For example, the concepts of intelligence and motivation are used to explain phenomena in psychology, but neither is directly observable.

How To Conduct Literature Search



- Integrate relevant evidence from multiple searches on important aspects of interest area
- Narrow and inform your precise research question
- Make an argument for the social and scientific value of your study
- Demonstrate the gap in the evidence that your study will address

How To Collect References

- The more, the better
- Journal articles, book chapters, web information, seniors' advices, etc.
- Reference of each article is also important information source.
- Ask your supervisors and colleagues which article is related with your interest
- Not only medicine but other areas too: e.g. psychology, economy, anthropology…

Open Your Eyes

- Go to conferences and sell your ideas!
- If you know more about what you don’t know, you will improve yourself.
- If you can focus on some topics please concentrate on the topics. If not you can learn wider perspectives.
- You can use SNS to disseminate your ideas to the colleagues.