

2015. 12. 10

18th OECD/Japan Seminar

"Education 2030: 21st Century Competencies"

Emotional Quality + Meta-competencies

**(Formerly as
“Character + Metacognition”)**

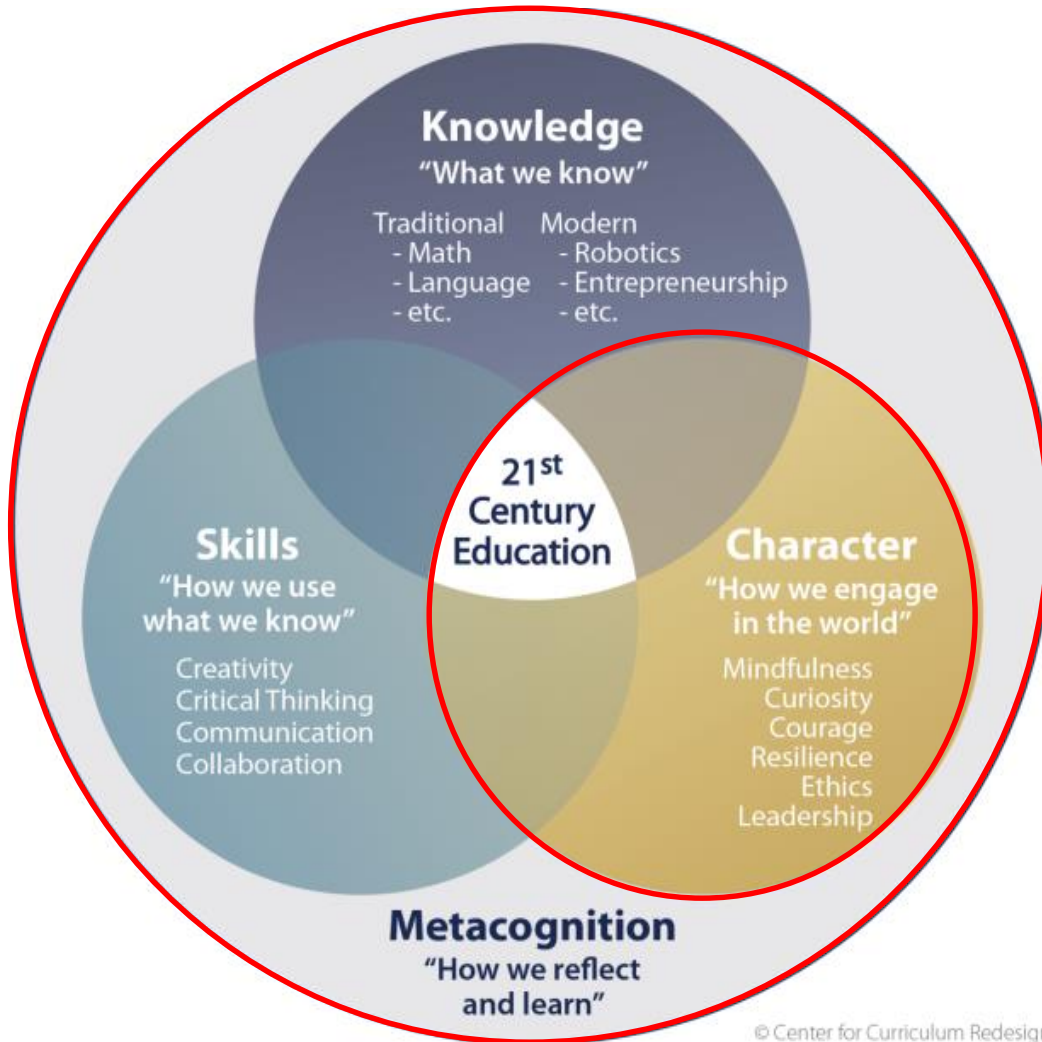
Hajime Shirouzu

**National Institute for Educational Policy Research
(NIER)**

Content

- 1. **What is “Emotional Quality & Meta-competencies”?: Summary of background discussion**
2. **Japanese current and future curriculum for “Emotional Quality & Meta-competencies”**
3. **Three selected cases to address challenges for teaching and assessment of “Emotional Quality & Meta-competencies”**

What is “Emotional Quality + Meta-competencies”?

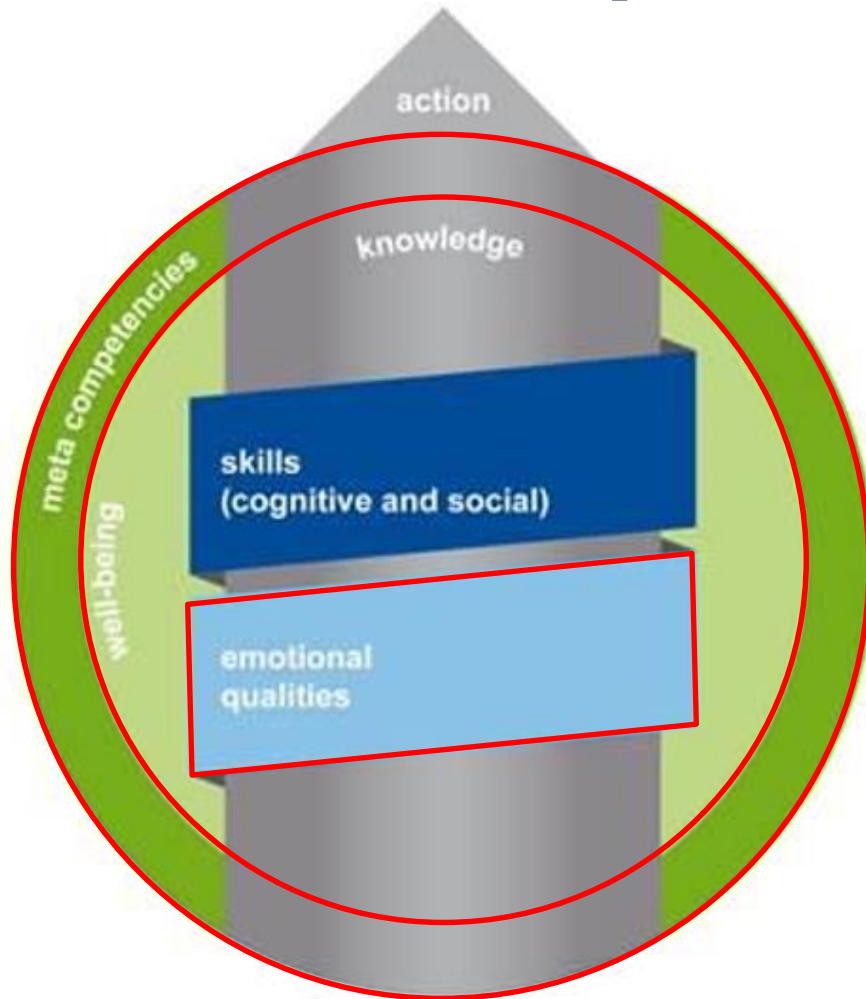


How we reflect and learn about “How we engage in the world” through actual experiences of engagement

Revised into five domains (Tentatively)

Knowledge	subject knowledge: e.g. Math, Languages; inter-disciplinary knowledge: e.g. entrepreneurship practical knowledge: e.g. know-how, sector-specific knowledge	
Skills	Cognitive competencies	e.g. problem solving, critical thinking, creativity
	Social competencies	e.g. collaboration, communication, teamwork, leadership
Emotional qualities	e.g. curiosity, courage, empathy, grit, responsibility, mindfulness	
Well-being	e.g. health habits and outcomes, subjective happiness (well-being) as well as skills to use physical tools and manual skills	
Meta- competences	e.g. self-awareness, self-regulation, self- reflection, goal orientation	

Visual example of the competency domains



Emotional quality for knowledge growth and taking action.

Meta-competencies for regulation of and reflection on curiosity, empathy, responsibility etc. for “from knowledge to action.”

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Current curriculum (essence)

Solid academic abilities

確かな学力

基礎・基本を確実に身に付け、自ら課題を見付け、自ら学び、自ら考え、主体的に判断し、行動し、より良く問題を解決する資質や能力

Factual knowledge and specific techniques

Skills of critical thinking, judgement, expression, etc.

Readiness for learning, Humanities, Proactivity, Respect for diversity, Partnership, etc.

【生きる力】

Zest for life

自らを律しつつ、他人と共に協調し、他人を思いやる心や感動する心など

豊かな心

Richness in humanity

たくましく生きるための健康や体力

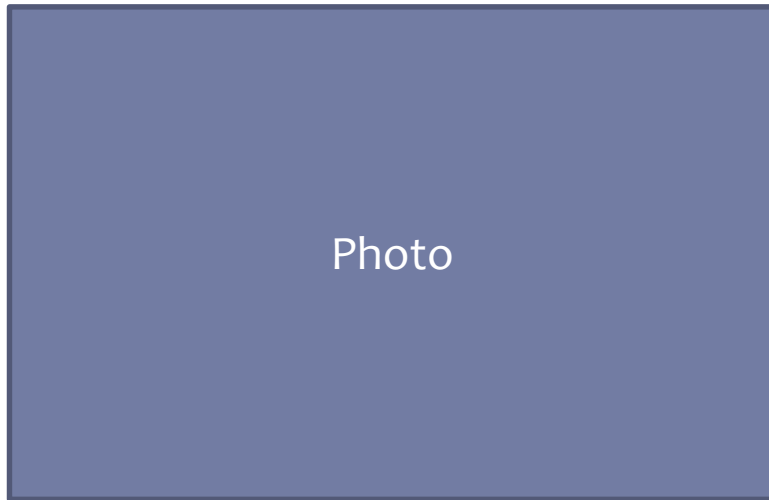
健やかな体

A sound body

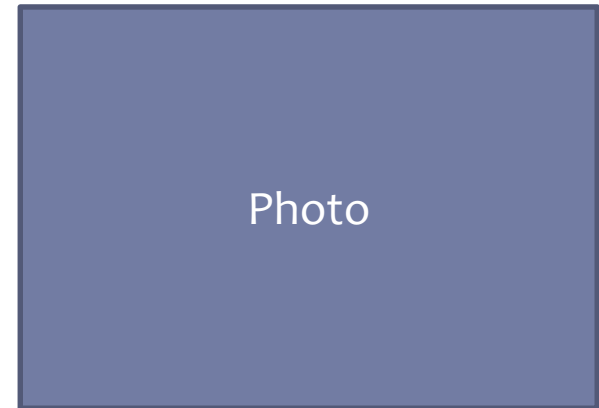
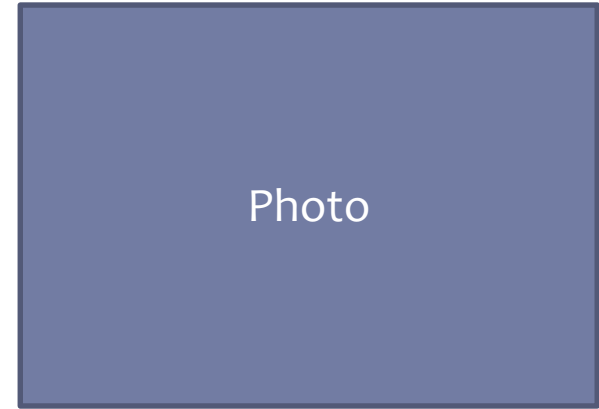
School Education Law
Art. 20, para 3, etc.

※ Well-being is/will be one of educational objectives as a matter-of- course, which should be nurtured in collaboration with home and society.

Ordinary classrooms and outside the rooms



**Passive learning not tied
to the competencies**



**Division and specialization:
Extra-curricular experiences
for the competencies**

Future curriculum (essence)

人格の完成を目指す

教科横断的・総合的に育成すべきさまざまな資質・能力

Knowledge and Skills

Ability to think, judge, and express

Readiness for learning and living

個別の知識や技能
(何を知っているか、
何ができるか)

教科等の本質に根ざした
見方や考え方等
(知っていること・できることをどう使
うか)

情意、態度等に
関わるもの
(どのように社会・世界と関わり
よりよい人生を送るか)

教科等間の往還
(curriculum management)

教科学習
Subject Matters

各教科に固有の知識や
個別のスキル

各教科の本質に根ざした問題解
決の能力、学び方や
ものの考え方

各教科を通じて育まれる情意、
態度等

総合的な学習
Integrated Study

(各学校で設定)

横断的・総合的な問題解決の
能力

実社会における横断的・総合的
な問題解決に取り組む態度

特別活動
Special Activity

集団の運営に関する方法や基本
的な生活習慣等

よりよい集団の生活や自己の生
活習慣等を形成していく能力

自己の役割や責任を果たす
態度等

道徳教育
Moral Education

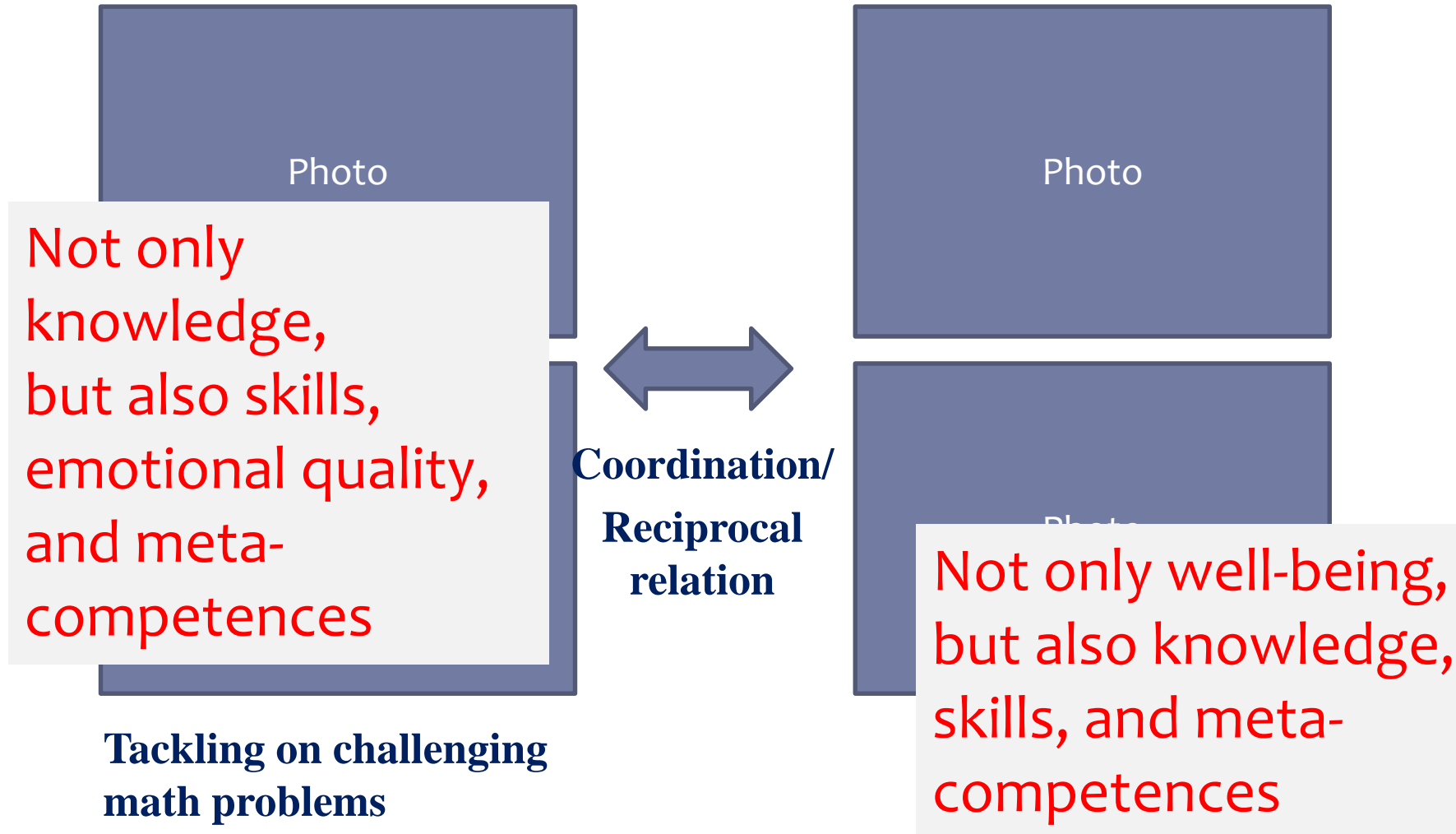
道徳的価値

道徳的な判断力

道徳性

Integrated learning processes (Active Learning)

From curriculum innovation to classroom changes in coordination with experiences outside



○教科・学問分野を越えた共通言語として

⇒どの教科や分野にも当てはまる汎用性が重要

○カリキュラム政策担当から現場の教員までが共有できる共通言語として

⇒なるべく数の少ないシンプルな構造が重要

例えば・・・

1) Knowledge

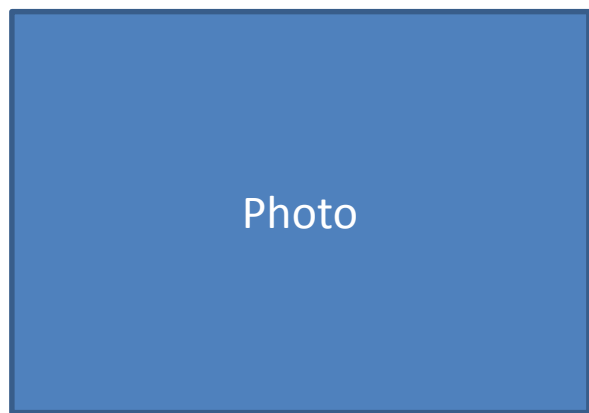
2) Social and Cognitive competencies

3) Emotional qualities

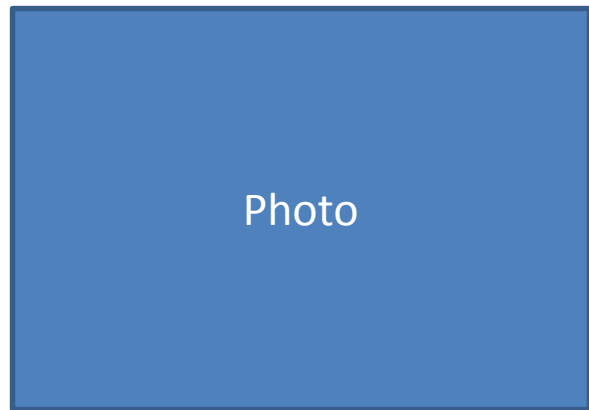
4) Meta-competencies

	Math	Japanese	Science	Social Studies	Arts	Physical Education	Health, Well-Being
Knowledge									
Social and Cognitive									
Emotional									
Meta-competencies									

From curriculum innovation to classroom changes in coordination with experiences outside



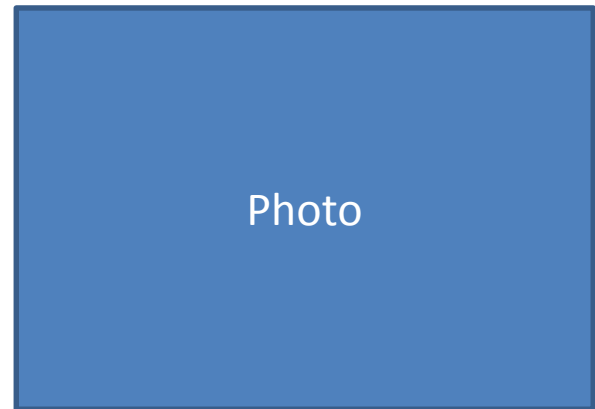
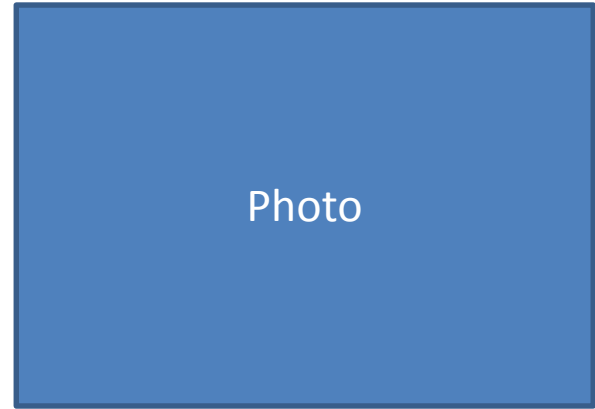
Making a play script



**Tackling on challenging
math problems**



**Coordination/
Reciprocal
relation**



Then, how?

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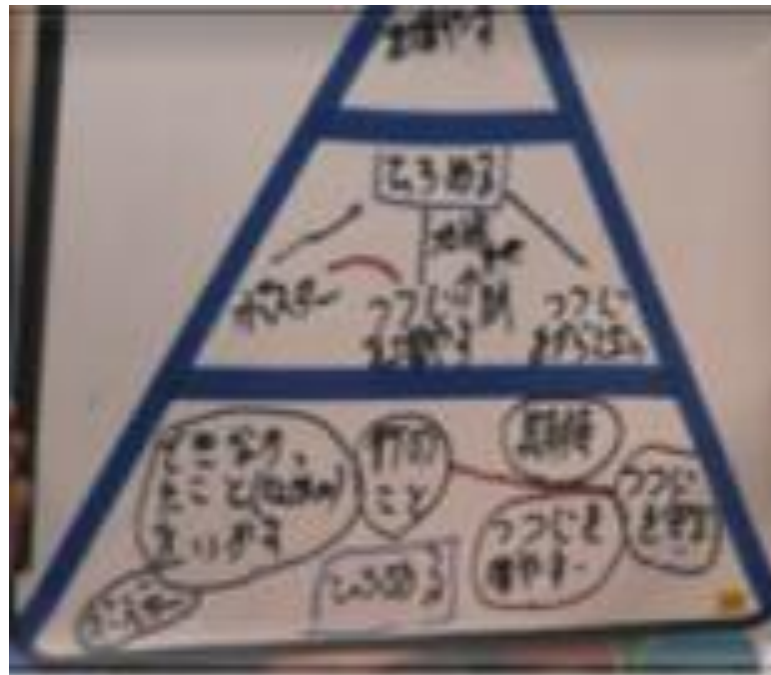
Three questions

- 1. Do children really raise their emotional quality and gain meta-competencies through school education? (6th grade, Integrated study)**
- 2. Can they learn them even in other subjects than the moral education? (5th grade, Japanese from Tokyo Gakugei University Team)**
- 3. How can we change moral education into the learner centric one that integrates knowledge, skills, emotional quality and meta-competencies? (7th grade, Moral Ed.)**

Case 1: Okubo Elementary School

- **Context:**
 - Three-fourths of pupils have foreign (or foreign-related) parents.
 - “Hate-speech” conducted on the street 100meter apart.
 - Principal led teachers school policy from “learn first, create later” to inquiry-centered: “learn and create simultaneously”
- **Lesson: 6th grade (teacher: Hiroki Mita)**
 - Integrated study: Revive “Okubo azalea (大久保つつじ)” in their district, with a help of adults around, as their comprehensive survey of four years learning, spanning one-two semesters.

- **April: Discuss what they should do in next month.**
- **Personal opinions→Think in group
→Discuss in class, with thinking tools**
- **Finally: “Keep azalea grow and broadcast it”**



「友達と意見が違うときにどうするか？」

- 児童「意見をぶつけ合うことによって自分の学びにもなるし、その意見がつながっていつたり関連して深くなってゆくというのが一つの私たちの考えで、私の考えではあります」

Video

Three questions

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Case 2: Oizumi elementary school attached to Tokyo Gakugei University

- **Class: Grade 5, Japanese language (Teacher: Shinya Ueda)**
- **Course units: “Let’s discuss whether zoos are necessary or not.”**

1. Pupils read two articles and decide their own opinion about whether zoos are necessary or not.

2. They read four more articles and discuss in small group consisting of members with same opinion.

3. They discuss in small groups consisting of members with different opinions and seek how to improve zoos in further discussion.

4. They propose how to improve zoos to officials in the zoological park society.

From debate to “synthesis (no-side discussion) after debate”

- **Debate: Students organize information but do not integrate it: Evidence is sorted according to which hypothesis it supports. Lacks exploratory coherence (Bereiter, 2014).**
- **From “presentational talk” to “exploratory talk.” (Barnes, 1976)**

Video

Summary of two cases

- **Student learning:**
 - **Skill: Synthesis of different opinions**
 - **EQ & Meta-C: Empathy; Self-agency coupled with respect for diversity**
- **Learning mechanism:**
 - **A “shared goal/problem” to tackle**
 - **Constructive interaction (w/tools & others)**
 - **Reflection upon own progress**
- **Goals: Integration of multiple elements**

Further questions

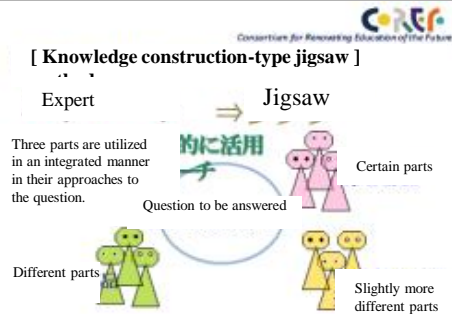
- 1. Students' self report clearly shows their gains of meta-competence of EQ → But, is it the goal that lets them come to report in that way??? How to let assessment drive teaching?**
 - Shared Epistemic Agency (Crina Damsa) is the answer, for instance?**
- 2. How to assess students' progress in lessons themselves for formative or “trans-formative” assessment?**

Three questions

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Examples of “Active Learning” in high schools

Collaborative learning (jigsaw method)



World History

One theme are divided into plural viewpoints, and each group in charge of each viewpoint gives an explanation. The explanations are integrated through discussion to find out a better answer. The process leads students deeper understanding.

Inquiry-based learning in Super Science High Schools



Frontier Science I · II · III

<Cycle of a unit>

Preparation → Field work, Lecture → Inquiry activities → Presentation and Evaluation

Logical thinking, creativity and originality, ability inquire scientifically and skills to express are developed.

Inquiry-based learning in Super Global High Schools



Global Inquiry

Students investigate current situations and problems of the local industry and traditional crafts in Japan and abroad, and explore the possibility of a global expansion.

The foundation of critical thinking, judgement, and practical communication skills is developed.

Experiential learning in “challenge schools”



Life Practice

Students learn how to protect themselves from crime, skills of writing letters of thanks and traditional etiquette.

Knowledge and skills necessary to live independently are acquired through solving problems in everyday life.

Project-based learning in vocational high schools



To achieve low-cost and year-round cultivation of vegetables, students conduct joint research on “no-heating cultivation of winter vegetables” by using solar thermal energy and improving the soil with the use of biomass materials. Students also did harvesting and sale of vegetables.

Utilization of ICT



Students record the process and the course of chemical experiments and observations using tablet PCs. They are used to communicate, compare and share the results.

Case 3: Moral education in grade 7 with Knowledge Constructive Jigsaw

- **Problem: Do you agree with/second a new type of leadership?**
- **Materials:**
 - Veteran doctor “reads” hidden emotion of a wife whose husband faced with terminal cancer
 - Teacher reads hidden context of a lonely girl
 - Parents read their small kid’s unarticulated words.
- **Synthesized into “The leaders are expected who can “read” and/or “hear” contexts of socially vulnerable people”**

- **80% of students can succeeded in the integration of three materials, and almost all of them welcomed this type of leaders.**
- **One boy discussed with other members:**
 - Boy “I don’t agree with him.”**
 - Girl “Why?”**
 - Boy “Because the leader should help not only vulnerable people but also all people.”**
 - Girl “All?”**
 - Boy “Yes, because all of us can become ‘vulnerable people’ anytime.”**

Assessment of all conversations to capture their EQ & Meta-C in the authentic situations

Consortium for Renovating Education of the Future

Students

授業デザイン1 都市部の水害 知識構成型ジグソー活動 全生徒対話データ

Utterances

J1	J1	J1	J2	J2	J2	J3	J3	J3	J4	J4	J4	J5	J5	J5	J6	J6	J6	J7	J7	J7	J8	J8	J8	J9	J9	J9	J10	J10	J10	J11	J11	J11	J12	J12	J12				
-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	-1	-2	-3	
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
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461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500

神谷駅 Jingu Valley station

All the students (n=36) in all the jigsaw groups (1/12pages)

Toward real “evidence-based education” of 21st century competencies