



Industrial skills development

Challenges and opportunities in developing countries



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The structure of presentation

Why is the industrial skills development necessary?

- **The node** to link and achieve various developmental goals
- Skills \Leftrightarrow SDGs, poverty reduction, and economic growth

What does it mean to be competent at work?

- Do we really know the exact contents of “skills” to be developed?
- The latest global discussion on **the concept of “knowledge”**

Why does skills gap occur?

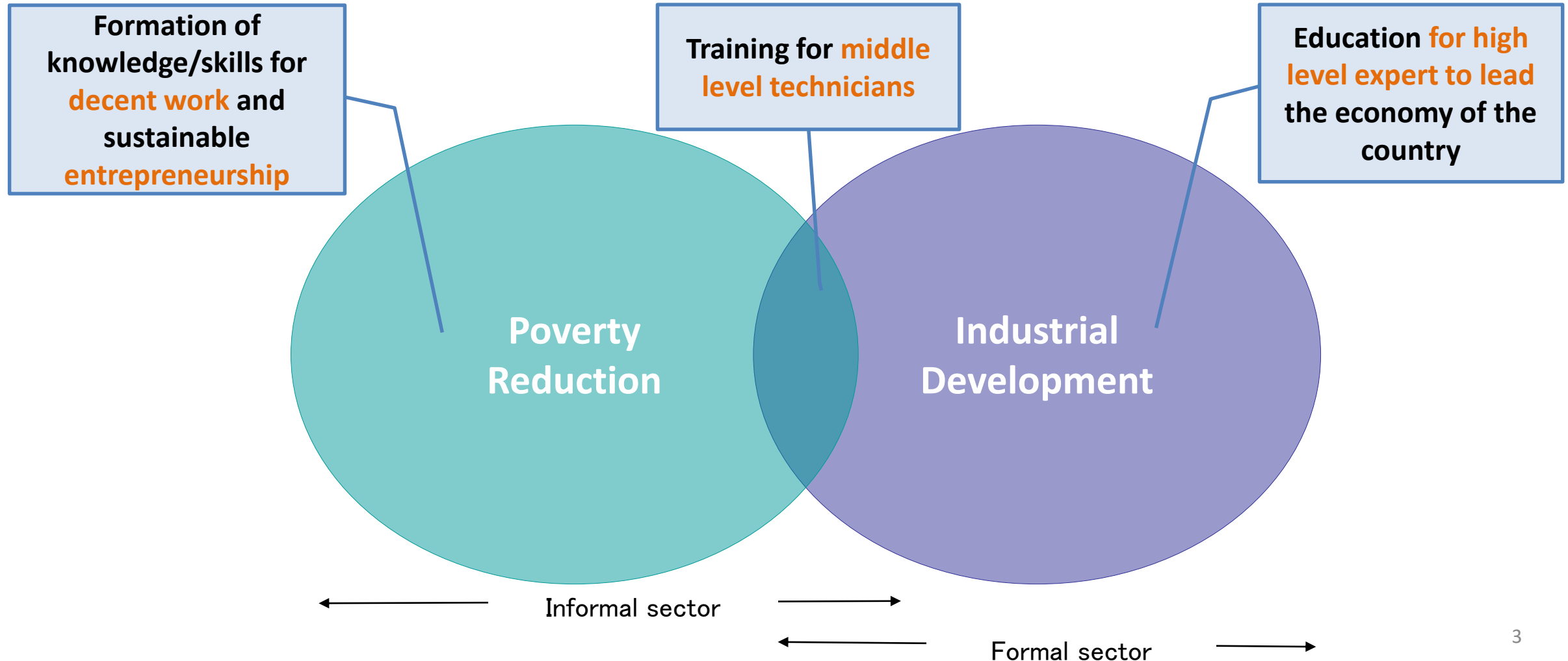
- “Live together but in different worlds” – Why is **the coordination among stakeholders** so difficult?
- **Twin gaps** of supplies and demands in the labor market
- **Fluidity and multi-dimensionality** of targets and contents

Who demands for TVET?

- The skilled workers are necessary but should they be trained at TVET?

Any impact of COVID on skills development ?

Skills are the foundation of economic growth and poverty reduction



Social investment for the growth of developing countries

Capital

Investment

- **Human capital**

- Capacities of individual workers. Its improvement will enhance the workforce's productivity

< Education >
Vocational training;
school education
< Health >
Health services

- **Physical capital**

- Infrastructure (road, railway, etc.)
- Machineries and equipment
- Land, facilities

Construction
Procurement of materials
Acquisition of land

- **Financial capital**

- Cash, stock, bond

Bond issuance
International development aid
• Grant aid, loan

- **Social capital**

- Human relationship which promote the business partnership

Many governments, particularly those aiming to achieve rapid economic growth increase the budget for education

Budget increase does not necessarily guarantee the improvement of productivity or employment



Countries depending on labor-intensive industries tend to increase the number of employment but with low productivity

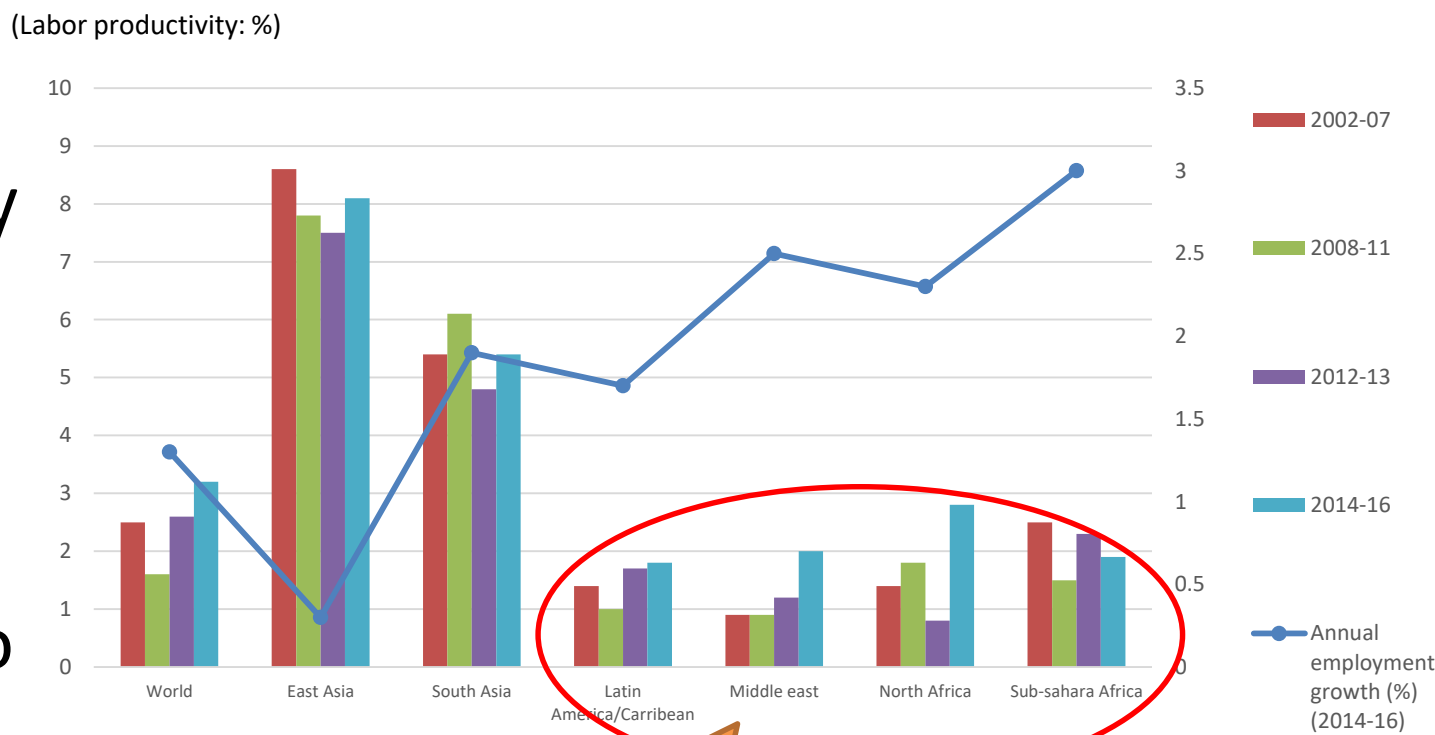
<Macro-economic viewpoint>

To depart from the “competition to the bottom”, highly skilled workforce is key to improve productivity

<Viewpoint on poverty reduction>

Improved abilities will lead to secure jobs and income growth for the individuals

Employment and labour productivity growth by region



Human resources are the key

Source: ILO

SDGs and Industrial Skills Development

Effects on the side of developing countries

Global actors



What causes the skills gap?

“Live together but in the different worlds”



School teacher

Our school has **XX major** and the graduates will have specialist **certificate**



Youths

I want to be **an IT engineer**



I will be **a fashion designer!**

Our national plan is to be a middle income country by 2030. To achieve it, we need more **high skilled workers in ZZ industry.**



Government officials

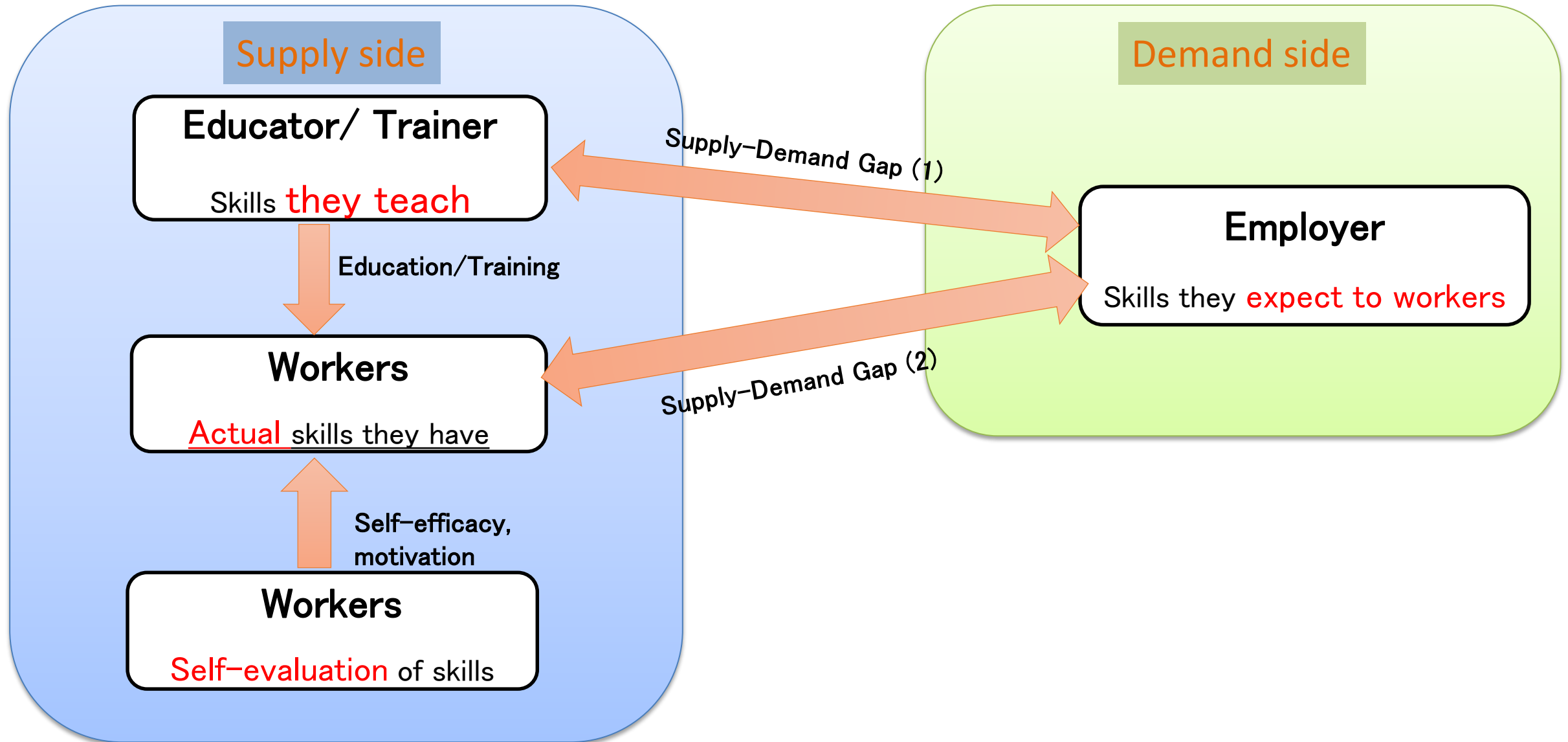
We invest in Country A but cannot find competent people to be **local managers.**

We need workers who can **work accurately and efficiently.**



Employers

Twin gaps of supplies and demands of skills in the labor market





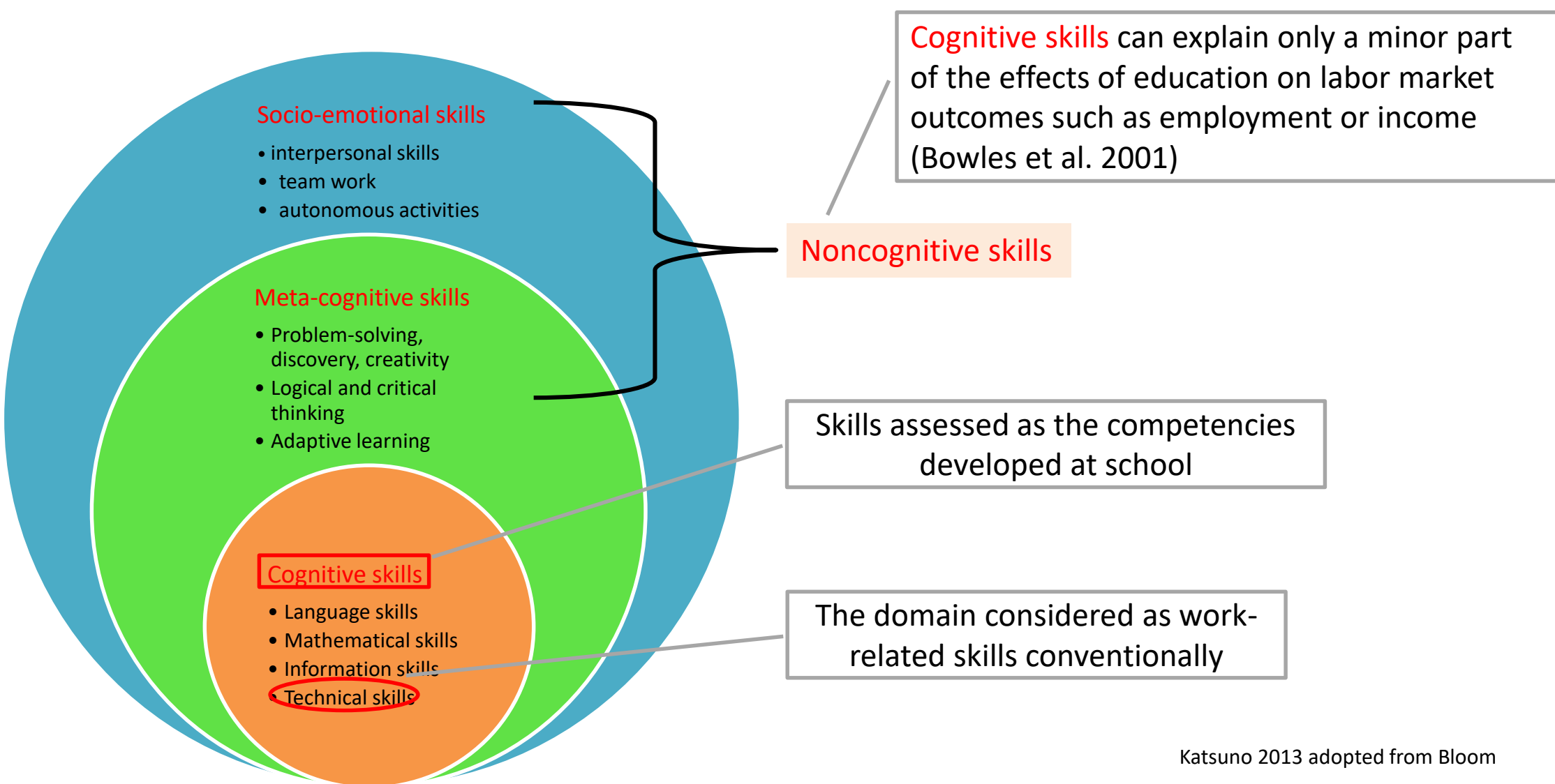
Do we know what “employable skills” are?

- **Skills to solve problems** in the context of work
Identify problems → find causes of problems → find solutions → apply techniques to solve problems
- Problem-solving skills are the comprehensive whole of **vocational skills, cognitive skills (literacy, numeracy and theories) and non-cognitive skills (attitudes and values)**

➡ Increasing attention to the noncognitive skills in



Taxonomy of cognition



Katsuno 2013 adopted from Bloom

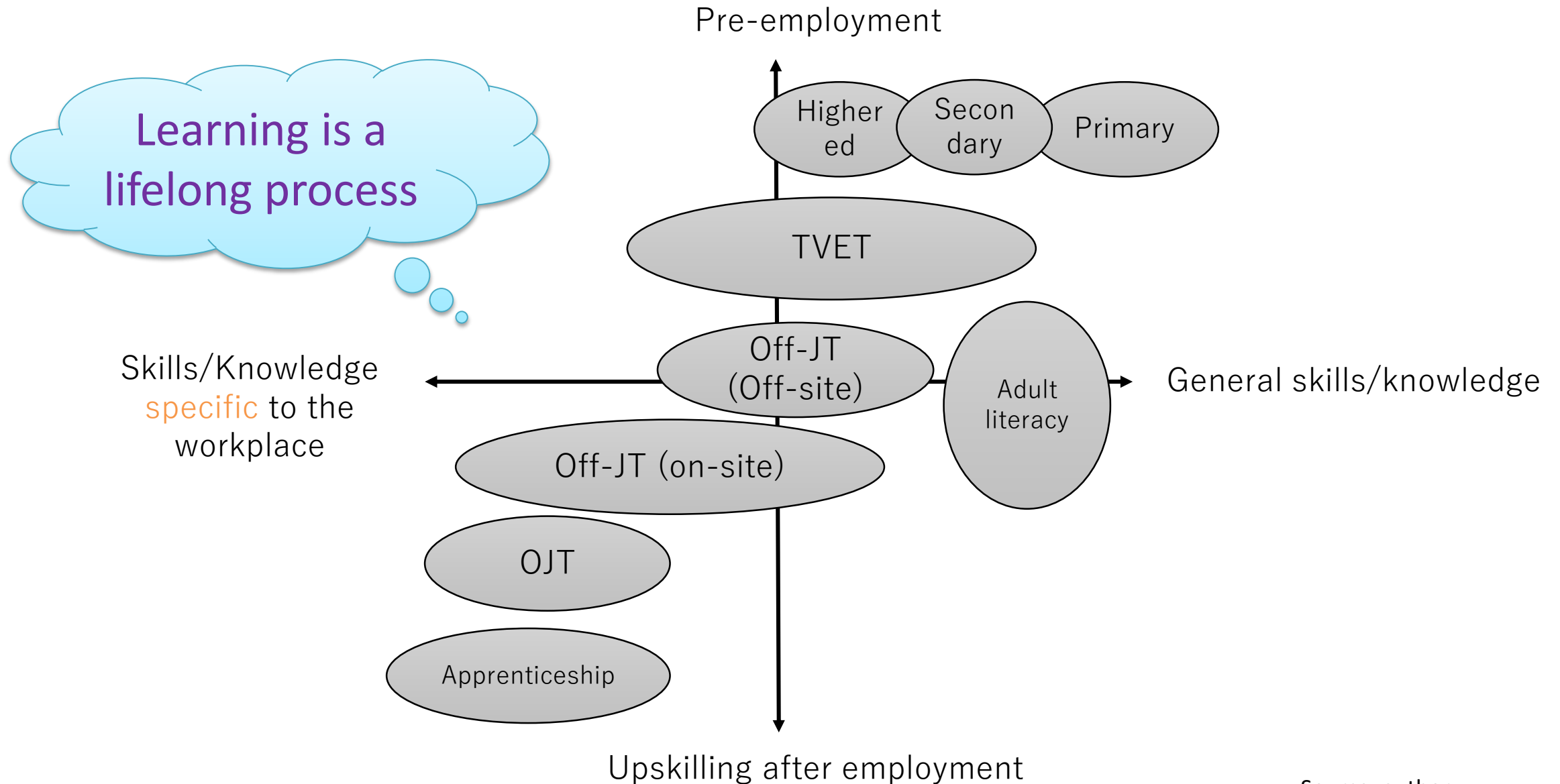
Problem-solving at work \neq getting high score in exams

Schooling ≠ Skilling

Does the increased investment in TVET solve the problem of skills mismatch??

- How does the supply-demand gap occur?
 1. The government planned the resource allocation among different education levels mistakenly → created many workers with “Over-education” and “Under-education”
 2. The criteria of evaluating the quality of workforce is often not the education qualification but skills ← there is no established benchmark of assessing skills
 3. There are significant gaps of perception between the employers and the trainers/educators, but demand side data is often unavailable → The skills development plans are made without demand side information

When, where, and what kind of skills do they need to develop?





First thing we need to do is to **diagnose** the causes and nature of skills gap first

What are **the contents of skills** which cause the mismatch?

- Abilities to conduct specific tasks → **Vocational/ operational skills**
- Personalities and attitude? → **Noncognitive skills**
- Basic cognition which enables continuous learning? → **Cognitive skills**
- Educational certificate → **Expansion of the school system**

Are there any **system-level deficits**?

- Asymmetry of information on employment
→ **Matching job opportunities**
- The fast pace of change of the employers' skills needs
→ **Routinized needs assessment and enhanced flexibility and responsiveness of the training system**
- Legal and financial framework to promote skills development does not exist or malfunctioning
→ **Skills development act, Occupational standard, accreditation, skills development fund, subsidies**
- Low quality of training contents and delivery
→ **Improvement of training materials and trainers**

Types of intervention to promote skills development and actors' involvement

Objectives	Interventions	Role of government	Role of employers	Role of training institutions	Role of learners/ workers
Enhanced coordination among actors	Public-private partnership (PPP) to fill the supply-demand gaps	<ul style="list-style-type: none"> To establish the <u>coordination agency</u> for skills development, involving multiple government bodies, industries, and training institutions 	<ul style="list-style-type: none"> To enhance the partnership for various forms of skills development, such as in-firm training, apprenticeship, and public and private TVET Modernization of the apprenticeship system To bridge the training gaps between formal and informal sectors 		
Resource utilization for effective skills development system	Establishment of the <u>financial incentive mechanism</u> to vitalize the training market	<ul style="list-style-type: none"> To introduce the <u>levy</u> for skills development To establish the <u>skills development funds</u> Provide <u>subsidies</u> for companies and training institutions <u>Scholarships</u> for students 	<ul style="list-style-type: none"> To provide opportunities of skills development, both on-site and off-site, for employees utilizing the subsidies and loans from the government (SMEs) To provide matching funds to the government subsidies (large companies) 	<ul style="list-style-type: none"> Receive trainees from the companies 	<ul style="list-style-type: none"> To pay the tuition for training To acquire opportunities of suited training using vouchers and other government services To demand for loans and scholarships for continuous learning
Formation of quality skilled workers	Skills assessment and certification based on the problem solving skills required in the world of work	<ul style="list-style-type: none"> Establishing the <u>occupation standard</u> for respective industries and levels of skills Establishing the <u>mechanism to accredit</u> training providers who follow the occupation standard 	<ul style="list-style-type: none"> To input the needs of employers in developing the occupation standard To take part, as the examiner, in the skills assessment following the occupation framework 	<ul style="list-style-type: none"> To provide education and training along with the occupation standard To be accredited by the government according to the occupation standard (accredited institutions will have subsidies) 	<ul style="list-style-type: none"> To sit for the skills assessment on the national occupation standard, in addition to the TVET certification
	Strengthening the <u>practical training</u>	<ul style="list-style-type: none"> Matching the TVET interns with the companies through the skills development coordination agency 	<ul style="list-style-type: none"> To accept interns (practical trainees) from TVET 	<ul style="list-style-type: none"> Finding companies at which students can do intern Improve the school practical training Teacher training to update the latest techniques of the industry) 	
	Direct provision of TVET to supplement the training by private TVET and employers	<ul style="list-style-type: none"> Direct management of public TVET 			
Promotion of employment	<u>Matching</u> recruiters and job searchers	<ul style="list-style-type: none"> Establishment of an employment agency 	<ul style="list-style-type: none"> Open recruitment (reduce closed recruitment) 	<ul style="list-style-type: none"> Make the info of students and graduates available for recruiters 	<ul style="list-style-type: none"> Proactive job search

Direct provision of TVET is only a minor part of the government's role in skills development



Who demand for the government-led skills development most?

- The recent neo-liberal conception of skills development demands the government **more coordinative role** than direct involvement in training provision
 - To mitigate the asymmetry of information between the supply and demand
 - To incentivize the skills development by reducing the financial and system barriers
- Large companies (e.g. factories of the global multinationals) have their own priorities and strategies of workers' skills development and promotion
← driven by their own internal labor market
- TVET demands are higher among **SMEs and informal sectors** which do not have the capacity to internalize their workers' training
- **Linkage between the plans for industrial development and skills development** is a key

COVID and the new demands for skills development

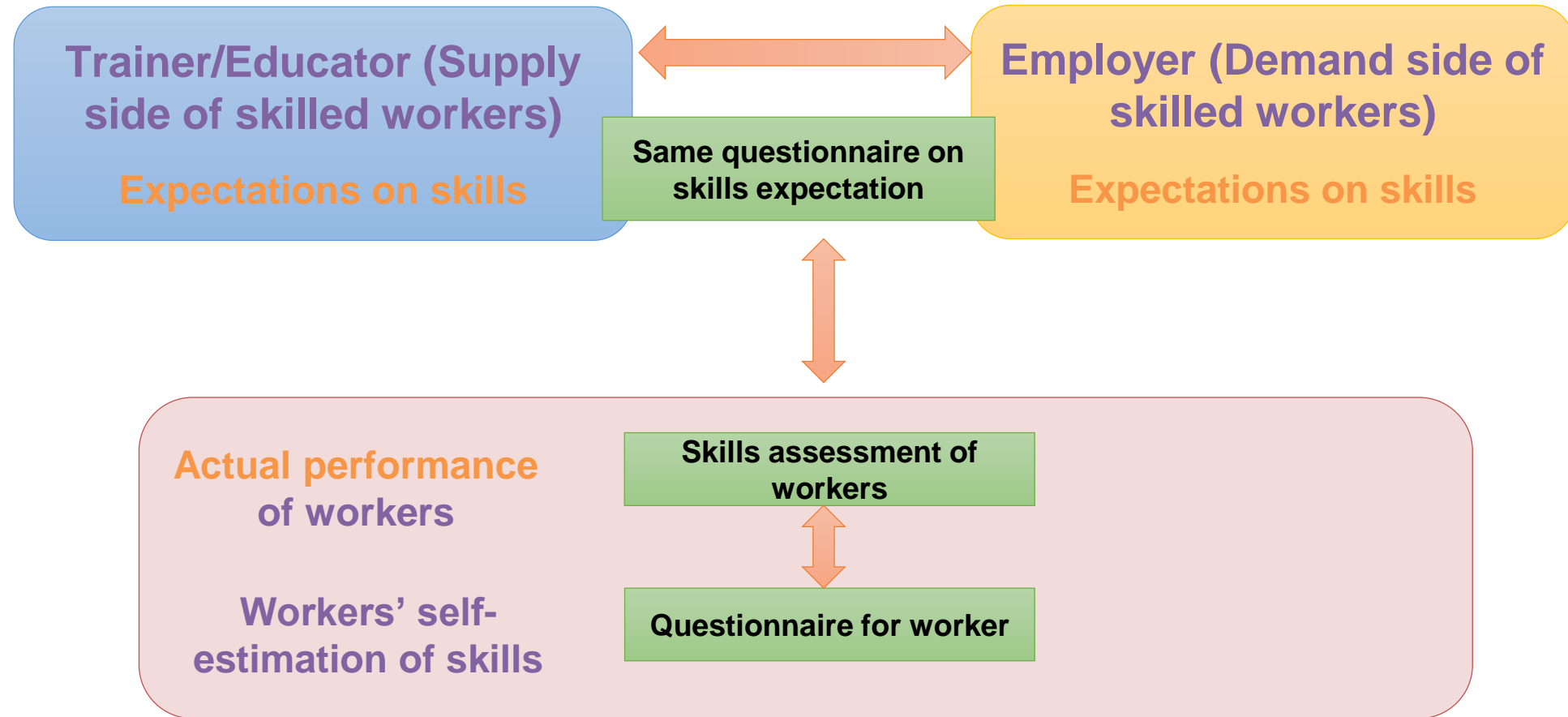
- Vocational training without contact?
 - Increased inequality of learning opportunities ← aggravation of existing problem
 - Lack of access to school, alternative tools of learning, or learning support
 - Restriction of practice-based training ← New challenge
 - Despite TVET reforms to increase relevance, a large part of the practical training and internship were suspended
- Changed mode of business operation
 - Enhanced transfer of goods without human interactions
← More reliance on IT and indirect communication skills
- Problem-solving skills in the era of with-COVID
 - Performance evaluation will be more outcome-oriented than sharing the process
 - Attentive and accurate work without visible outcomes will not appeal to the supervisor
 - Capacities to verbalize (= express in written or spoken words instead of actions or feeling) the work-related concerns and achievements will become more important

Skills and Knowledge for Youth (SKY) project

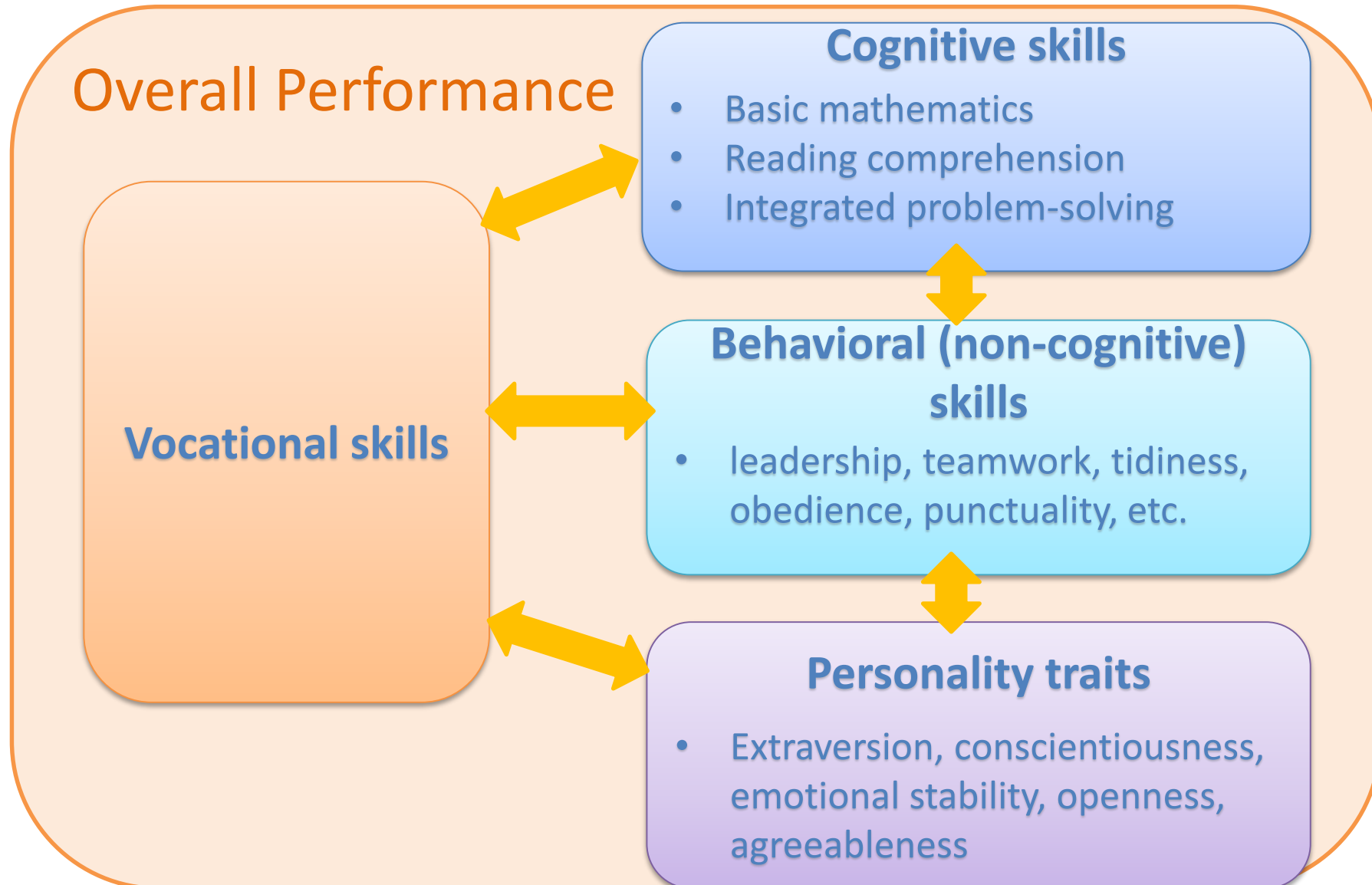
We can **diagnose** the skills of workers from multiple angles

- Our module provides pictures about the complex relationships among cognitive, non-cognitive (behavioral), and vocational skills
- We can compare the perspectives of different stakeholders and **identify the exact nature of gaps**
- We can provide **evidence-based proposals** for improving the skills development plan

1. Identify the exact contents of gaps among multiple stakeholders

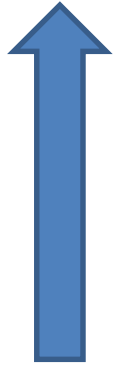


2. Diagnosis of Overall Performance of workers and students



3. Identification of factors which influence the performance

High
performance



Worker A



Worker E



Worker B

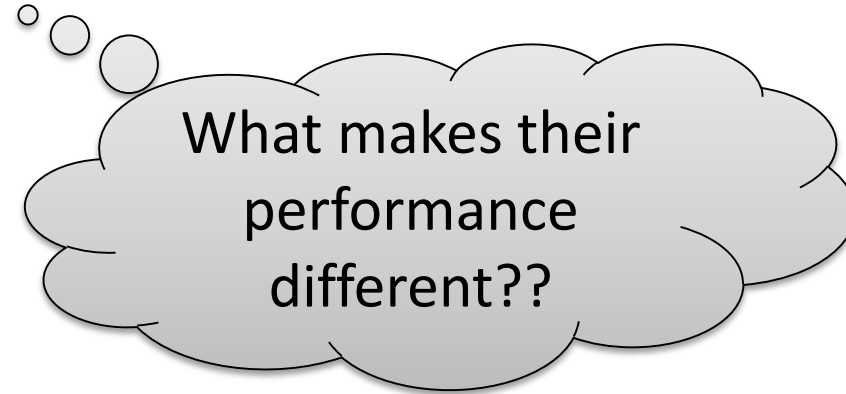
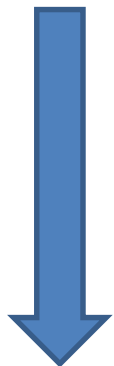


Worker C



Worker D

Low
performance



Educational background?

Years of experience?

Home background?

Gender?

Commuting distance?

Absenteeism?

More information about us

Website

<https://skills-for-development.com>



Twitter
[@SKYproject_NU](https://twitter.com/SKYproject_NU)

SKY Newsletters (biweekly)

