

Implementation of Competence-based Curriculum

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ABOVE+
BEYOND

1. OECD Education 2030 & Competence-based Education



The origin of the concept “competence”



DeSeCo Project

A research conducted by the OECD from 1997 to 2003, recognizing the importance of 'competence' and identifying key competencies necessary for future societies.



What competencies are needed for a successful life and a livable society?

<Definition of Key Competencies>

The ability to cope with complex demands in a particular context using psychological and social resources, including personal attitudes, values, and motivations, in addition to knowledge and skills.

<Three Criteria for Selecting Key Competencies>

1. Must bring something valuable to the individual and society.
2. Should help in meeting important personal needs in various contexts.
3. Must be important not only to experts but to all individuals.

<Categories of Key Competencies>

1. Interactive use of tools (language, technology).
2. Interaction in heterogeneous groups.
3. Autonomous action.



What should students learn and how should schools teach?



Constraints of the DeSeCo Project:

Competencies were somewhat theoretical and abstract, failing to provide practical aspects for teachers in schools.

Education 2030 Project:

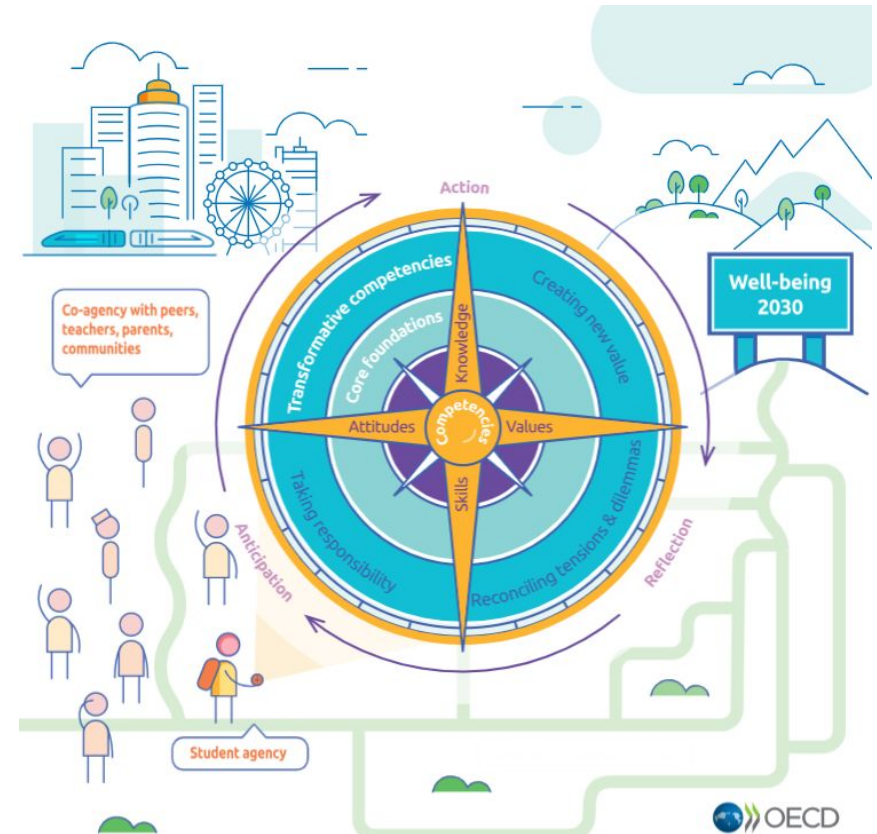
Extends the concept of competence education presented in the DeSeCo Project to overcome its limitations, proposing a more systematic and long-term vision for future education with the concept of transformative competencies. The OECD announced this as a 'Learning Framework' for the future.

4. Definition of Transformative Competence

Knowledge, skills, attitudes, and values needed to shape a better future for a good life.

Transformative Competencies

1. Creating new values.
2. Resolving tensions and dilemmas.
3. Taking responsibility.



5. Change in the Concept of Competence from DeSeCo to Education 2030



From Key Competencies (DoSeCo) to Transformative Competencies (Education 2030)

Aim	DeSeCo Project		Education 2030 Project
	Success of individual and society		Well- being do individual and society
Definition	Ability to meet complex demands, by mobilising not only knowledge and skills but also attitudes in particular context.	➔	Ability of mobilising knowledge, skills, attitudes and values to meet complex demands <ul style="list-style-type: none">- Knowledge : Disciplinary, Interdisciplinary, Epistemic, Procedural- Skills : Cognitive & metacognitive, social & emotional, physical & practical- Attitudes & Values : Personal, Local, Social, Global
Characteristics	Key Competencies <ul style="list-style-type: none">- Contribute to valued outcomes for societies and individuals- Help individuals meet important demands in a wide variety of contexts- Be important not just for specialists but for all individuals		Transformative Competencies <ul style="list-style-type: none">- A sense of responsibility to participate in the world and to influence the world for the better- Need for young people to be innovative, responsible and aware
Categories	<ul style="list-style-type: none">- Use tools interactively- Interact in heterogeneous groups- Act autonomously		<ul style="list-style-type: none">- Creating new values- Reconciling tensions and dilemmas- Taking responsibility
Core	Reflectiveness		Student agency



OECD Education 2030 Project:

Future, Wellbeing, Transformative Competencies, Student Agency

Growth of all
students
into holistic
beings

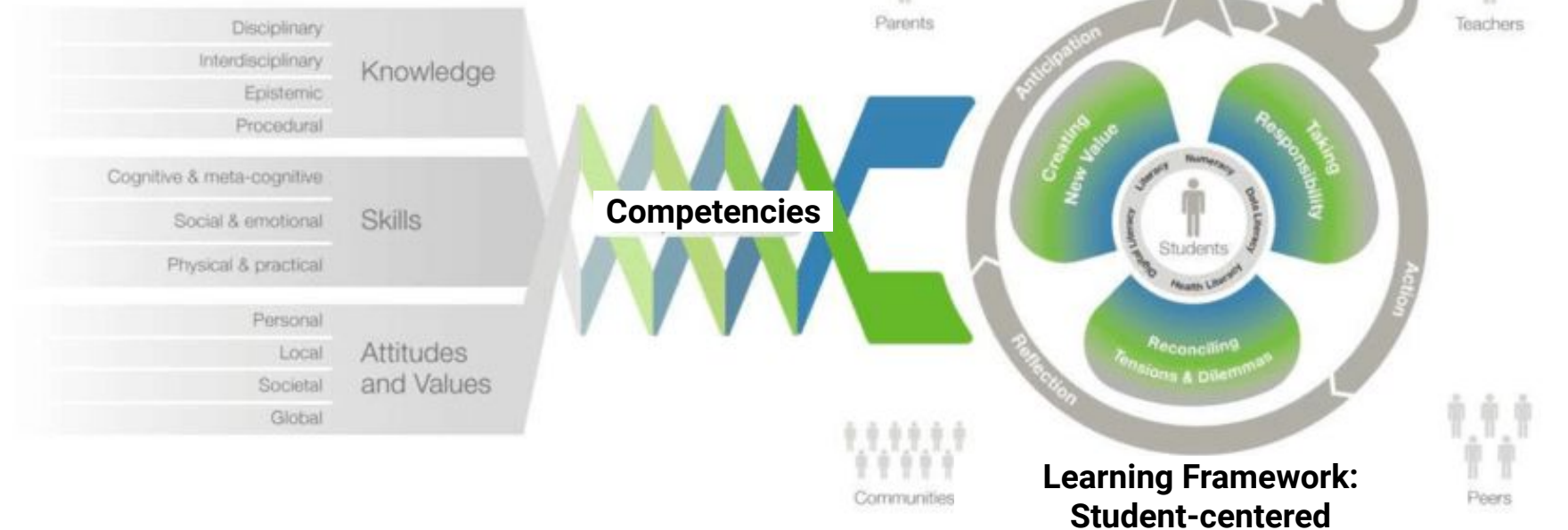
Maximizing the
potential
inherent in
students

Building a
common future
society based
on the
wellbeing of
individuals and
society

6. OECD Education 2030

Education defined by the OECD Learning Framework 2030

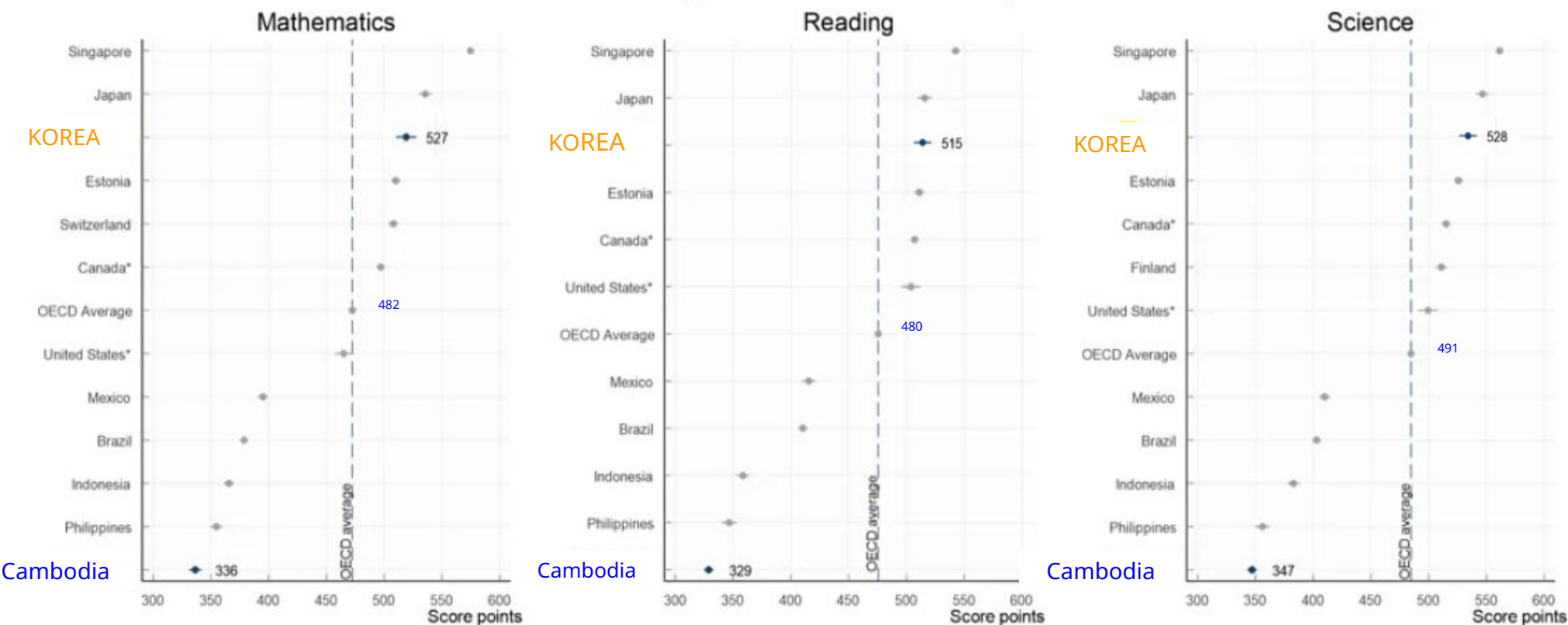
The **OECD** Learning Framework 2030





OECD Average and National Distributions

Cambodia, OECD average and selected comparison countries

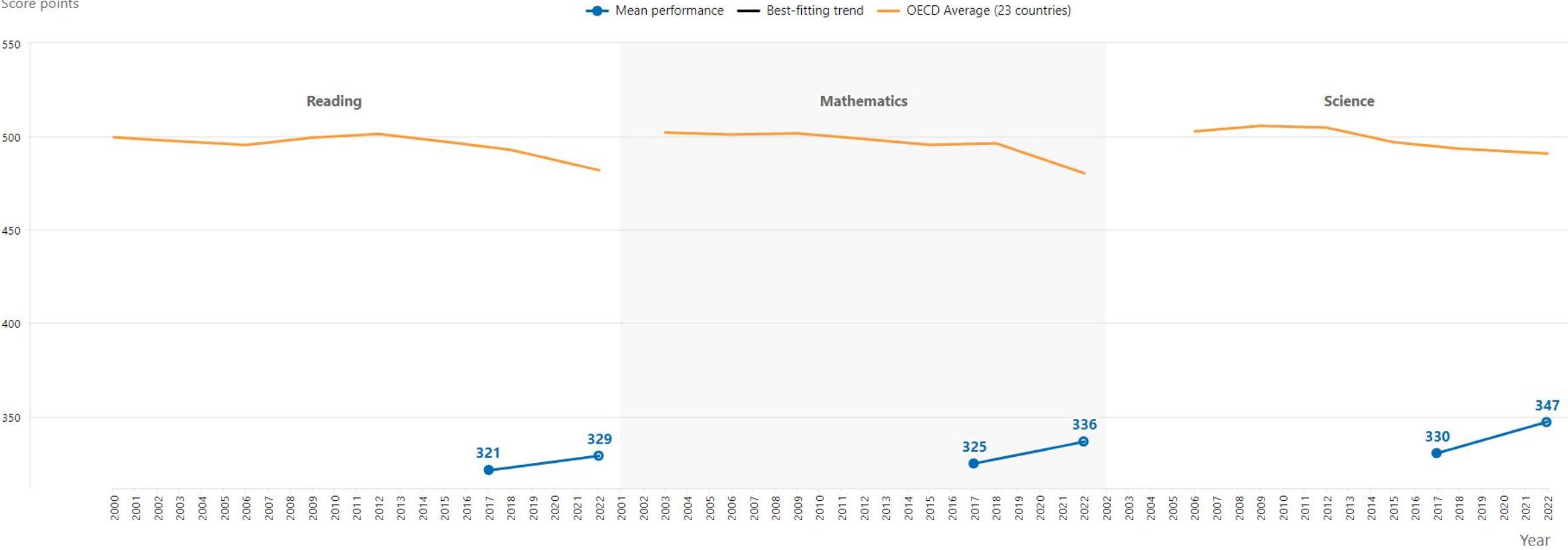


7. OECD PISA Results



Cambodia

Score points



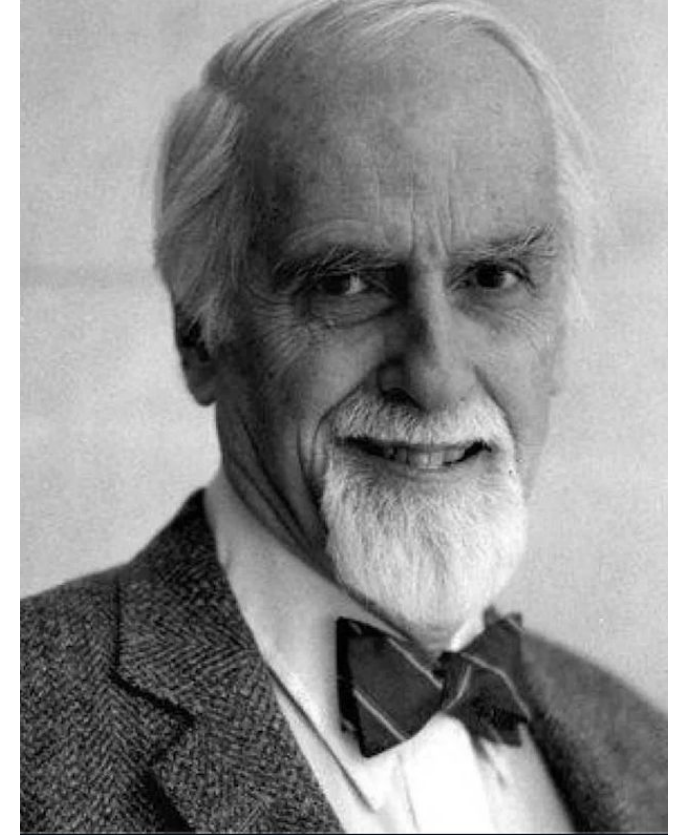
2. What is Competence?

1. Definition of Competence



The ability of an individual to adapt to changes

- The concept of competence began as a reflection on the inability of traditional intelligence and aptitude tests to validly predict an individual's achievements in real life.
- In the 1970s, psychologist David C. McClelland of Harvard University initiated discussions on measuring individuals' competencies that emerge during learning or performance processes, as a response to the need for predicting actual achievements in life.
- Recently, this concept has been actively adopted in public education, vocational education, and adult education.



2. The Concept of Definition Expended



Various interpretations of competence according to changes over time

Scholars	Definitions of Competence
McCelland(1973)	Intrinsic characteristics of an individual that predict excellent job performance in the field.
Klemp(1980)	Intrinsic characteristics of an individual that lead to successful outcomes in performing a role.
Boyatzis(1982)	General knowledge, skills, traits, motivations, self-image, or social roles of an individual causally related to effective behavior, evaluated against external performance criteria.
Mclagan(1982)	Ability characteristics of an individual related to outstanding performers in job or role execution.
Fletcher(1991)	The ability to perform job activities according to defined standards.
Corbin(1993)	The ability that includes what an individual needs to know and be able to do to achieve desirable goals or outcomes.
Dubious(1993)	Characteristics an individual possesses that are used to successfully perform roles in life.
Spencer&Spencer(1993)	A broad concept that includes the ability to transfer knowledge and skills to new situations in the work domain.

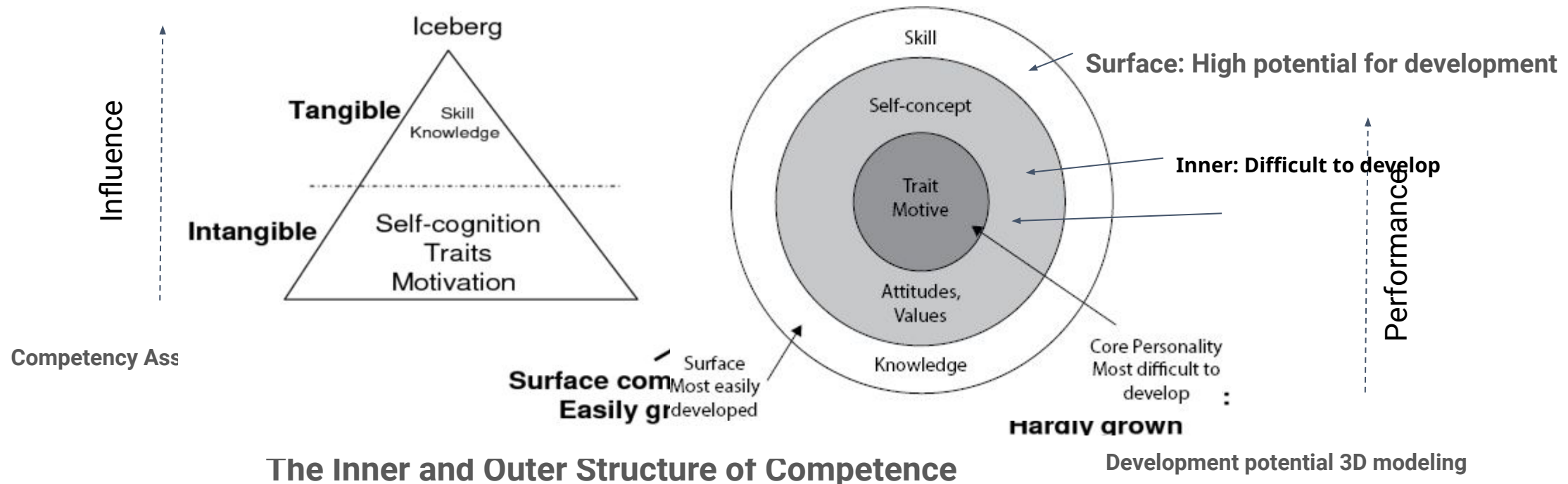
3. Essential Characteristics of Competence

Competence can be acquired through learning

Definition

1. Competence is a comprehensive ability inherent in humans.
2. Competence is the ability used in real situations.

In other words, competence is an **ability that can be acquired through learning and experience** (**demonstrates the possibility of learning**)



4. Core Competencies



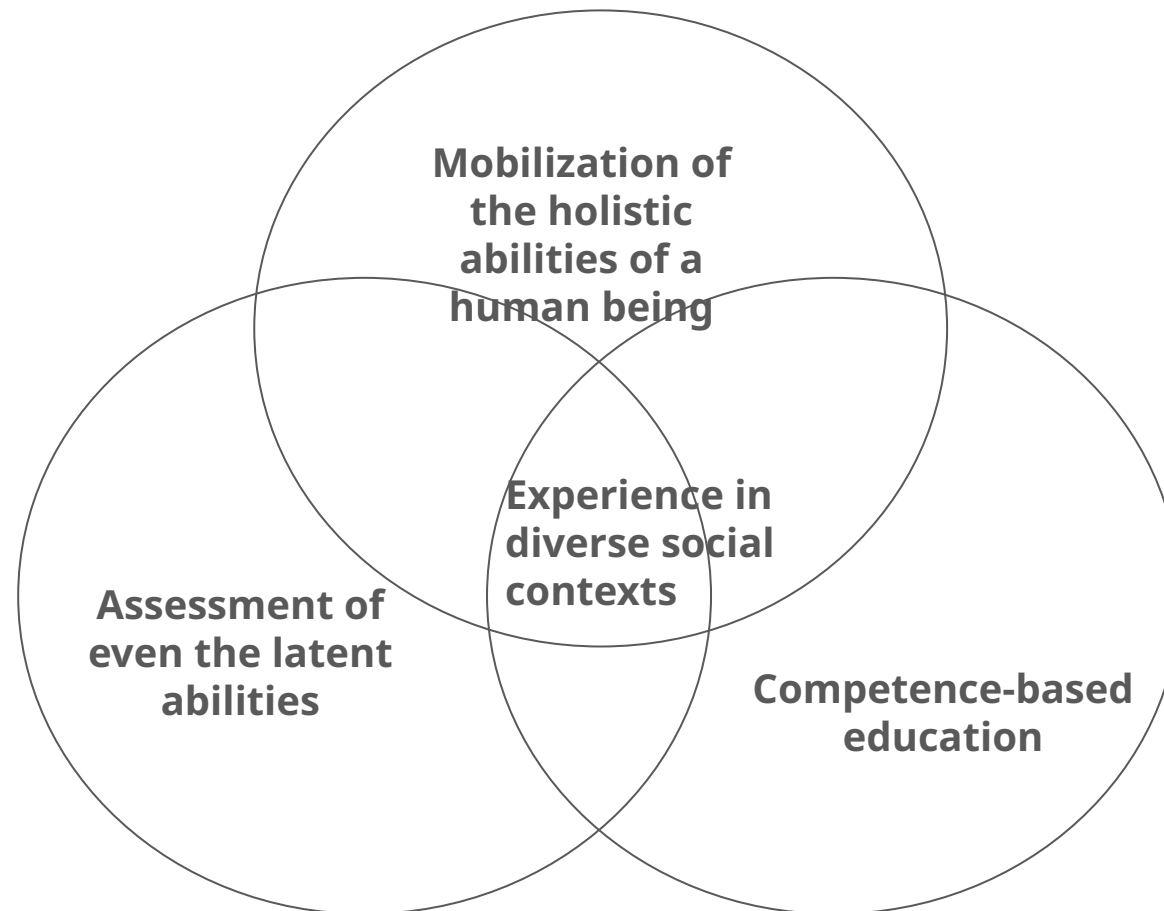
Displaying transformative competence and successful performance in various situations



4. Core Competencies



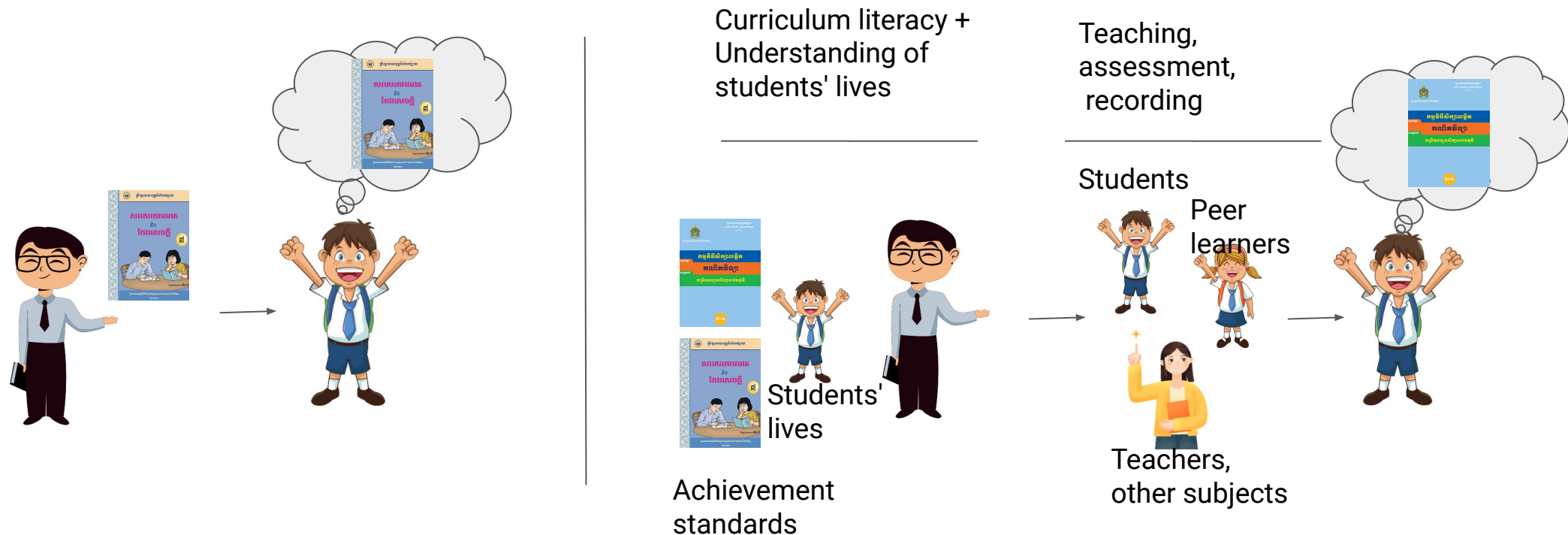
Competence-based Education: Key elements that competence-based education should encompass:



3. What is the role of teachers, and what responsibilities should they fulfill?

1. Teachers' Role and Responsibilities

Teachers are no longer mere transmitters of textbook content, but facilitators of competencies based on achievement standards





In these changes, what should teachers do?

- **Curriculum literacy**
- **Lesson planning ability** (based on literacy)
- **Digital literacy skills**

4. How can teachers interpret the national competence-centered curriculum and plan their lessons?

1. Flow of Cambodian Curriculum

In these changes, what should teachers do?



OECD 2030 Learning Compass



Cambodia Learning Compass
(Cambodia New Curriculum Framework)

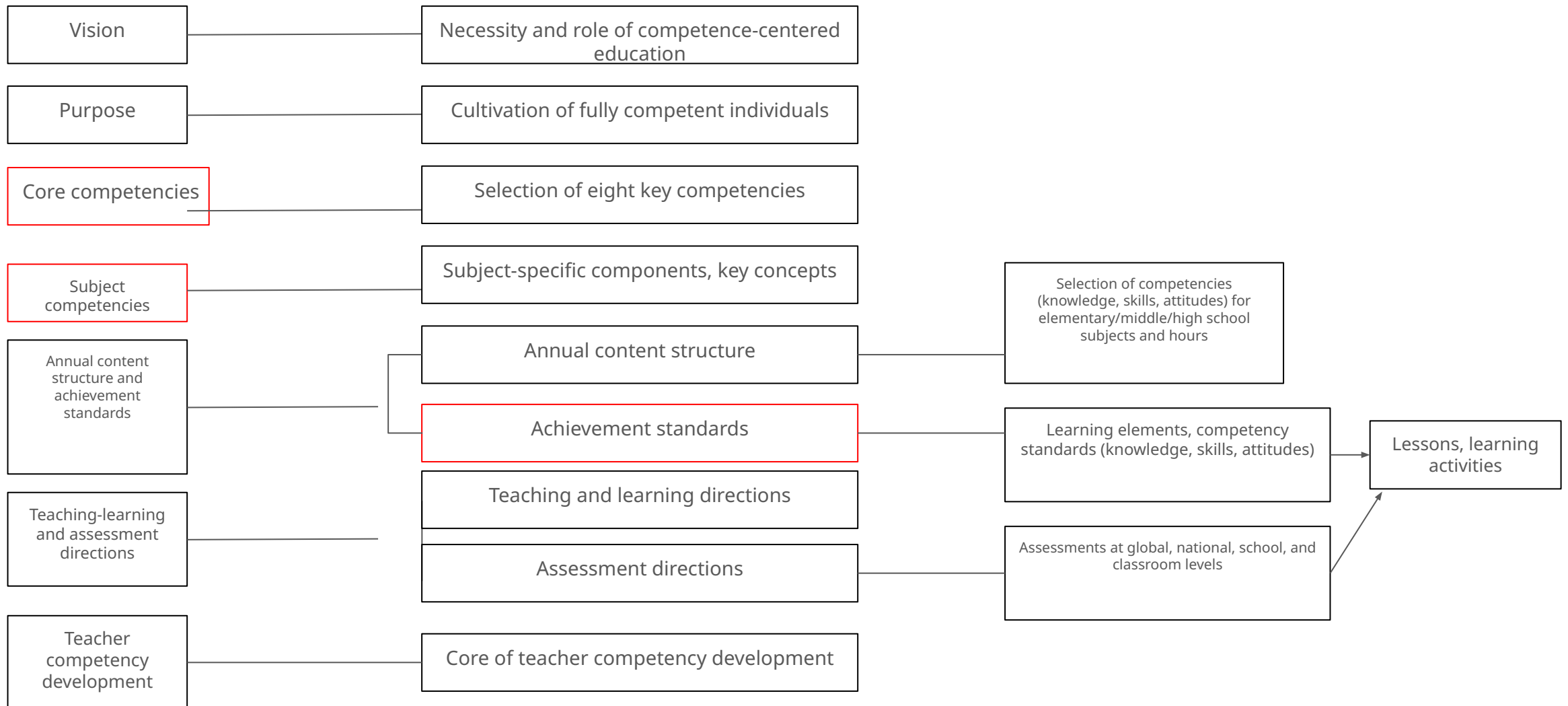


Learning Compass of
Republic of Korea

2. Structure of Cambodian Curriculum Documents



Analysis of Cambodian curriculum document structure



3. Key Competencies, Subject Competencies, and Achievement Standards in Cambodian Curriculum



Competencies defined in Cambodia New Curriculum

8 Core Competencies

	Core Competencies
1	Literacy and Numeracy
2	Foreign Languages
3	ICT
4	Communication and Teamwork Ability
5	Analysis and Creativity
6	Applying Knowledge and Skills
7	Personal, Family and Society Development
8	Entrepreneurship and Leadership

Curricula Competencies of Subject
under 8 Core Competencies

Subject	Subject Competencies
Khmer Language and Literature	Describe, analyze, judge, explain, describe correctly and reasonably
Math	Think reasonably, calculate, analyze, explain, and describe quickly and correctly
Social Studies	Apply knowledge and skills learned from the study of subjects in Social Studies for further study and daily lives.
Science	Problem-solving, calculate, analyze, explain, describe quickly and correctly based on scientific methods.
...	...

Achievement Standards

Unit	Achievement Standards of Grade 7 Mathematics
Absolute value	Knowledge -Show the absolute values of positive and negative numbers on the number line correctly -Tell the opposite number and mark the number on the number line correctly Skill -Compare and sort numbers correctly -Compare rational numbers and integers Behavior -Responsible and practices absolute values when interpreting the magnitude of positive and negative numbers in daily life

4. . Definition of Achievement Standards



The definition and importance of achievement standards

What is the “achievement standards”?

- Achievement standards are the criteria that articulate what students should learn through each subject and the abilities they are expected to demonstrate or develop after completing classes.
- Knowledge, skills, attitudes, and values that students are expected to develop through the learning process.
-

Why are the achievement standards important?

- Learning should be designed and progressed on the basis of the achievement standards.
- Achievement standards are the basis of specific assessment criteria for evaluating students' learning.
- Breaking down the achievement standards into knowledge, skills, and attitudes — it becomes clearer what factors or criteria are being used for evaluation.

5. Interpretation of Achievement Standards in Competency-Based Curriculum



How should achievement standards be interpreted?

Achievement Standards

Knowledge (Know):

Elements that are analyzed as things one should know through achievement standards
Lesson: Connecting with the topic
Assessment: Linking with assessment elements

Skill (Do):

Elements that are analyzed as things one should be able to do through achievement standards
Lesson: Deciding on teaching methods for imparting knowledge
Assessment: Choosing methods to assess performance

Attitude and Values (Be):

Cases where values or attitudes related to knowledge and skills are included in achievement standards (not always)
Lesson: Selecting activities that can form the values and attitudes presented in achievement standards
Assessment: Conducting effective ability assessment

6. Lesson Plans Based on Achievement Standards



Example of incorporating achievement standards to assessment criteria

Class Topic		Unit	
Achievement Standards (Lesson Objective)	<ul style="list-style-type: none"> - Compare rational numbers and integers - Interpret the absolute value as the distance from 0 to the number of the rational number on the number line. 		
How to analyze the achievement standards	Knowledge -Show the absolute values of positive and negative numbers on the number line correctly -Tell the opposite number and mark the number on the number line correctly Skill -Compare and sort numbers correctly -Compare rational numbers and integers Behavior -Responsible and practices absolute values when interpreting the magnitude of positive and negative numbers in daily life		
Learning Flow	Tool	Learning Activities	
Introduction	Concept Video		
Main	Worksheet		
Closing	Assessment		

Achievement Standards	Assessment Criteria		Student Group		
			A	B	C
Knowledge	-Show the absolute values of positive and negative numbers on the number line correctly -Tell the opposite number and mark the number on the number line correctly	H			
		M			
		L			
Skills	-Compare and sort numbers correctly -Compare rational numbers and integers	H			
		M			
		L			
Attitudes	-Responsible and practices absolute values when interpreting the magnitude of positive and negative numbers in daily life	H			
		M			
		L			

6. Lesson Plans Based on Achievement Standards



<កិច្ចតែងការ>

ប្រធាន : តម្លៃជាប់ខាត និងការប្រៀបធៀប		រយៈពេល	
ការវិភាគលើលទ្ធផលរំពឹងទុក (វគ្គបំណង)	<ul style="list-style-type: none">- ប្រៀបធៀបចំនួនសនិទាន និងចំនួនគត់- បកស្រាយតម្លៃជាប់ខាតជាប់ជាយក ០ ទៅលេខនៃចំនួនសនិទាននៅលើបន្ទាត់ចំនួន		
ការវិភាគលើលទ្ធផលរំពឹងទុក	<p>វិជ្ជាសម្បទា</p> <ul style="list-style-type: none">-បង្ហាញពីតម្លៃជាប់ខាត និងចំនួនវិជ្ជមាន អវិជ្ជមានបានត្រឹមត្រូវ-ប្រាប់ពីចំនួនផ្ទុយ និងដៅចំនួនលើបន្ទាត់ចំនួនបានត្រឹមត្រូវ <p>បំណិនសម្បទា</p> <ul style="list-style-type: none">-ប្រៀបធៀប និងរៀបចំនួនបានត្រឹមត្រូវ-ប្រៀបធៀបចំនួនសនិទាន និងចំនួនគត់បានត្រឹមត្រូវ <p>ចរិយាសម្បទា</p> <ul style="list-style-type: none">-មានស្មារតីទទួលខុសត្រូវក្នុងការអនុវត្ត តម្លៃជាប់ខាត ចំនួនវិជ្ជមាន និងអវិជ្ជមានទាក់ទងនឹងជីវភាពប្រចាំថ្ងៃ		
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ការអភិវឌ្ឍ (សន្លឹកកិច្ចការ)	<ul style="list-style-type: none">- ដោះស្រាយសន្លឹកកិច្ចការដោយប្រើផែនទីគោលគំនិត- ពិភាក្សាក្រុម និងធ្វើបទបង្ហាញ <p>*គ្រូជាអ្នកសម្របសម្រួល</p>	<p>១.សិស្ស</p> <p>1) ដោះស្រាយសន្លឹកកិច្ចការ</p> <p>2) ធ្វើបទបង្ហាញតាមក្រុម</p> <p>២. គ្រូសម្របសម្រួល</p>	

2. ចំនុចវាយតម្លៃ និង លក្ខណៈវិនិច្ឆ័យ

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ចរិយាសម្បទា	អនុវត្ត តម្លៃជាប់ខាត ចំនួនវិជ្ជមាន និងអវិជ្ជមានទាក់ទងនឹងជីវភាពប្រចាំថ្ងៃបាន	ល្អ		
		មធ្យម		
		ខ្សោយ		

7. Assessment Based on Achievement Standards



Methods and tools for assessment

Written Examination

Students write answers to questions on an exam paper, and the teacher evaluates the students' responses to measure academic achievement.

Mostly used to assess the **knowledges** that students acquired from learning

Observational Assessment

Questioning, discussions and debates, projects, portfolios, and self-assessment

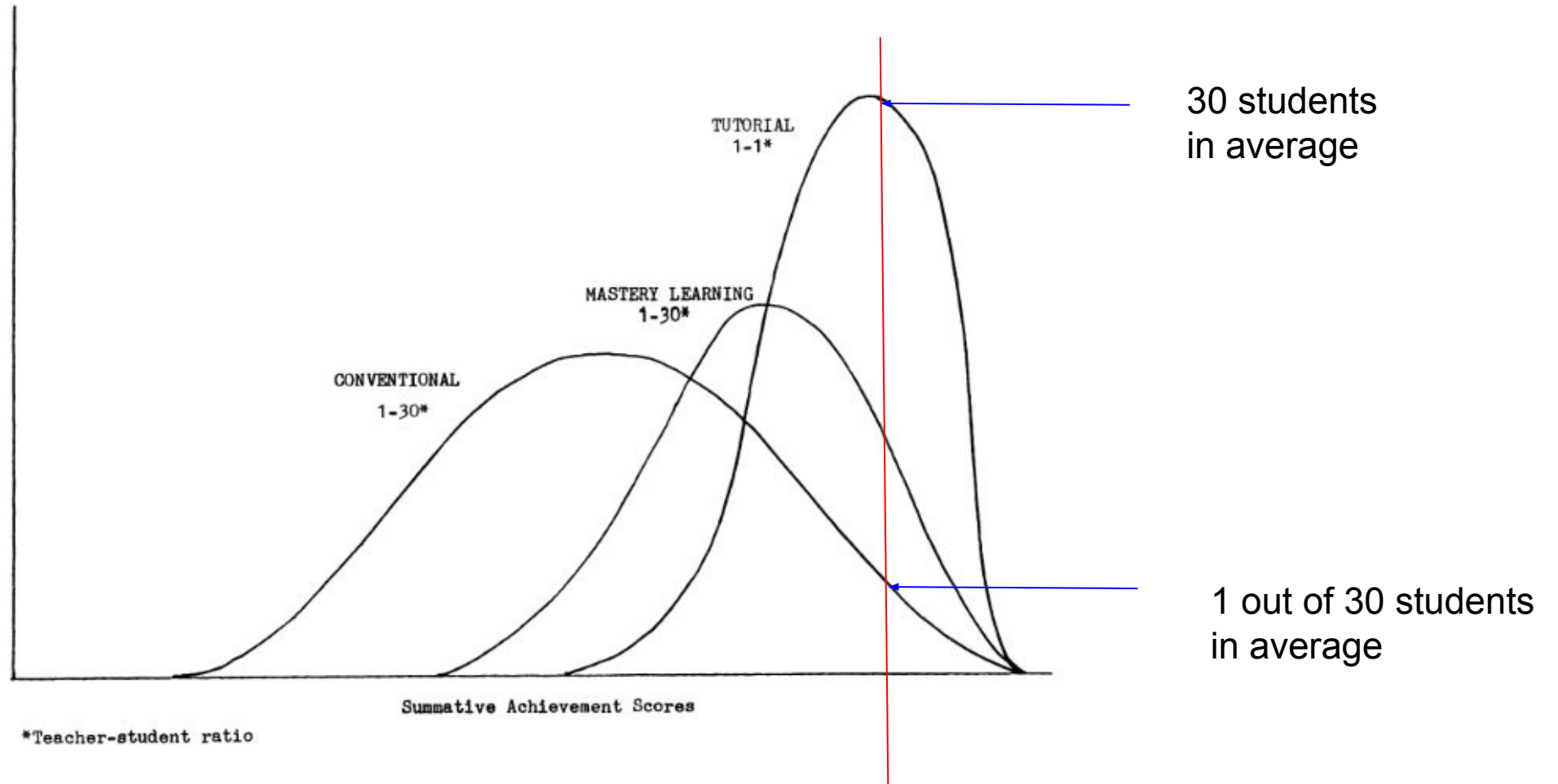
Evaluating students where they have to show what they know (**knowledges**) and can do (**skills**) by creating something or demonstrating **through actions**

**What are teaching methods
for competency-based
education?**

1. Teaching Methods for Realizing Competency Education



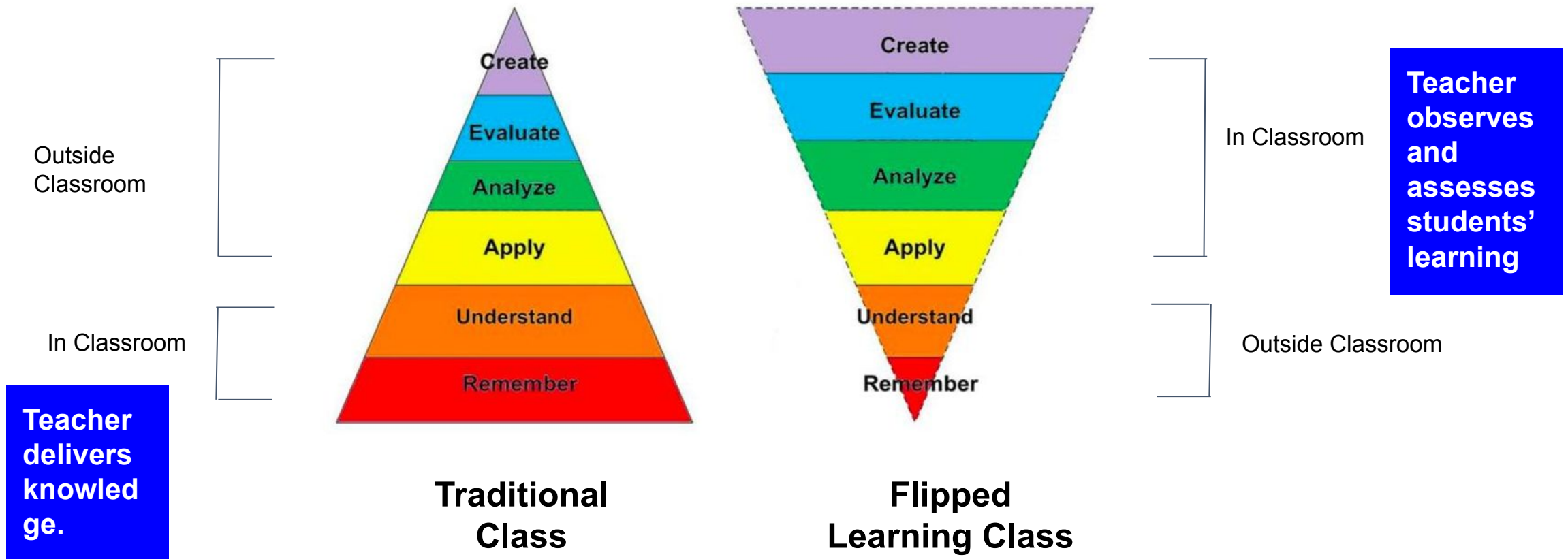
Bloom's two sigma graph



2. Teaching Methods for Realizing Competency Education



Bloom's Taxonomy and Mastery Learning



3. Competency-based Education for Cambodian Teachers



Examples of competency-based curriculum lessons

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ប្រធានបទ ១២.១ ចម្រុះ	រយៈពេល	៨០ នាទី
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ការវិភាគលើលទ្ធផលវិធាន	<ul style="list-style-type: none"> វិជ្ជាសម្បទា - ពន្យល់បានច្បាស់ពីវិធីចម្រុះ តាមរយៈការសង្កេតនិងការពន្យល់បង្ហាញរបស់គ្រូ បំណិនសម្បទា - បង្ហាញពីវិធីចម្រុះបានត្រឹមត្រូវ ចរិយាសម្បទា - អភិវឌ្ឍន៍ចំណេះដឹងពីការប្រើប្រាស់វិធីចម្រុះបានត្រឹមត្រូវ នៅក្នុងជីវភាពរស់នៅប្រចាំថ្ងៃ 	
ជំហាននៃការបង្រៀន	សកម្មភាព	ចំណាំ
ការណែនាំ (វីដេអូគោលគំនិត)	<ul style="list-style-type: none"> សំណួរ - ប្រសិនបើយើងយកម្សៅឡដាក់ចូលទៅក្នុងកែវដែលមានទឹក ហើយក្នុងបន្ទុះ តើយើងនឹងទទួលបានអ្វី? - បើយើងចង់បានទឹកល្អដែលគ្មានការម្សៅល្អ តើយើងត្រូវធ្វើដូចម្តេចដើម្បីយកកាកម្សៅល្អចេញពីល្អយកទឹកល្អ? ការពន្យល់គោលគំនិត - យើងទទួលបានល្អយកទឹកល្អ - យើងត្រូវធ្វើការវិញ្ញាណកម្ម ដោយប្រើវិធីចម្រុះ វីដេអូគោលគំនិត - ការពិសោធន៍ អំពីការវិញ្ញាណកម្មដោយប្រើវិធីចម្រុះ 	<ul style="list-style-type: none"> 1. រៀបចំវីដេអូគោលគំនិត ដើម្បីចំណេះដឹង (សួរសំណួរ—ពន្យល់គំនិត—វីដេអូគោលគំនិត) 2. ការចែករំលែកគំនិត
អភិវឌ្ឍន៍ (សន្លឹកកិច្ចការ)	<ul style="list-style-type: none"> ការកំណត់សម្មតិកម្ម - ទឹកនៅក្នុងកែវ A មានកាកម្សៅល្អ បង្កើតបានជាល្អយក - ទឹកក្នុងកែវ B មើលមិនឃើញកាកម្សៅល្អ ដោយសារកាកល្អនៅជាប់នឹងឡាវចម្រុះ នៃនការពិសោធន៍ 	<ul style="list-style-type: none"> 1. សិស្ស ១) ការកំណត់សម្មតិកម្ម ២) ការពិសោធន៍ផ្ទៀងផ្ទាត់សម្មតិកម្ម



4. Competency-based Education for Cambodian Teachers

Examples of competency-based curriculum lessons

[STEM Ambassador]

ឆ្នាំ ០១

C

ChhenthavyKhoun

2023.11.08.

មេរៀនទី២ ចរន្តរលំដាប់

ពិសោធន៍ ការបង្ហាញចលនារលំដាប់របស់ ឧប្បល័ង (ផ្សែង)



ឆ្នាំ ០១

S

SokcheaCHUN

2023.11.07.

វិស័យការងារក្រៅទី១



[STEM Ambassador]

ឆ្នាំ ០១

V

VongVong Samphors


2023.11.09.

វិស័យពិសោធន៍គីមីថ្នាក់ទី១០

មេរៀនទី២៖ សិក្សាធាតុតាមក្រុម (ត)

ប្រតិកម្មរវាងលោហៈសូដ្យូម ជាមួយទឹក

រៀបចំដោយអ្នកគ្រូ រៀន សម្ព័ន្ធនៃវិទ្យាល័យហ៊ុន សែន ខ្មែរ។



[STEM Ambassador]

ឆ្នាំ ០១

g

gnimSocheat

2023.11.14.

មេរៀនទី២១ ក្រាបសរសេរ សរសេរឆ្ពោះ

មេរៀនទី២១ ក្រាបសរសេរឆ្ពោះ បង្រៀនដោយ អ្នកគ្រូ ញឹម សុជាតិ បង្រៀននៅវិទ្យាល័យក្រុងកំពង់ឆ្នាំង



ឆ្នាំ ០១

C

ChhenthavyKhoun

2023.11.13.

សកម្មភាពបង្រៀននិងរៀន



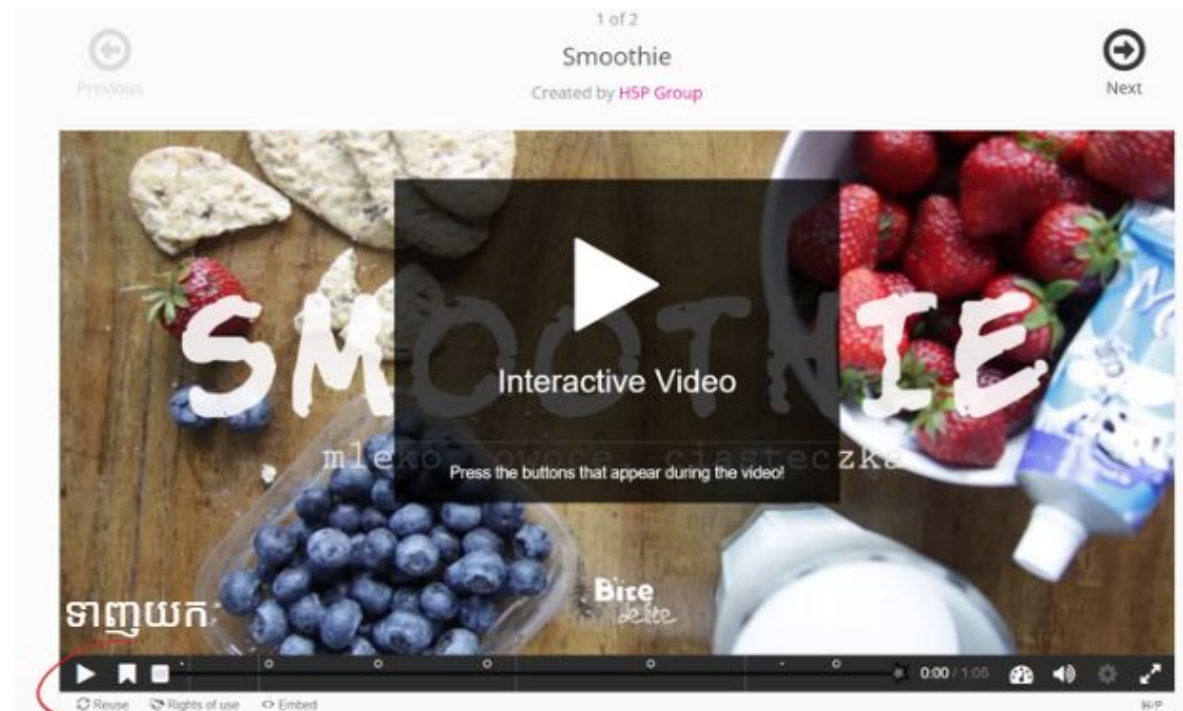
4. Competency-based Education for Cambodian Teachers

សិក្ខាសាលាបែកបែក
ស្តីពី៖
" ការសិក្សាផ្ដោតលើសមត្ថភាពសិស្ស "

ថ្ងៃ អាទិត្យ ទី១០ ខែធ្នូ ឆ្នាំ២០២៣
ពេលវេលា៖ ម៉ោង ០៨:០០នាទី~១២:០០នាទី

**STEM
AMBASSADOR**

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Science Teacher
STEM-CPD
SADACH TECHO HUN SEN DANGKOR HS.



Thank you

