



## ***Profiling a Learner's Capability in a Progression of Competence on Selected 21st Century Skills***

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## Aim of the Presentation

To show how levels of competence in general capabilities (21<sup>st</sup> century skills) can be described as observable behaviors in an empirical developmental progression.

## Terminologies used interchangeably

- 21<sup>st</sup> century skills
- general capabilities
- employability skills
- transferable skills
- life skills

*Care, E. et al. (2018), Education System Alignment for 21st Century Skills: Focus on Assessment, The Brookings Institute, Washington, D.C.*

*Foster, N. (2023). 21<sup>st</sup> century competencies: Challenge in education and assessment, OECD.*

## Specific Context

- Study on Micro-certification in DepEd's Alternative Learning System (ALS) (2020-2023)
  - identified capabilities embedded across the ALS Life Skills modules
  - developed and piloted assessment tools for four capabilities:
    - ✓ Communication
    - ✓ Teamwork and cooperation
    - ✓ Problem-solving
    - ✓ Leadership

## Micro-certificates

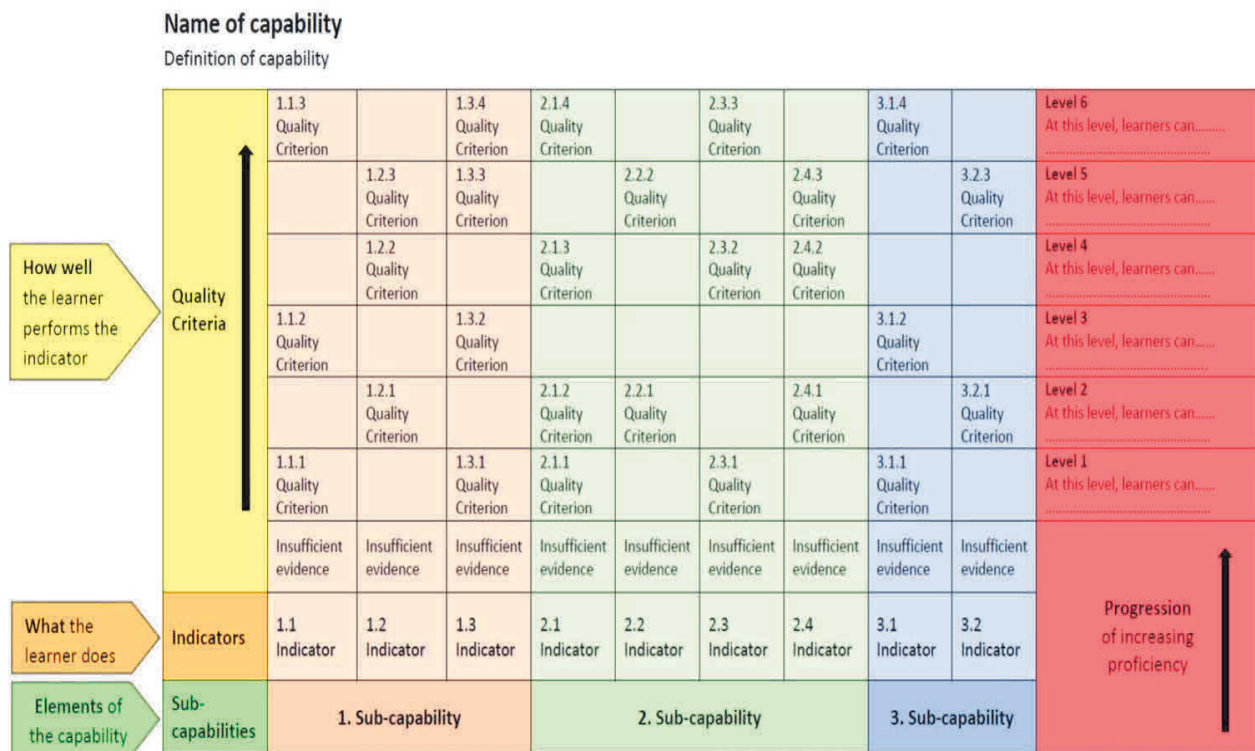
(micro- credential, badges, nano-certs, etc.)

- can certify smaller units or areas of learning
- provide information about what learners know and can do
- are increasingly used as a tool to certify complex competencies
- can be used by the credential holder seeking entry to or credit for work or study
- can be 'stacked', or combined to create a larger certificate
- Thus, micro-certification is a new approach to credentialing of learning

# Components of a developmental assessment framework

- Capabilities:** skills, knowledge, attitudes and/or expectations representing the overall development of a person in an area of learning
- Indicative behaviors/performance indicators:** what the learner does; provide evidence that a capability has been developed; demonstrated at different levels of quality
- Quality criteria:** how well the learner performs the indicative/performance indicator; “How well was it done?”

Figure 2: A generic assessment framework



## Teamwork & Cooperation

Ability to work with others to perform tasks and achieve common goals

Quality criteria	1.1.4 Initiates contributions that enhance team performance	1.2.4 Identifies ways to ensure support is available (e.g., policies, procedures, resources)	1.3.4 Analyses factors that may influence decisions		1.5.3 Completes task or role to higher than required standard			2.2.4 Adds value to others' viewpoints by elaborating or expanding on them	2.3.3 Mediates to resolve conflict or reach consensus	2.4.4 Motivates/ encourages persistence or resilience in response to setbacks in pursuit of team goals	2.5.4 Ensures establishment of group organization
		1.2.3 Supports others by sharing skills or knowledge				1.6.4 Takes action to improve outcomes	2.1.4 Encourages others to elaborate or expand on their ideas/suggestions/viewpoints	2.2.3 Incorporates others' viewpoints into own thinking; may adapt them	2.3.2 Seeks to understand different sides of disagreements (e.g., asks questions)		2.5.3 Suggests own ideas for establishment of group organization
	1.1.3 Matches contributions to team goals	1.2.2 Encourages/motivates others to complete their task or fulfill their roles	1.3.3 Shares own ideas or suggestions to help with decision-making	1.4.3 Takes initiative to perform additional tasks related to own role		1.6.3 Analyses own performance or contribution to identify areas of improvement	2.1.3 Invites input from others			2.4.3 Encourages others to achieve team goals	
	1.1.2 Completes tasks			1.4.2 Performs assigned tasks without reminders or guidance	1.5.2 Completes task or role to required standard	1.6.2 Provides explanation for own performance or contributions		2.2.2 Seeks to understand others' viewpoints (e.g., asks questions, prompts further information)	2.3.1 Acknowledges disagreements		
			1.3.2 Responds to ideas and suggestions from others to help with decision-making			1.6.1 Acknowledges own contribution	2.1.2 Converses with others			2.4.2 Practices pakikisama to promote teamwork	2.5.2 Responds to others' suggestions for establishment of group organization
	1.1.1 Commences tasks	1.2.1 Acknowledges ideas or suggestions by others	1.3.1 Agrees with decisions taken	1.4.1 Relies on guidance and/or reminders from others	1.5.1 Performs task or role			2.2.1 Acknowledges others' viewpoints		2.4.1 Complies with team directions	2.5.1 Participates as required in establishing group organization (e.g., votes)
	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence	Insufficient evidence
Indicators	1.1 Contributes to shared work	1.2 Supports others to contribute	1.3 Contributes to shared decision-making	1.4 Works independently	1.5 Meets work criteria	1.6 Takes responsibility for outcomes of own work	2.1 Interacts with others	2.2 Engages with others' viewpoints	2.3 Addresses disagreement between members	2.4 Promotes teamwork to achieve shared outcomes	2.5 Contributes to establishment of group organization
Sub-capabilities	1. Participation (getting the work done)						2. Social regulation (managing group dynamics)				

## Assessment process

1. Rating instruments developed are based on the developmental assessment framework
2. Different raters assessed each learner:
  - External raters
  - Teachers had observed the learner working.
3. Learners had self-rating.

# Sample assessment item

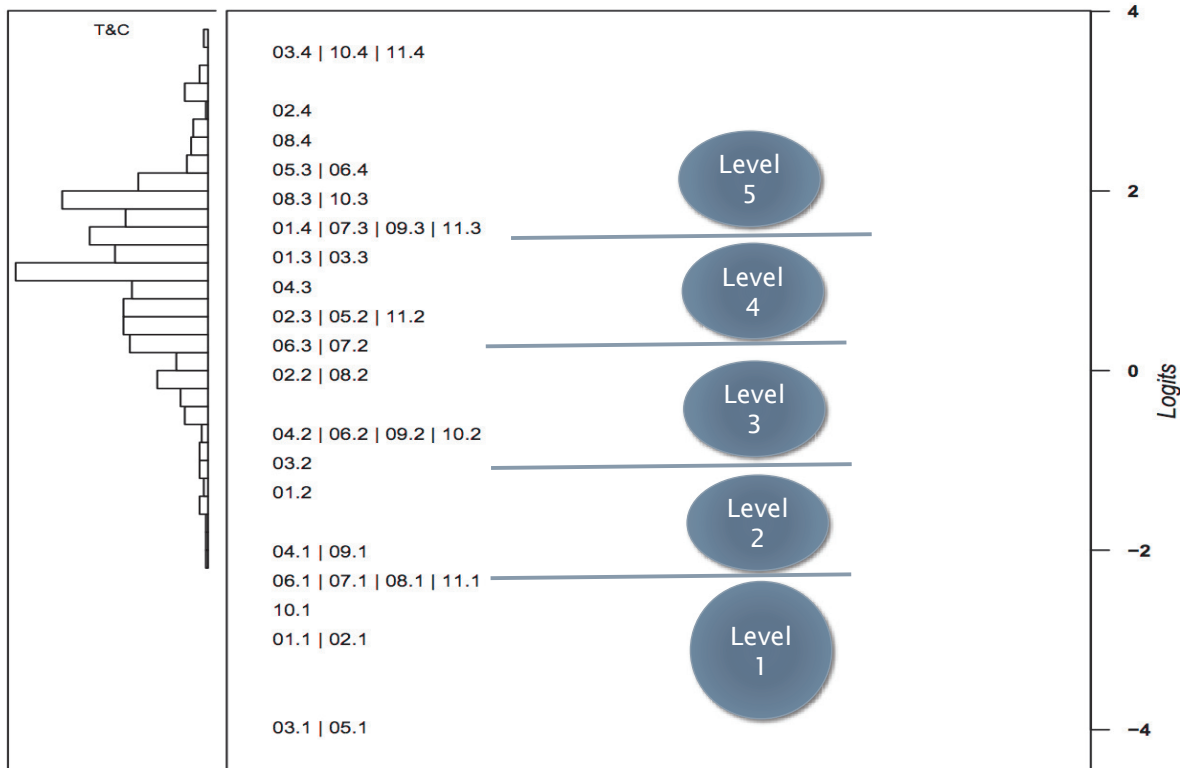
## 2. Supporting others to contribute

Think about the ways the learner supports others to contribute to shared work.

- The learner acknowledges ideas and suggestions provided by others.
  - The learner encourages or motivates others to complete their tasks or to fulfill their roles.
  - The learner supports others by sharing his/her skills and knowledge.
  - The learner finds ways to make sure support is available for himself/herself and others.
- 
- The learner does not regularly demonstrate any of the above behavior.
  - I have not had the opportunity to observe the learner work with others.

## Assessment process

3. Each rater judged carefully whether or not the learner exhibited the behaviors **on each criterion** in the instrument.
  
3. Psychometric analysis was used to evaluate and aggregate the coherence of the ratings, and to form a single reliable assessment.



Learner ability and Item difficulty on the same scale;  
Connecting behaviors to competence levels.

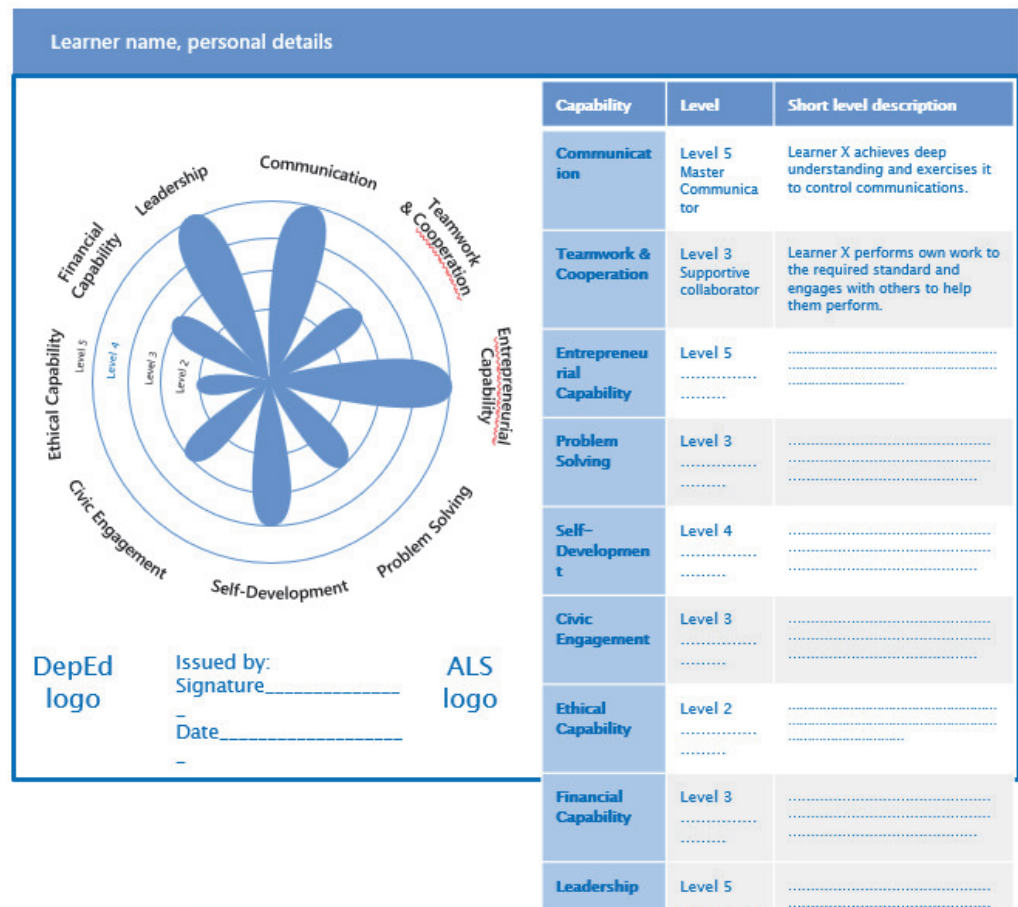
## Progression and Standards for Teamwork & Cooperation

<b>Level 5</b>	<p><b>Organizing collaborator</b></p> <p>Learners at this level can perform leadership roles if given opportunities. They reflect on the factors that may influence group decisions and ensure that structures and processes are in place to sustain the work of the team. They motivate others to persevere despite setbacks and ensure that support is available to all team members.</p>
<b>Level 4</b>	<p><b>Value-adding collaborator</b></p> <p>Learners at this level perform their work to a higher standard than required and take initiative to raise the work of the group to a similar standard. They perform additional tasks within the role assigned to them, adopt and develop the ideas of other team members, and step in to resolve misunderstandings, helping to achieve consensus.</p>
<b>Level 3</b>	<p><b>Supportive collaborator</b></p> <p>Learners at this level perform their work to the required standard, matching their contributions to the goals of the team, and engage with others to help them perform at the same level. They make suggestions, share their knowledge and skills, invite input from others and encourage them to elaborate or build on their ideas to help achieve team goals.</p>
<b>Level 2</b>	<p><b>Responsible collaborator</b></p> <p>Learners at this level undertake and complete teamwork without being prompted or reminded. They help with decision-making by responding to the suggestions of others and contribute to group harmony by practicing pakikisama. They try to see issues from different sides and ask questions to increase their understanding of others' viewpoints.</p>
<b>Level 1</b>	<p><b>Guided collaborator</b></p> <p>Learners at this level follow instructions and participate in groupwork as required. They engage with other team members, acknowledging their contributions and viewpoints.</p>

## Basis of reliability

- Each learner was rated on behaviors indicated in the assessment framework.
- Each behavior was rated by learners themselves and up to 2-3 other raters, and their teachers.
- If there are enough micro-judgments or decision points in an assessment, there will be enough data points for reliable analysis
- Reliability can be checked by comparing the judgments of different assessors
- Anomalies can be examined and removed if necessary

### Sample report of attainment in the capabilities





## Conclusions

- 1. Assessment of capabilities**
  - Capabilities can be assessed by focusing on what learners can do, say, make, or write
- 2. Usability of instruments**
  - Helpful to have instructions for the learners in Filipino for the survey forms
  - Captured what the learners know and can do

## Conclusions

- 3. Judgment-based method**
  - General capabilities can be assessed using human judgment based on independent ratings and standards-based progressions.
- 4. Standards-referenced**
  - Progressions for each capability can be prepared that set the standards for reporting levels of attainment.

## Conclusions

### 5. Varied uses of the levels generated

- Levels can be used to motivate, monitor, and report learning.
- They can be summarized to monitor standards and can be used by future employers and other assessors.

## Key Takeaways

From

SCORES and NUMBERS

To

Establishing STANDARDS

PASS or FAIL

Showing HOW FAR a learner can demonstrate a capability.



*Thank you!*

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