



Competency-based learning

MEE YOUNG HAN SUGGESTS THAT AN EFFORT TO DEFINE EDUCATIONAL COMPETENCIES IS REQUIRED IN INDIA AT EACH LEVEL, AND REACHING A CONSENSUS ABOUT THESE DEFINITIONS IS AN IMPORTANT TASK FOR THE EDUCATION COMMUNITY IN THE COUNTRY.

We live in a highly technology-driven world in which both promises and challenges coexist. The McKinsey Global Institute estimated in 2017 that around 50 per cent of current work activities are technically automatable. Most of the new tasks and jobs required due to these changes would be different from traditional roles. This rapid transformation in workforce calls for prompt changes in the way we teach students and help ready them for the future. The United Nations Population Fund highlighted in 2014 that this is more important for India which has the world's largest youth population.

In this challenging world, it is inevitable that our expectations from education and the way we prepare students for the future change. The international education community is moving towards preparing the new generation of learners for the era of technology when critical thinking, practical application of principles, problem solving, and creativity will be more critical than rote learning. In this regard, it is promising that India recognises quality education for all and has introduced competency-based learning in its National Education Policy 2020.

Competency-based education initially gained popularity among researchers in the 1970s based on Benjamin Bloom's research. His approach to education focused on attention to individual students, student-centred instruction, and flexible pacing in teaching and learning. Bloom in 1956 contributed to the body of educational research by defining the hierarchy of cognitive processes, which places the learner's ability to apply, analyse, evaluate, and synthesise at a higher level than only remembering and comprehending. However, this approach was not an entirely new idea. Steele et al. in 2014 pointed out that John Dewey's experiential learning emphasised that students constructed their own learning through real-world experience and engagement. Competency-based learning

has regained its popularity recently with information technology supporting learners for self-motivated and personalised learning.

The traditional teacher-centric approach to education assumes that an educated man is equivalent to a competent man. In this approach, students are expected to acquire knowledge and skills by receiving lectures and learning the curriculum. On the contrary, CBE recognises that real learning does not take place automatically by taking lectures and memorising a body of facts. In a competency-based system, it is believed that mastery in learning comes from application of knowledge and skills in real-world situations. In this sense, competency-based learning is similar to experiential learning, proficiency learning, project-based learning, and flipped learning.

Competency-based education favours reducing disparities in students' performance outcomes and bridging achievement gaps. It allows students to build academic foundations by mastering the current concepts or skills before they move on to new ones. In order to achieve success in competency-based teaching and learning, researchers summarise the following features as requirements. (For more information, read Steele et al., 2014; Patrick and Sturgis, 2013).

- Defined progression toward mastery – this means that learning progressions are clearly defined and students see a clear learning pathway for improvement. The learning progressions need to be developed through a robust empirical study with the continuous effort of subject experts in defining them.

- Flexible pacing – this means that each student progresses through content at his or her own pace, and potentially at different paces in different content areas. It is more important to set a student's starting point at the current level of competency in learning progression rather than his or her placement in an age-based grade level. Since the traditional school system maintains rigid

grade levels, this may be a challenge to successful implementation of CBE unless there is suitable support from education authorities.

- Personalised learning – it is important to recognise that learners learn differently, have different skill levels, and encounter different opportunities to learn outside of school. As students mature, CBE provides opportunities to make more choices regarding how they acquire skills and knowledge, as well as how to provide evidence. This personalisation can lead to increased engagement. In CBE, mentoring and facilitating become more important for teachers rather than the mere transfer of knowledge.

- Anytime/anywhere learning – this means access to out-of-school learning opportunities. This has been catalysed by advances in educational technology, enabling instructional systems that incorporate both online and teacher-led instruction. Students often acquire subject or content area knowledge by themselves when related information can be found through easily available references.

- Credit for mastery – students demonstrate proficiency and earn credit by applying knowledge and skills. Academic credit is based on evidence of learning, not only completion of a certain number of days or hours of instruction in a course. Therefore, it becomes extremely crucial for learners to be aware of specific learning targets required.

Competency is a broad concept which contains knowledge, skills, dispositions, and expectations. It is a general term that describes the desired knowledge, skills, and behaviours of a student graduating from a programme (or completing a course), while a learning outcome is more granular and specific. Competencies are commonly defined as the applied skills and knowledge that enable people to successfully perform in professional, educational, and other life contexts.

In this rapidly changing world, the demand for a new set of competencies is growing. Many entities have labelled these competencies by different names, but they are often called 21st century skills with an emphasis on intrapersonal skills. The Organisation for Economic Co-operation and Development (OECD) has used the term ‘global competence’ as one of the test domains of the Programme for International Student Assessment (PISA) 2018. The Brookings Institution calls more or less similar competencies transversal competencies, while the Australian Council for Educational Research calls them general capabilities. No matter how it is named, the core of defining competencies is in reaching an agreement within the education community on what students should know and be able to do to prepare for the future.

Competencies may vary across different countries, states, districts, and schools, reflecting their unique learning environments. For instance, three Asian countries, Cambodia, Mongolia, and Nepal, participated in a project, Optimizing Assessment for All (OAA), led by the Brookings Institution. Care et al. in their 2020 study mention that the OAA project aims to support efforts to use assessment constructively in education systems, specifically through developing assessments of 21st century skills. As a part of the project, competencies were identified for assessment of skills such as problem solving, critical thinking, and collaboration.

The strategy adopted by the project to define these competencies provides meaningful insights to other countries who are struggling with identifying similar competencies. The OAA project identified broad skills at the top level, and each skill was then further broken down into two more levels, subskills and sub-subskills, and named substrands and sub-substrands respectively. This helped understand the broad meaning of a competency or skill as the subskills to which they contribute by

breaking down the mix. The table below shows how one of the skills, collaboration, is defined.

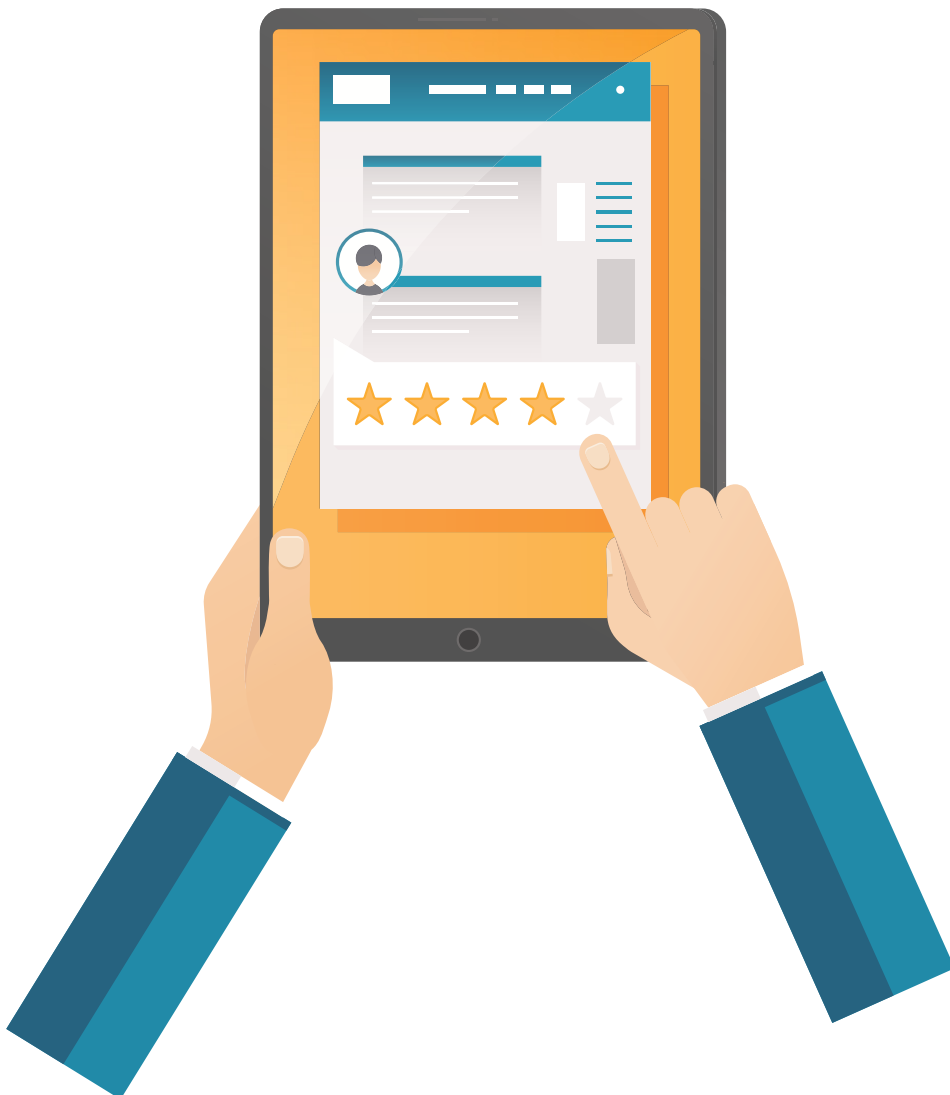
Skill	Substrand	Sub-substrand	
Collaboration	Participation	Interact with group members	
		Show responsibility	
		Show flexibility	
	Communication	Share information and ideas	Listen
			Respond to others
			Express emotion in an appropriate way
		Negotiation	Identify conflicts
			Make arguments
		Perspective taking	Recognise others
			Provide feedback to others
Decision making	Adapt based on receiver		
	Allocate roles/work		
	Make plans		
		Identify possible alternatives	

Reorganised from Care et al. (2018)

Assessment tasks were developed based on the definition of the skills and test tools constructed for a pilot study to check the usability of the tasks developed at the classroom level in the three participating countries, and to collect empirical data on the quality of the tasks. The process adopted by the project sets a good model for countries to follow at any level of educational administration when they identify competencies. This is to identify competencies and skills required for CBE, develop competency-based tasks based on the set of competencies and skills, and confirm the feasibility of implementing identified competencies in classroom from empirical evidence.

An effort to define educational competencies is required in India at each level, and reaching a consensus about these

definitions is an important task for the education community in the country. This will be the first step toward preparing our students for the rapidly changing future. **T**



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