New Indicator Proposal for SDG Target 4.7: Skills

Concept Note and Work Plan

INTRODUCTION

The 21st century demands a broad set of skills that includes from respect to diversity, emotional skills to creativity, ingenuity, and 'thinking outside the box' all important skills and determinants of future skills for the young generations. They are equivalent – and sometimes arguably superior – to knowledge.

Hence, a proposal has been made to the sixth meeting of the Technical Co-operation Group (TCG) to stimulate discussion on the feasibility and relevance of a new indicator on a broader set of skills. Throughout this document these skills will be referred to as "breadth of skills" or "a broad set of skills" and should be understood to refer to 21st century skills or transversal competencies. Definitional issues will be addressed in the proposed conceptual framework.

THE IMPORTANCE OF A BREADTH OF SKILLS DEVELOPMENT

In an ever-changing world and a quickly evolving future, new and more elaborate skills are needed. Young adults are expected to be able to determine the relevance of information, distinguish between fact and opinion, identify unstated assumptions, detect bias, suggest reasonable and plausible solutions, predict possible consequences, and finally, within this complicated realm, make relatively quick and informed decisions. These skills will not be acquired and mastered without a broad set of skills such as critical and creative thinking, problem solving etc.

However, many of today's education systems are disconnected from the skills that learners need to develop. Therefore, there is an urgent need to encourage education systems across the world to create more enabling environment to enhance a breadth of skills, so that all learners would be equipped with these skills to successfully navigate their lives in a complex and uncertain world.

MEASURING SKILLS

SDG Target 4.7 emphasizes all learners' acquisition of knowledge and skills needed to promote sustainable development and focuses on creating a systematic and enabling environment. It reads as follows:

By 2030, ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development

The idea is to evaluate how enabling the environment can provide the opportunity for the development of a broad set of skills. This will assess the level of national commitment towards the attainment of Target 4.7 by embedding skills development within education systems through education policies and education sector planning.

Therefore, the new indicator is proposed as follows:

"Extent to which national education policies and education sector plans recognize a breadth of skills that needs to be enhanced in national education systems".

HOW TO MEASURE

Measuring a broad set of skills in an educational setting will take place by first defining what are the set of skills relevant and what are (and how to define) the relevant policy dimensions to inform (such as curricula, teacher's strategies/practices and environment).

Once the first steps of defining a conceptual framework is completed, the second step is to define a methodological approach to measurement (including a questionnaire) and the indicator framing and reporting.

Third stage is to pilot the questionnaire, fine-tune and implement the measurement. In each steps guidelines need to be elaborated.

Step 1 Conceptual framework

Since the last decades of the 20th century there has been increasing recognition that the generic human learning targets espoused by the Delors et al. (1996) report - to know, to do, to be, to live together - will not be met without structured initiatives to facilitate them. With subsequent reports including OECD's DeSeCo Report (Rychen & Salganik, 2003) taking into account 21st century contexts explicitly, more detail in identification of competencies emerged. With the European Commission (Gordon et al., 2009) we saw a move toward analysis within the educational environment, followed by North American focus on educational implications through Partnerships21 (http://www.battelleforkids.org/networks/p21) and the US National Research Council (Pellegrino & Hilton, 2012). The ATC21S KSAVE framework (Binkley et al., 2012) then explicitly acknowledged competencies beyond skills, identifying knowledge, and the cluster set of attitudes, values and ethics.UNESCO's (2014) interest in global citizenship, and the OECD (2016) interest in global competency has confirmed the broad reaching concerns about how to plan for a sustainable future for the world and those that live on it.

The first two decades of the 21st century has also brought increased commitment from countries worldwide to prepare their youth for a changing world. This commitment has been seen through education policy statements (Care, Anderson & Kim, 2016), participation by schools worldwide in initiatives such as UNESCO's Associated Schools Network (ASPnet), curricula such as that provided by the International Baccalaureate of Education, regional research initiatives into the policy to practice implications of a 21st century skills agenda (e.g. UNESCO 2015, 2016; UNESCO, 2016a [Care & Luo); LMTF, https://www.brookings.edu/product/learning-metrics-task-force/) and recent large scale assessment programs of specific skills (e.g. collaborative problem solving) and complex competencies (e.g. global citizenship). As increasing numbers of countries engage in aspirations to produce 21st century citizens, the breadth of these aspirations demonstrates a strong core of shared perspectives about development of the individual, as well as more generic commitment to educate youth to serve the religious, community, and economic needs and values of nations.

In order to measure the commitment of nations to recognize *"a breadth of skills"* (Care & Anderson, 2016), we need to identify a framework which will serve to structure the diversity across country aspirations. It is proposed that this framework is developed based on two sets of resources. The first set will be published frameworks such as those mentioned in this brief introduction; and the second will be drawn from a scan of 30 countries national mission and vision statements. These two sets of resources, the first primarily philosophical and academic, and the second primarily educational, will provide a sufficiently coherent framework within which to identify what might comprise a "breadth of skills".

Step 2 Methodological approach

In order to measure the commitment of countries to a "breadth of skills", it is necessary to move beyond aspirations. First, aspirations do not of themselves provide opportunity. Second, although it might reasonably be hypothesised that aspirations would precede provision of opportunities for meeting those aspirations,and could therefore act as a proxy for opportunity, a Brookings Institution mapping study (Care & Kim, 2018) of 131 countries demonstrated that specific skills highlighted in curricular documents were not referred to in aspirational terms in the high level mission statements of countries - hence accessing aspirational statements alone is misleading.

How are opportunities to learn provided by national education systems? By being guided by their goals, through their curricula, their pedagogical philosophies, their assessment, and their resources. Curricula may be explicit about breadth of skills or silent. Silence cannot be assumed to imply absence however, since the theories of learning or pedagogical philosophies that are adopted by a system might be sufficient for a breadth of skills approach to teaching and learning to be made available. Accordingly, evidence of breadth of learning opportunities (Anderson, Hegarty, Henry, Kim & Care, 2018) needs to be captured across multiple data sources. The perspective that alignment by 21st century learning goals across curriculum, assessment and pedagogy is essential for successful delivery is being increasingly highlighted in research and policy (e.g. Care [in press]; Care & Kim, 2018). Is explicit mention of a wide range of skills in the curriculum actually a learning opportunity? Does a constructivist pedagogical approach constitute such an opportunity? Can the opportunity be offered in a classroom of 80 students? In order for there to exist opportunities to develop breadth of skills, do all facilitating features need to be aligned? In order to explore how these multiple sources might paint differentiated pictures of opportunities to learn, it is proposed to collect data from curriculum, assessment, teacher, and classroom level. Analysis of the data will be designed to identify the degree to which combinations of these might predict likelihood of opportunity to learn, such that data collection for country-level monitoring purposes might be minimised.

As an outcome of the work described, a data collection tool along with detailed methodological guide and instructional manual will be drafted for piloting.

Step 3 Pilot the questionnaires

Questionnaires to identify enabling environments will be piloted across a small number of countries. Countries invited to participate will be drawn from low to high income, and across Africa, the Asia-Pacific, the Americas, and Europe. The questionnaires will be more extensive than the finalised tools, in order to maximise the probabilities of collection of best indicators. The questionnaires will be designed for completion by in-country education personnel, and will be designed to capture system aspiration data, curriculum data, existence of assessment at national level, statements of pedagogical practice, teacher responses, and classroom environment scan; and identification of alignment across these. Existing documents will provide the source for some of these data and so less likely to be subject to biased response. However, the teacher and classroom data may be more subject to bias. Accordingly, the questionnaires will need careful design in order to be able to capture accurate information. Lead country researchers will have participated in final steps of questionnaire design, and will be requested to provide usability feedback on use.

Step 4 Finetune methodological approach, including questionnaire, methodological guide and instructional manual, for implementation

This step will draw on the pilot of the questionnaires to ensure usability of the materials. These will be provided in English and will minimize use of technical terms that might present translation difficulties. Given the broad scope of the pilot data collection, it is anticipated that analysis of these data will provide the opportunity to identify key diagnostic variables to inform the final set of indicators.

WHAT STEPS NEED TO BE FOLLOWED

UIS plans to follow the steps below in order to have a concrete methodological proposal for the sixth TCG meeting in August 2019:

- Convene a Technical Working Group that would agree on the scope of the methodological framework and the terms of reference for a theoretical paper
- Commission a theoretical paper that defines the breadth of skills and provides recommendations on measurement options
- Consult the Technical Group and countries
- Develop a questionnaire to collect data on a breadth of skills in education systems, and an instructional manual to guide countries to report on a new indicator
- Test and validate the methodology by piloting the questionnaire in a number of selected countries
- Finalize the questionnaire

The expected products are:

1. Framework to measure a breadth of skills to be defined
2. Guidelines for countries to include those skills within education systems
3. Data collection tool and process

TECHNICAL WORK GROUP MEMBERSHIP

The Technical Working Group will consist of (1) members with expertise in the concepts of breadth of skills and 21st century skills and practical experience in the measurement of these skills and curriculum audit practices; and (2) members from countries which are working to enable these skills within their education systems. Membership will be limited to a maximum of 10 members in order to complete the work efficiently within relatively short timeframe.

Invitees will include representatives from:

- a UNESCO regional office, currently hosting programs on transversal competencies/21st century skills
- the research community, with expertise in curriculum mapping associated with transversal competencies/21st century skills
- a private sector organization that has demonstrated interest in breadth of skills
- a non-government organisation that has demonstrated interest and expertise in transversal competencies/21st century skills

- a teacher association, with experience in the concept of breadth of skills
- four countries which have stated aspirations toward the development of a breadth of skills in their formal education systems.

PROPOSED BUDGET

The sum of USD 10,000 will be allocated for each of the papers on conceptual framework and methodological approach; USD 24,000 will be allocated for the pilot phase, with majority of the funds to support within-country pilot implementation; USD 6,000 will be allocated to support travel costs for a member of the Working Group to attend initial pilot data gathering in two countries, as a quality control mechanism and to check on logistical viability of the data collection.   USD 11,000 will be allocated to administration and support from UIS.

Table 1: Activity plan and project timeline

	2019						
	Jul	Aug	Sept	Oct	Nov	Dec	Jan
Activity 1: Research, design, and methodological development							
Launch and convene Technical Working Group	▩	▩					
Technical paper with definitions and recommendations		▩					
Methodological paper outlining methodological decisions		▩					
Activity 2: Questionnaire development							
Draft of questionnaire, methodological guide, and instructional manual			▩				
Finalization of questionnaire, methodological guide, and instructional manual				▩			
Development of indicator				▩			
Activity 3: Piloting the new opportunity survey							
Mail out survey and instructional guide to selected countries					▩		
Data processing and validation						▩	
Elaboration of final report						▩	
Activity 4: Submission of proposal to the TCG							▩

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