



Programme for International  
Student Assessment

# Big picture thinking

How to educate the whole person  
for an interconnected world

**Principles and practices**

Veronica Boix Mansilla  
Andreas Schleicher

# Acknowledgements

---

The principles and practices informing this publication build on over a decade of research and close analysis of exemplary teaching practices from around the world. It is to these reflective practitioners - teachers, leaders, policy makers and their students - to whom we owe our deepest gratitude. They add nuance to our understanding of the opportunities and demands of transformative global and intercultural education. A number of experienced and dedicated analysts, as well as graduate students, contributed their insights along the way. Special appreciation to Miyako Ikeda for her exquisite project management, Martyn Barrett, Darla Deardorff, Hye-Won Lee, Pierre Gouédard and Tarek Mostafa, as well as members of the PISA governing board for their careful feedback on prior versions of this publication. Devon Wilson and Hania Marien made literature reviews and editorial contributions. The publication was edited by Clara Young, designed and laid out by Della Shin, and Alison Burke co-ordinated the production.

Several organizations provided support for the research informing this publication. The Longview Foundation, in particular, supported the study of Signature Pedagogies in Global Education. This brochure was developed with the support of the Bussola Institute.

## About the authors

---

Dr. Verónica Boix-Mansilla is a Senior Principal Investigator at Project Zero, Harvard Graduate School of Education and Director of Research at Re-imagining Migration. An international expert on global competence and intercultural education, her research examines conditions that enable learners to understand and take action on the most pressing issues of our times (migration, inequality, sustainability) through quality disciplinary and interdisciplinary work. Her research unfolds in diverse educational settings in Argentina, China, Colombia, Japan, India, Uganda, United States, and Vietnam. Boix-Mansilla co-led the conceptual development of key global education frameworks with the OECD-PISA, Asia Society, International Baccalaureate, and Harvard Project Zero.

Andreas Schleicher is Director for Education and Skills at the Organisation for Economic Co-operation and Development (OECD). He initiated and oversees the Programme for International Student Assessment (PISA) and other international instruments that have created a global platform for policy makers, researchers and educators across nations and cultures to innovate and transform educational policies and practices. He has worked for over 20 years with ministers and education leaders around the world to improve quality and equity in education.

# Table of contents



<b>ACKNOWLEDGEMENTS</b> .....	1
<b>INTRODUCTION</b> .....	6

## SECTION 01

<b>WHAT IS GLOBAL COMPETENCE AND WHAT DO WE LEARN FROM PISA 2018?</b> .....	11
PISA 2018 global competence framework .....	11
How global competence was assessed in PISA 2018 .....	12
Some key findings on PISA 2018 global competence results .....	13

## SECTION 02

<b>WHAT KIND OF LEARNING DO WE SEEK?</b> .....	25
Whole Learning .....	27
Relevant Learning .....	28
Deep Learning .....	30
Social Learning .....	31
Transformational Learning .....	33
“In the World” Learning .....	34

## SECTION 03

<b>HOW AND WHERE TO EDUCATE FOR GLOBAL COMPETENCE?</b> .....	41
There are multiple ways to teach for global competence with integrity .....	42
Educating for global competence with different scopes .....	42

**SECTION 04**

<b>TURNING TO PRACTICE: HOW CAN WE NURTURE GLOBAL COMPETENCE WITH QUALITY FOR ALL?</b> .....	49
Who are we? .....	50
What matters most to learn?.....	54
How do students learn to become globally competent?.....	62
How will we know we are making progress?.....	67

**SECTION 05**

<b>THE EDUCATOR WE NEED: HOW CAN WE PREPARE OURSELVES TO TEACH FOR GLOBAL COMPETENCE WITH QUALITY?</b> .....	73
Becoming a global teacher: integrating forms of expertise .....	74
Nurturing global educators: What leaders and policy makers can do.....	77

**SECTION 06**

<b>BIG PICTURE THINKING: EDUCATING THE WHOLE PERSON FOR AN INTERCONNECTED WORLD</b> .....	83
<b>ANNEX A</b> The Many Stories project .....	87
<b>ANNEX B</b> Climate stewards go global! .....	92
<b>ANNEX C</b> Exploring planetary health through intercultural digital exchange.....	97
<b>REFERENCES</b> .....	101

**FIGURES**

Figure 1. The dimensions of global competence.....	12
Figure 2. Students' agency regarding global issues .....	14
Figure 3. Performance in global competence and in other PISA subjects.....	15
Figure 4. Countries' and economies' relative performance in global competence .....	16
Figure 5. Students engaged in learning opportunities at school .....	17
Figure 6. Number of learning activities related to global competence and students' attitudes .....	18
Figure 7. Educating for global competence: The learning we seek .....	27
Figure 8. Education for Global Competence: Four questions .....	50
Figure 9. Education for global competence: Educators' expertise we need.....	74
Figure 10. Educating for global competence: An integrative framework .....	84

## BOXES

Box 1.	Teaching for Global Competence is not an “add-on” but a new approach to curriculum and instruction. Marissa’s story: “I have to teach them math!”	5
Box 2.	What this publication is and is not	9
Box 3.	COVID-19: Making sense of complex emergent global issues	19
Box 4.	Quality learning opportunities for all children and youth: Investigating migration family stories with empathy	21
Box 5.	A grounding example to reflect on quality learning: El Pasado Vive: Afro-Caribbean influences in the Spanish classroom	26
Box 6.	Relevant and deep learning in the fourth grade: Climate Stewards go global	29
Box 7.	Social Learning: Taking perspective – one self’s and others’ – through a timeless story circle practice	32
Box 8.	Nurturing and assessing transformative learning through deliberately designed intercultural exchange in study abroad	34
Box 9.	Learning that is relevant, deep, and “in the world”: Samir’s investigation of HIV-AIDS	35
Box 10.	Teaching for global competence with quality for all: Illustrative cases overview	37
Box 11.	Many ways to teach for global competence with integrity	43
Box 12.	Educating for global competence in the early years: Global environmental stewardship – From love to action	44
Box 13.	Drawing on multiple disciplines to protect cultural traditions at risk	46
Box 14.	Reimagining migration in the museum	47
Box 15.	Understanding our students: Portrait of a child	51
Box 16.	Connecting with communities on and offline: Planetary health through intercultural digital exchange	53
Box 17.	Selecting topics that matter while navigating world challenges	56
Box 18.	Deep understanding of relevant issues in the globally competent mathematics classroom: A population growth lab	58
Box 19.	Teaching for global competence: Creating a shared identity in a young and diverse society	60
Box 20.	Anticipating learning challenges: Climate stewards go global (2)	64
Box 21.	Creating global school cultures that teach: Community, values, and sustainability in the elementary years	66
Box 22.	Global Thinking Routines	69
Box 23.	Envisioning and nurturing well-grounded and well-rounded effective global competence teachers	77
Box 24.	Setting conditions for sustained teacher growth	78
Box 25.	Policies of continuity, national reach, and local agency	80

**Box 1**

**Teaching for Global Competence is not an “add-on” but a new approach to curriculum and instruction. Marissa’s story: “I have to teach them math!”**

### **U.S. – Elementary School – Immigrant Origin Students - Mathematics**

Marissa, a second-grade public school mathematics teacher, is learning to prepare students for an interconnected and interdependent world. Over the past weeks she has been learning about global competence pedagogies and wondering whether they belong in her mathematics class. These days she is experimenting with something new: using her brief morning circle time, when students typically greet each other or do “show and tells”, to bring the world into her classroom. She invites her students to look at an image projected on the wall depicting Hurricane Maria’s effect in Puerto Rico. “What do you see?” “What does this image make you think about?” “What do you wonder about?” Students’ deep observations, story-sharing, and questions show Marissa how much these young, mostly Latino immigrant-origin, children have to say about an island far away as well as their own local community in Washington DC.

Students are engaged in a morning circle that soon extends to 20, sometimes 40 minutes. “This is great, but I have to teach them math!” Marissa worries. Her district tests students’ mathematics literacy progress regularly, so ensuring students’ understanding of multiple addition is a must. Suddenly, Marissa has an epiphany. She asks her students to calculate the cost of school supplies needed to reopen a school in Puerto Rico they had been following – to do that, the children will have to do multiple addition and, even, multiplication.

Though it may, at first, have seemed peripheral to mathematics instruction, Marissa’s small, safe, if somewhat transgressive, experimentation with morning circle allowed students to think deeply about significant issues. Students engaged in an issue they deemed relevant and contributed their own background knowledge to class discussions. Students were able to examine this local and global issue from multiple perspectives critically and empathically. Especially important, the experience enabled all to learn that “mathematics literacy” is more than solving problems in a notebook. It entails using mathematics as a lens to interpret and make informed decisions on issues that matter to communities across the globe and our collective well-being.

**Source** : *The World in DC Project*, DC Public Schools, Harvard Project Zero

# Introduction



Globalisation and digitalisation have connected people, cities, countries and continents in ways that vastly increase our individual and collective potential. But the same forces have also made the world more volatile, more complex, more uncertain and more ambiguous. The world is witnessing a growing disconnect between an infinite growth imperative and the finite resources and delicate ecosystems of our planet; between the financial economy and the real economy; between the wealthy and the poor; between the concept of gross domestic product and the well-being of people; between technology and social needs; and between governance and the perceived voicelessness of people.

No one should hold education responsible for all of this but neither should anyone underestimate the role that people's knowledge, skills, attitudes and values play in social and economic development and in shaping the cultural context.

In today's world, education is no longer just about teaching students something but about helping them develop a reliable compass and the tools to confidently navigate through an increasingly complex, volatile and uncertain world. Success in education today is about identity, it is about agency and it is about purpose. It is about building curiosity – opening minds. It is about compassion – opening hearts. And it is about courage – mobilising our cognitive, social and emotional resources to take action. These are also our best weapons against the biggest threats of our times: ignorance – the closed mind; hate – the closed heart; and fear – the enemy of agency.

Things that are easy to teach and test have become easy to digitise and automate. We know how to educate learners who are good at repeating what we tell them. But in this age of acceleration and artificial intelligence, we need to think harder about what makes us human.

Algorithms that sort us into groups of like-minded individuals create social media echo chambers that amplify our views and insulate us from opposing arguments that may alter our beliefs. These virtual bubbles homogenise opinions and polarise our societies; and they can have a significant – and adverse – impact on democratic processes. Those algorithms are not a design flaw; it is how social media works. There is a scarcity of attention but an abundance of information. We are living in a digital bazaar where anything that is not built for the network age is cracking apart under its pressure.

The conventional approach in school is to break problems down into manageable bits and pieces and then to teach students how to solve these bits and pieces. But modern societies create value by synthesising different fields of knowledge and making connections between ideas that previously seemed unrelated. Innovation comes from connecting the dots.

In today's schools, students typically learn individually and at the end of the school year, we certify their individual achievements. But the more interdependent the world becomes, the more we need great collaborators and orchestrators. We can see during this pandemic how the well-being of countries depends increasingly on people's capacity to take collective action. Schools need to help students learn to be autonomous in their thinking and aware of the pluralism of modern living. This is important. At work, at home and in the community, people will need a broad understanding of how others live in different cultures and traditions, and how others think, whether as scientists or as artists.

The foundation for this doesn't entirely develop naturally. We are all born with "bonding social capital", a sense of belonging to our family or other people with shared experiences, common purposes or pursuits. But it requires deliberate and continuous efforts to create the kind of "bridging social capital" through which we can share experiences, ideas and innovation with others, and increase our radius of trust to strangers and institutions.

These considerations led PISA, the global standard for measuring the quality of educational outcomes, to include 'global competence' in its latest evaluation of 66 school systems. To do well on this assessment, students had to demonstrate that they can combine knowledge about the world with critical reasoning, and that they were able to adapt their behaviour and communication to interact with individuals from different traditions and cultures.

It is perhaps no surprise that countries that generally do well in education also tended to show higher levels of global competence: students in Singapore and Canada who do well on the PISA subject matter tests also came out on top in global competence. What is more interesting, however, is that a country like Colombia where students often struggle with reading, math and science tasks does far better on global competence than predicted by its reading, math and science scores. Also Scotland, Spain, Israel, Panama, Greece, Croatia, Costa Rica and Morocco did better than expected. In turn, students in Korea and the Russian Federation did less well than predicted. In other words, global competence is not an automatic by-product of academic learning, it is something that needs to be nurtured.

But how can this be done effectively? How do we design curricula, instruction, assessments, and learning environments that develop students' global competence?

This publication offers research-informed and actionable **pedagogical principles** that policy makers, leaders, and educators can use to support equitable and effective global and intercultural competence education. It includes **case studies to illustrate these guiding principles** in real-life contexts like classrooms, museums, learning centres, cultural exchange programmes, and digital platforms. Around the world today, teachers like Marissa (Box 1) are embracing the shifting demands of their profession.



Five questions ground this work and the sections that follow:

- I. **What is global competence and what do we learn from PISA 2018?**  
*Introducing the PISA 2018 global competence framework, assessment, and some key findings*
- II. **What kind of learning do we seek?**  
*Making global competence learning visible.*
- III. **How and where to educate for global competence?**  
*Ubiquitous opportunities to educate for global competence across scopes, ages, disciplines, institutions, and geopolitical outlooks*
- IV. **Turning to practice: How can we nurture global competence with quality for all?**  
*Four guiding questions, principles, and practices*
- V. **The education we need: How can we prepare educators to teach for global competence with quality?**

Global competence-centred curriculum and pedagogies help educators bring the world into the classroom. They contribute to a classroom culture that nurtures relationships and encourages compassionate and respectful dialogue across differences. These pedagogies can: give voice to historically marginalised communities; cultivate an ethic of human dignity and appreciation for diversity; diminish hatred; and nurture young people's agency as local and global actors. Global competence education does not have to be limited to the classroom – the digital response to the pandemic has shown this. Digital platforms and people and institutions outside of schools – museums, community centres, exchange programmes, families, and municipalities – have a role to play in preparing students for the world. In fact, crucial to long-term success in nurturing young people's global and intercultural competence are the ongoing daily interactions between communities, educators, learning environments, and materials that students are exposed to. These adults and institutions can create a learning ecology that fosters curiosity, sensitivity, and appreciation for diverse worldviews, languages, and cultures.

Getting this right is important. Young people's global competence can shape our future as profoundly as their reading, math and science skills. Not least, it will be the societies that value bridging social capital and pluralism most that can draw on the best talent from anywhere and nurture creativity and innovation.

**Box 2****What this publication is and is not**

The principles and practices included in this publication provide informative guideposts that stakeholders and professionals in education may use to make decisions about curriculum, instruction, assessment, and the creation of rich learning environments. They do not provide recipe-like solutions to teach our youth. In fact, the wide-ranging diversity of educational institutions, students, cultures, socio-economic and geopolitical contexts in which global competence learning takes place militates firmly against rigid pedagogical one-size-fits-all directives. Instead, the proposed principles and practices invite readers to examine key qualities of learning and revisit perennial questions in education placing global competence at the centre. As readers endeavour to design programmes, courses, projects, lessons, digital-learning platforms, cultural exchanges, service-learning experiences, independent projects, museum visits and the like, they are invited to explore fresh answers to timeless questions, keeping our world today and better collective futures in mind.

A diverse collection of cases has been included in the publication because principles come to life through rich exemplification. Practitioners learn best through close analysis of quality practices that they can connect to their own. This publication brings together many years of case-based qualitative research on deep learning and quality global and intercultural pedagogies, and expands it with additional PISA 2018 results. These case studies illustrate opportunities for innovative cross-curricular and interdisciplinary education (Klein, 2002). Cases represent a variety of educational contexts, schools, museums, digital programmes, and cultural exchanges to shed light on possible global competence learning ecologies. Finally, and perhaps most importantly, cases unfold in a broad range of geographical and social contexts, illuminating the key role of cultural contextualisation in global competence education. Cases and selection criteria are listed in Box 10 and more extensive case studies in Annexes A-C.

Throughout the publication, a series of invitations to reflect provide resting points in the journey. Readers can pause to think critically about the ideas proposed, make connections to their practice, experiment with aspects of design, converse with others, and contribute to enriching our collective understanding of the art and science of educating for global competence. As a reader, you are invited to engage, to peruse the cases you find relevant, enjoy the wisdom and creativity of the educators involved, and remember that the cases here presented are often the result of multiple iterations.

The publication is built on the premise that all educators – teachers, administrators, professional development experts, parents, coaches, museum docents – have an opportunity to learn to educate for global and intercultural competence, and that we can do so in developmentally meaningful and intellectually responsible ways (Bruner 1976, 1996), working across ages, disciplines, and contexts.





01

# What is global competence and what do we learn from PISA 2018?

**Introducing the PISA 2018 global competence framework, assessment, and some key findings**

## **PISA 2018 global competence framework**

The OECD PISA 2018 framework defined global competence as:

*a multidimensional capacity that encompasses the ability to: 1) examine issues of local, global, and cultural significance; 2) understand and appreciate the perspectives and worldviews of others; 3) engage in open, appropriate, and effective interactions across cultures; and 4) take action for collective well-being and sustainable development.*

The framework articulates a view of Global Competence as a multidimensional construct, involving students' cognitive, socio-emotional, and civic development. Global competence is needed to thrive in an interconnected and interdependent world. More specifically, it is a vital competence for living harmoniously in multicultural communities,

using media platforms effectively and responsibly, navigating a changing labour market, and supporting the Sustainable Development Goals.

The four core dimensions of global competence include “examining issues”, “understanding perspectives”, “interacting across cultures,” and “taking action”. They are supported by four inseparable factors, which are knowledge, skills, attitudes, and values as shown in Figure 1. Effective education for global competence gives students the opportunity to mobilise their knowledge, skills, attitudes, and values while exchanging ideas on a global issue in or outside of school with people from different cultural backgrounds (for example, engaging in a debate, questioning viewpoints, asking for explanations, or identifying directions for deeper exploration and action).

Figure 1. The dimensions of global competence



Source: PISA 2018 Assessment and Analytical Framework (OECD, 2018).

### How global competence was assessed in PISA 2018

The global competence assessment in PISA 2018 was composed of two parts: a cognitive assessment and a background questionnaire.

- The test focused on cognitive aspects including knowledge and cognitive skills in three dimensions of global competence: “examine issues”, “understand perspectives”, and “take action”. Answers to the test items were used to create a unidimensional scale of those cognitive aspects (i.e. plausible values).
- Questionnaire items collected self-reported information on students’ awareness of global issues and cultures, skills (both cognitive and social) and attitudes plus information from schools, teachers and parents on activities to promote global competence. The student questionnaire covered all four dimensions of global competence as well as related attitudes and dispositions. For instance, the “examine issues” dimension, included items on students’

awareness of global issues and self-efficacy regarding global issues. The “understand perspectives” dimension included students’ interest in learning about other cultures; respect for people from other cultures; ability to understand the perspectives of others; cognitive adaptability; and attitudes towards immigrants. The “interact across cultures” dimension also measured students’ awareness of intercultural communication. In turn, the “take action” dimension focused on students’ agency regarding specific global issues.

Twenty-seven countries and economies implemented the PISA 2018 global competence test. Sixty-six countries and economies implemented a questionnaire module of global competence. The PISA 2018 results show positive associations between students’ attitudes and dispositions measured by questionnaire items and their performance on the test. This association is attenuated after accounting for students’ and schools’ socio-economic profile but it remains positive and significant in almost all countries and economies with available data (OECD, 2020).

## **Some key findings on PISA 2018 global competence results**

### ***Four dimensions of global competence***

According to the PISA 2018 results, a majority of students reported that they had self-efficacy regarding global issues. Students responded that they are the most confident in discussing the different reasons why people become refugees. Some 77% of students across OECD countries reported that they can do this task easily or with some effort, as opposed to not being able or struggling to do so. Some 72% of students reported feeling confident when explaining why some countries suffer more from climate change than others. Some 63% of students reported feeling confident when explaining how carbon-dioxide emissions affect global climate change. Students were less confident when it came to explaining how economic crises in single countries affect the global economy (61% of students reported that they could do this easily or with some effort) and were less confident in establishing a connection between prices of textiles and working conditions in the countries of production (58% of students so reported) (OECD, 2020).

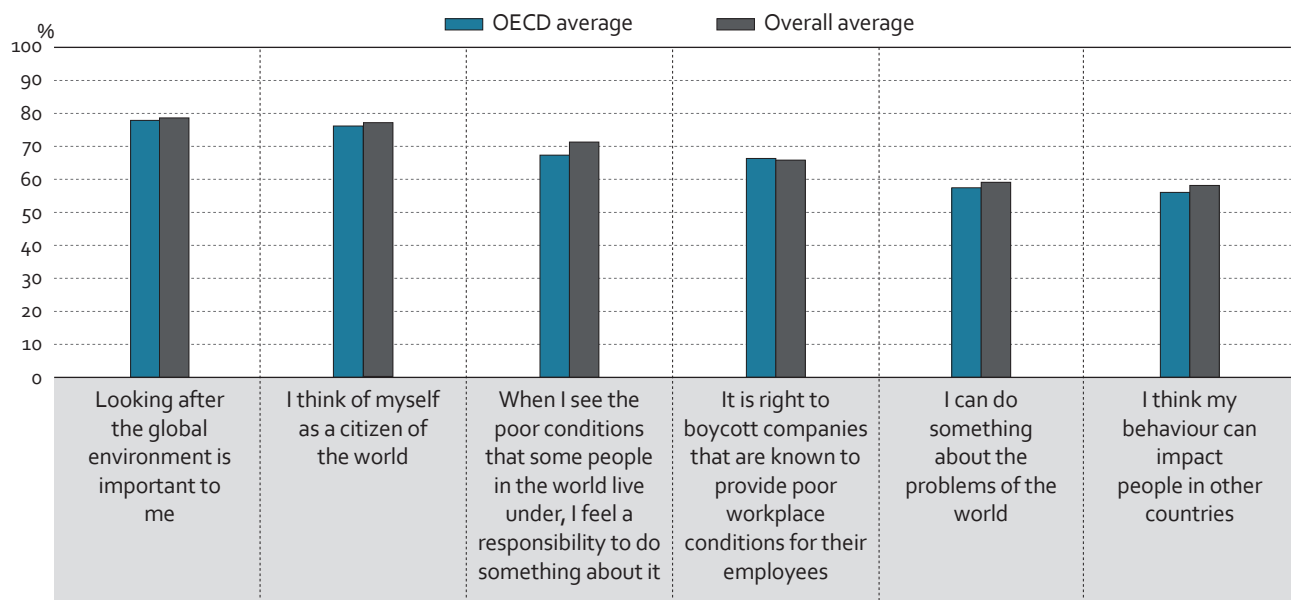
Regarding perspective-taking, on average across OECD countries, 64% of students reported a capacity to understand their friends better by imagining how things look from their own perspective (i.e. the students responded “very much like me” and “mostly like me”). Similarly, 63% of students reported that they believe that there are two sides to every question and that they try to look at them both, and 59% reported that they try to look at everybody’s side of a disagreement before taking a decision. However, fewer students reported that they try to imagine how they would feel if they were in the place of someone before criticising them (55%) and that they try to take someone else’s perspective when they are upset at them (40%) (OECD, 2020). These results suggest that understanding the perspective of others becomes more challenging in the context of conflict.

A large majority of students reported their awareness of intercultural communication. On average across OECD countries, some 88% agreed or strongly agreed that they listen to what others say; 85% agreed or strongly agreed that they can find a way around problems with communications; 84% agreed or strongly agreed that they check to be sure that people understand each other correctly; 82% agreed or strongly agreed that they observe others’ reactions; 81% agreed or strongly agreed that they give concrete examples to explain ideas; 80% agreed or strongly agreed that they choose their words carefully; and 78% agreed or strongly agreed that they explain things very carefully (OECD, 2020). These results highlight that nine out of ten students report that listening for understanding is a key element of communication.


Students were more likely to agree with statements that did not involve an active role than with statements that imply that they need to take action. As shown in Figure 2, 78% of students on average across OECD countries agreed or strongly agreed that looking after the global environment is important to them. Some 76% of students agreed or strongly agreed that they think of themselves as citizens of the world; 67% agreed or strongly agreed that when they see the poor conditions that some people in the world live under, they feel a responsibility to do something about it; 66% agreed or strongly agreed that it is right to boycott companies that are known to provide poor workplace conditions for their employees; 58% agreed or strongly agreed that they can do something about the problems of the world; and 56% agreed or strongly agreed that they think their behaviour can impact people in other countries. This indicates some degree of pessimism about whether students can make a difference. In other words, students may well be aware of a global issue and have positive attitudes about it but remain reluctant to take action or may not see themselves as responsible for solving that issue. This suggests the importance of global competence education that goes beyond knowledge accumulation to focusing on student agency.

**Figure 2. Students' agency regarding global issues**

OECD and overall averages



Source: PISA 2018 Results Volume VI. Figure VI.5.2.

StatLink  <https://doi.org/10.1787/888934170089>

### ***Performance on the global competence test and in reading, mathematics and science***


Scores in reading, mathematics, science and global competence were highly correlated as Figure 3 shows. On average across the 27 countries and economies that conducted the global competence test, performance on this test correlated at 0.84 with performance in reading, at 0.79 with performance in science and at 0.73 with performance in mathematics. The correlation between performance on the global competence test and performance in reading was the same as that between performance in reading and in science. The strongest correlations between performance on the global competence and reading tests were found in Brunei Darussalam, Israel, Lithuania, Malta and Chinese Taipei while the weakest were observed in Costa Rica, Indonesia, Kazakhstan, Scotland (United Kingdom) and Thailand (OECD, 2020).

### Figure 3. Performance in global competence and in other PISA subjects

Overall averages

Correlation between performance in...			
Mathematics	Reading	Science	...and performance in...
0.73	0.84	0.79	Global competence
	0.79	0.78	Mathematics
		0.85	Reading

**Source:** PISA 2018 Results Volume VI. Figure VI.6.5.

**StatLink**  <https://doi.org/10.1787/888934170336>

The strong correlations indicate that high performance on cognitive tests, regardless of the subject, could be underpinned by general cognitive skills. For instance, high performance in global competence and science would require students to be able to read and understand the scenarios provided in the test units and the questions they need to answer. As such, an adequate level of proficiency in reading is a prerequisite for sitting written tests in other subjects. Moreover, both reading and global competence require certain skills such as weighing sources' reliability and relevance, reasoning with evidence, and describing and explaining complex situations and problems.

However, reading proficiency does not necessarily account for all variations in performance on the global competence cognitive test. This indicates that specific cognitive skills in global competence may be needed to perform well on the test. Those skills go beyond general reading skills.

Given that performance in global competence is closely linked to performance in the three core PISA domains of reading, mathematics and science, it is possible to isolate the distinctive aspects of global competence by regressing scores in global competence over scores in the three core domains. Each student's relative performance – his or her performance in global competence after accounting for proficiency in reading, mathematics and science – was calculated. This calculation pooled data from all countries and economies that participated in PISA and thus allowed for the ranking of countries and economies by their average relative performance.

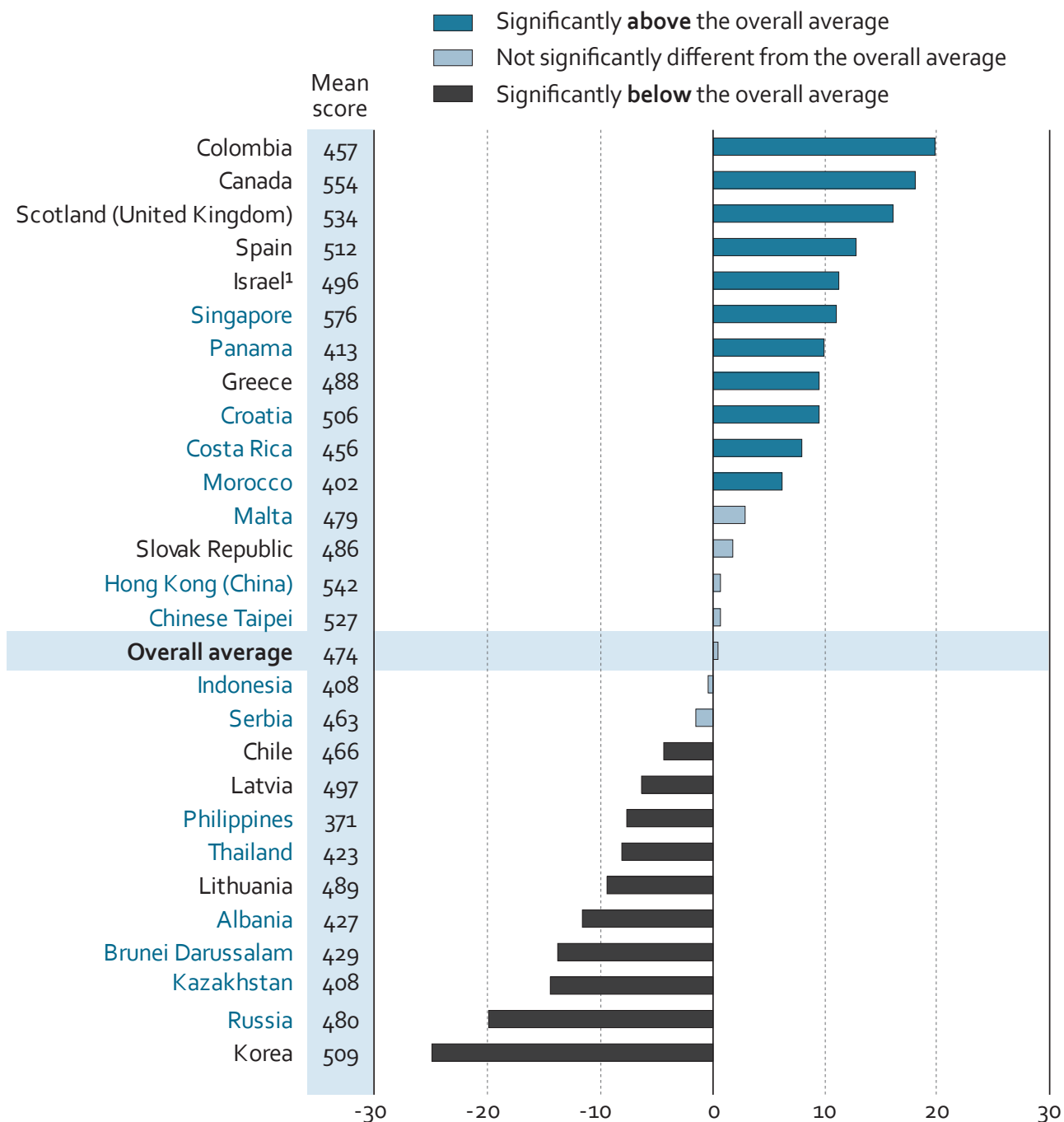
Figure 4 shows the relative performance in global competence of each participating country and economy. The values range from a high of 20 points for Colombia to a low of -25 points for Korea. Countries and economies are also divided into three broad groups: 1) those whose mean relative scores are statistically around the overall mean (pale blue bars); 2) those whose mean relative scores are above the overall mean (dark blue bars); and 3) those whose mean relative scores are below the overall mean (black bars).

The range and variation of relative scores are noticeably smaller than that of raw performance scores. One way to interpret such scores is to say that, on average, students in Colombia scored 20 points higher than expected, given their scores in reading, mathematics and science. Relative performance was significantly higher than the overall average in 11 countries and economies while it was not statistically different from the average in six countries and economies and was below the average in 10 others. Canada, Colombia, Greece, Israel, Panama, Scotland (United Kingdom), Singapore and Spain showed the highest relative performance in global competence while Albania, Brunei Darussalam, Kazakhstan, Korea and Russia showed the lowest relative performance.



Figure 4. Countries' and economies' relative performance in global competence


Score-point difference between actual and expected performance in global competence



1. The global competence sample from Israel does not include students in ultra-Orthodox schools and, thus, is not nationally representative. See PISA 2018 Technical Report (OECD, forthcoming) for details.

Countries and economies are ranked in descending order of the relative performance in global competence.

Source: PISA 2018 Results Volume VI. Figure VI.6.6.

StatLink  <https://doi.org/10.1787/888934170355>

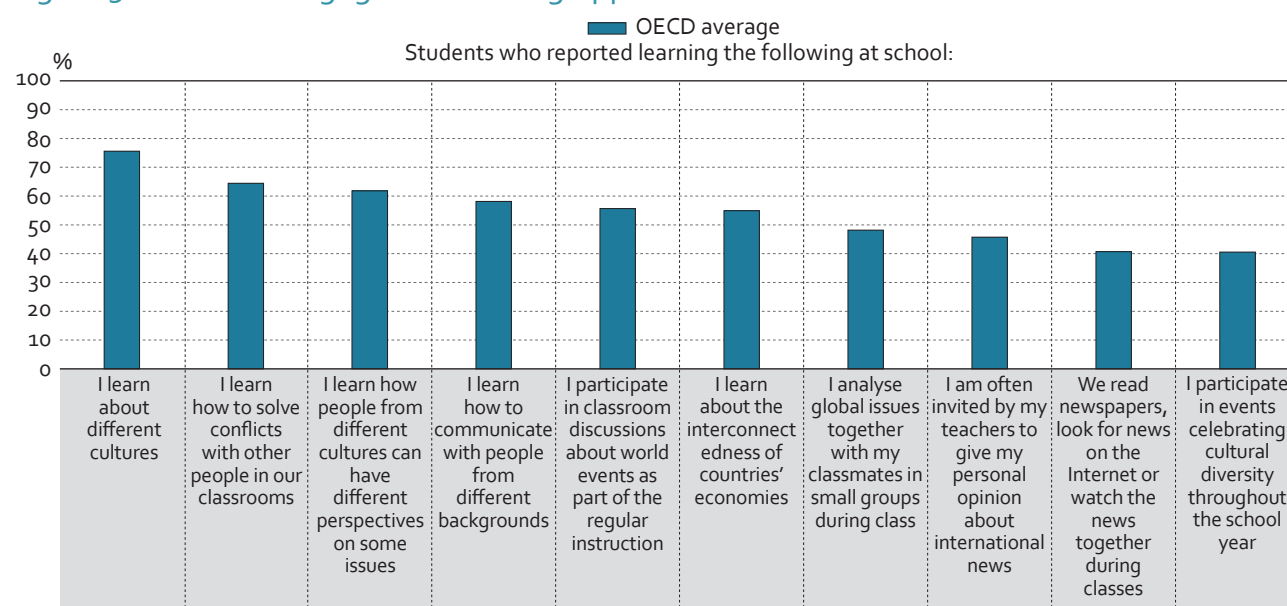
There are notable differences between country comparisons of raw and relative scores in global competence. For instance, while Indonesia was significantly below the overall average raw performance, it was not significantly different from the relative average performance. Moreover, Malta's and Russia's raw performance was not significantly different from the overall average while

Malta's relative performance was three score points above the relative performance average, and Russia's relative performance was 20 score points below the mean. These differences may be explained by students in these countries being stronger/weaker in the unique aspects of global competence after accounting for their performance in reading, mathematics and science.

### **Learning opportunities at school**


In addition to responding to attitudes and dispositions, students who participated in PISA 2018 were asked 10 questions about different learning activities related to global competence at school. As Figure 5 shows, 76% of students reported that they learn about different cultures at school and 64% of students reported that they learn how to solve conflicts with other people in the classroom on average across OECD countries. The least common learning activities – for 41% of students – were looking for news on the Internet or watching the news together during classes; and participating in events celebrating cultural diversity throughout the school year. The most common activities students engaged in were those that involve instruction and learning (*learning about*) rather than those that involve active discussion or participation (*learning by* or *learning to*). This suggests that current teaching practices rely on teacher-directed instruction rather than participative activities.

**Figure 5. Students engaged in learning opportunities at school**



Items are ranked in descending order of the proportion of students who responded "yes"

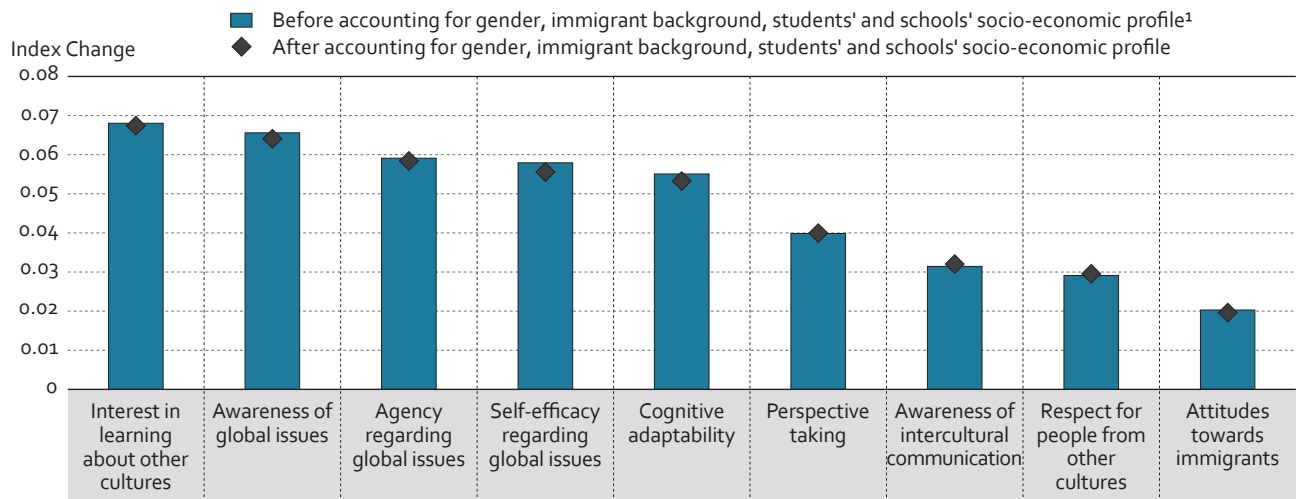
**Source:** PISA 2018 Results Volume VI. Figure VI.7.1.

**StatLink**  <https://doi.org/10.1787/888934170564>

Students with more positive global and intercultural dispositions tended to engage more broadly in learning activities at school such as learning about other cultures, developing perspectives on global issues, understanding how to communicate with people from different backgrounds, and learning to resolve conflict with their peers. As Figure 6 shows, the number of global competence learning activities is associated with students' interest in learning about other cultures, awareness and sense of agency regarding global issues, and cognitive adaptability. While it is impossible to draw causal inferences based on cross-sectional data such as PISA, this result implies that global competence can be learned when students have ample opportunities to do so.


The number of learning activities associated with global competence matters as does the quality of the activities proposed. Students benefit from experiences they deem meaningful to their lives, that deepen their understanding of the world, and engage local and global issues authentically. Schools and educators can integrate several learning activities in a wide range of global and intercultural topics. As we will see in the later sections of this publication, effective learning requires a consistent approach rather than sporadic or one-off activities. It requires curricula that address the breadth of global and intercultural topics relevant to students in age-appropriate ways.

**Figure 6. Number of learning activities related to global competence and students' attitudes**  
OECD average



1. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

**Source:** PISA 2018 Results Volume VI. Figure VI.7.3.

**StatLink**  <https://doi.org/10.1787/888934170602>

Schools and cultural institutions are uniquely positioned to provide safe spaces in which children and youth can explore complex and controversial global issues. These are the spaces in which multiple cultures, languages, and family traditions meet in an increasingly diverse and interdependent world. They are especially relevant for the cultivation of values such as peace, non-discrimination, equity, justice, non-violence, and respect for human dignity and human rights (Council of Europe, 2018; Postman 1999; UNESCO & Institute for Economics and Peace 2020,). Nurturing global competence in our increasingly interconnected, diverse, and changing world demands that such institutions recognise the importance of investigating and bringing the world into the classroom for critical deliberation, keeping the whole child in mind during the process. In so doing, quality global competence education must also prepare children and youth to engage with the world, address real issues, find solutions, and feel like active members of society not in the future but right now. Students develop local, intercultural, and global agency when they have ample opportunities to practice authentic and informed engagement with aspects of the world that matter to them and to society at large. Consider for instance how teachers can engage with emerging global issues like the COVID-19 pandemic (Box 3).

Equitable access to quality learning experiences is necessary, particularly for socio-economically and educationally disadvantaged students who may lack opportunities to discuss issues extensively at home. PISA 2018 shows important cross-country variation in equitable access to quality global learning activities. On the whole, socio-economic, and culturally advantaged students attending equally advantaged schools were more likely to participate in global learning activities than their

less advantaged peers – specifically in learning about different cultures and perspectives and participating in classroom discussions about world events. In turn, disadvantaged students, while reporting fewer learning opportunities, mentioned activities such as learning how to solve conflicts with other people in the classrooms; reading newspapers, looking for news on the Internet or watching the news together during class; giving personal opinions about international news; and participating in events celebrating cultural diversity throughout the school year (OECD, 2020). Schools and the policies that guide them can either mitigate or exacerbate inequalities through global competence education. Some countries exhibit a significant global competence learning gap across socio-economic and cultural groups (e.g. associated with student groupings, schooling expectations, and curricular foci). Many others are offering greater opportunities to less advantaged youth. Important factors empower and engage students from different backgrounds. They include teachers' attitudes, beliefs and the quality of their teaching; school climate and the relationships it fosters among students and peers; and students' sense of agency in overcoming socio-economic adversity (Aldridge et al 2016, Wang et al 2010, Weissbourd et al 2013).

### Box 3

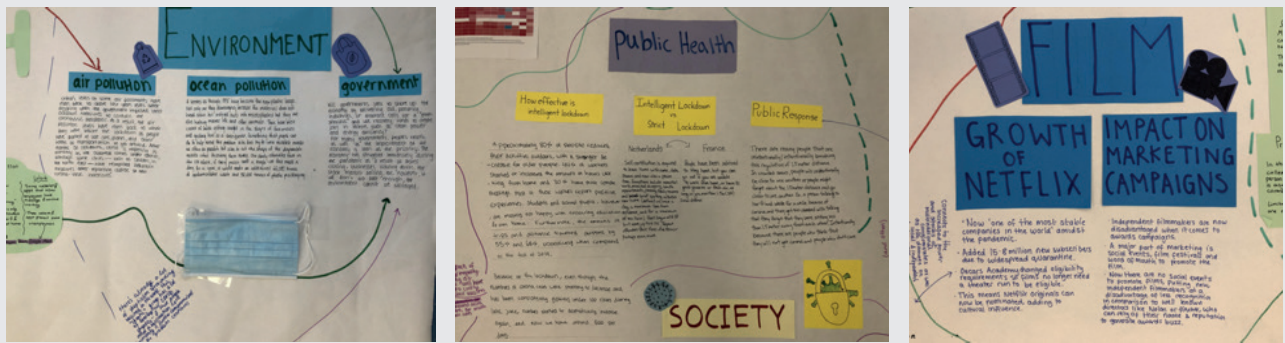
## COVID-19: Making sense of complex emergent global issues

### Netherlands – Secondary School (Grade 10) – Science-interdisciplinary

When COVID-19 forced students to learn from home, Emily was uniquely prepared. For over five years she had been teaching about global epidemics including SARS, Ebola, and Zika using collaborative, interdisciplinary, concept-mapping pedagogy. Understanding pandemics is a staple of her science biology class and a model for interdisciplinary teaching beyond it. The unit gives students the agency to inquire about aspects of the problem they find of interest, learn with and from their co-investigating peers, and contribute to a collective class concept map exhibited for the whole school to see.



Emily's unit on COVID-19 begins with "getting curious" – a series of experiences designed to generate curiosity, identify powerful questions for investigation, and link the personal experience of COVID-19 to the experience of others with empathy. They do so through careful engagement with a work of art, video interviews of children from around the world describing COVID-19 in their lives, and multi-cause analysis of an accessible case study – a news article pondering whether ice-cream truck-drivers were essential workers.



“Inquiry” is the second part of this unit. It invites students to continue to elaborate, sort and deepen the questions they have about COVID-19: How do viruses move from one body to another? Why are some populations more affected than others? How do vaccines work? How do people’s beliefs about the body and health influence the effectiveness of public health policies? Students select their questions for investigation and then ponder the disciplinary perspectives that might offer insight. In small groups they begin to “map” COVID-19, finding connections through questions. The unit ends with a turn to action where students propose daily and collective actions to promote more equitable and global responses to the pandemic.

Throughout this unit, Emily minimised her presentation of content. Instead, she used carefully selected materials and thinking routines (see Box 22) to ensure that students construct their own understanding. Part of a study of signature pedagogies in global education, this unit can be accessed through a Smithsonian digital learning collection ([getting curious, inquiry](#)).

**Source:** Veres, E. Interdisciplinary Mapping Case Study, WISSIT, Smithsonian Learning Lab

## Teacher readiness

Teachers play an important role in promoting and integrating intercultural understanding into their practices and classroom lessons. In PISA 2018, teachers in 18 countries and economies completed the teacher questionnaire. The findings show that global and intercultural topics are included in lessons to a varying degree. For instance, teachers commonly include critical thinking, respect for cultural diversity, knowledge of other cultures and openness to people from other cultures in their lessons. By contrast, intercultural communication and foreign languages are not as commonly integrated into lessons (OECD, 2020).

Although teachers do tend to integrate some intercultural topics in their lessons, few of them had attended relevant professional development activities in their teacher development programmes, and even fewer had done so in the previous 12 months. Across all 18 participating countries and economies, the most common activities were training on conflict resolution strategies, the role of education in confronting discrimination, and teaching about equity and diversity. By contrast, fewer teachers received professional development on teaching in multicultural or multilingual settings, second-language teaching, or teaching intercultural communication skills. Even fewer teachers participated in such training activities in the previous 12 months. The lack of professional

development in teaching in multicultural settings is reflected to some extent by teachers' self-reported need for training in certain areas such as teaching in multicultural and multilingual settings, teaching intercultural communication, teaching second languages and teaching about equity and diversity (OECD, 2020).

However, a large majority of teachers reported that they are confident in their ability to teach in multicultural settings, agreeing or strongly agreeing the following five statements: "I can cope with the challenges of a multicultural classroom"; "I can adapt my teaching to the cultural diversity of students"; "I can take care that students with and without migrant backgrounds work together"; "I can raise awareness for cultural differences amongst the students"; and "I can contribute to reducing ethnic stereotypes between the students" (OECD, 2020).

In sum, PISA data do not show a lack of confidence in teachers' ability to teach in multicultural settings or an unwillingness to promote multicultural topics. The main challenge seems to be to provide adequate professional development opportunities and support in this field. This publication aims to provide informative guideposts that educators may use to make decisions about instruction and the creation of rich learning environments. The following sections outline useful principles and practices.

In reflecting about quality global competence learning, particularly among disadvantaged children and youth, consider the example in Box 4 in which a student investigates her family's migration story and the opportunities she encounters to learn to examine global issues and take perspective.

#### Box 4

### Quality learning opportunities for all children and youth: Investigating migration family stories with empathy

#### U.S. – Elementary School – Immigrant Origin Students – English

Akual is a fifth-grade student in a public school which, as is the case for many urban centres the world over, has seen a rapid influx of new immigrant and refugee families in their communities. Akual is exploring her mother and uncle's difficult migratory journey from war-torn South Sudan to their settlement in the United States. "Akual, you come from a big tradition!" Her teacher encourages her to write when Akual shares that her uncle had been one of the "Lost Boys of Sudan". In a few months, her class will publish a book of stories showing the cultural diversity of their city. Akual's work speaks to the complex global issue of forced migration and its local implications for people's lives. She chooses to craft her story from the perspective of three family members, suggesting that she understands the unique experience of emigration, journey and adjustment involved. To do so, she learns to interview her family with care and empathy. She learns to listen actively and adapt the order of her questions to the emotional expressions of her mother. Her research on refugee camps reveals that her uncle spent time at the Kakuma camp in Northern Kenya. In her writing, she applies what she learns about the power of metaphors, imagery, character and language choice to the production of a piece that gives voice to her identity and family refugee experience. Told from three distinct perspectives – her mother's, her uncle's and her own – her story reveals a broad range of emotions and illuminates the larger issue of refugee resettlement.

“Why does your story matter to you? To our city? To the world?” her teacher asks the class. This prompts students to move well beyond the narrative mechanics of introductions, turning points and resolutions. The questions reveal to Akual that her story is more than a simple school assignment. Through multiple drafts, feedback loops, and revisions, she is learning to use her writing to raise local awareness about the lives and resilience of refugees in her town. In her view, writing about the Lost Boys of Sudan matters in order to correct the record – lest anyone believe that these boys “got lost”, they were in fact captured and forced to live in fear. Once a larger personal-local-global purpose is established, working through the mechanics of writing, imagery, word choice, spelling, and punctuation comes with greater ease, as does perseverance. After all, students’ published stories will be distributed among school and public libraries across town.

Akual’s example illustrates how examining local-global-intercultural issues, developing perspective, communicating across perceived differences and taking action can be seamlessly intertwined. In her example, socio-emotional, cognitive, civic, and aesthetic development work visibly together as she develops her global competence. Running through her learning experience is an invitation to nurture Akual’s agency over her narrative, her identity, and her capacity for influence to “set the record straight” vis-à-vis public perceptions of the Lost Boys of Sudan. Writing, language, and literary forms become instruments for self-expression and participation.

**Source:** World in Portland Project, Portland Public Schools, Harvard Project Zero. See full case study in Annex A.

As Akual’s example (Box 4) suggests, learning to become globally competent involves the dynamic interaction of core *values, attitudes, skills, knowledge*. Engaging with world issues and participating in finding solutions is not something students should do merely as “future citizens” but rather throughout their lives, starting as children. Disciplinary and interdisciplinary concepts, theories, methods, and skills are learned by thinking through increasingly complex local, global, and intercultural matters. Values of human dignity and appreciation for diversity are part of established classroom and school cultures. In fact, our success in this important enterprise calls for clarity about the qualities of learning we aspire to cultivate and the principles of practice that will help us to nurture such learning best.

## An invitation to reflect

---

Read Akual's case (Box 4) carefully keeping the definition and four dimensions of global competence introduced earlier (Fig.1) in mind:

- What global competence dimensions do you notice in Akual's case?
- How are values, attitudes, skills, and knowledge intertwined in Akual's learning?
- What kinds of supports and opportunities seem to foster Akual's global competence?
- What surprised you?
- What insight or idea can you glean to inform your own practice?







## What kind of learning do we seek?



### Making global competence learning visible

**All teaching builds on deeply held beliefs about the kind of learning that we value.** Learning to become globally competent is no exception. An emphasis on “competence” underscores dynamic qualities we associate with flexible expertise, and craftsmanship (Berger 2017). From this standpoint, learning is not merely about accumulating information in our minds, but about *thinking with* and *applying* information in a range of novel, often ill-defined situations. Central to this view of learning is students’ agency to examine and make sense of ideas, theories, skills, values, and apply them in the world – examining global issues, taking informed perspectives, communicating and building relationships and taking action in everyday life. Agency and participation loom large in the vision of global competence learning here proposed. This extends the traditional view of learning as “knowledge acquisition or mastery” to active and meaningful personal engagement in the world. PISA 2018 results show that, on the whole, students do have knowledge about world issues, but they reported taking action to a lesser extent.

## Box 5

## A grounding example to reflect on quality learning

### *El Pasado Vive: Afro-Caribbean influences in the Spanish classroom*

#### U.S. – Secondary School – Spanish

In this public high school in downtown Philadelphia, Melanie, the Spanish teacher, worries about language teaching practices that limit instruction exclusively to formal elements of grammar and vocabulary memorisation. She worries about practices that unwittingly present flat and stereotyped accounts of cultures. Therefore, she has filled her classroom with Latin American art, regional newspapers, students' infographics and music to create immersive experiences for her students.

Concerned with the lack of representation of Spanish cultures of Caribbean descent in Spanish instruction, her inquiry-centred unit on Afro-Caribbean and Afro-Latinx history and culture brings variations in Spanish language, cultures and identity to life. "How does the Transatlantic Slave Trade impact modern-day realities in the Americas?" she asks. "How can we come to see the African presence in the Americas as rich in culture?" "How is African heritage expressed in various Spanish-speaking countries?"

Music, images, and films offer windows into the history of the African diaspora and the rich syncretism of Afro-Caribbean and Afro-Latinx cultures. Melanie aspires to nurture in her students a genuine passion for the Spanish language as a window into cultures and an opportunity to build relations across differences. She hopes that her students will come to see and appreciate the Afro-Latinx contributions to culture in their everyday life.

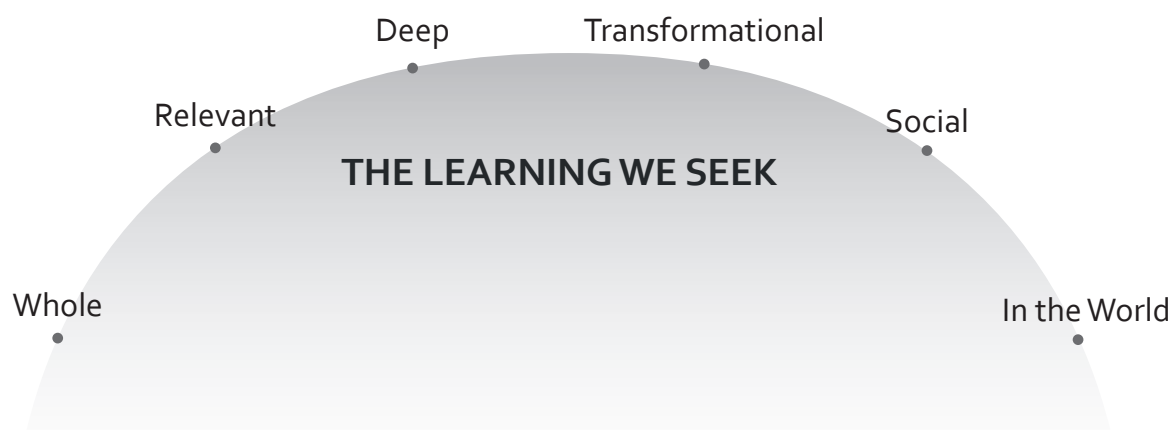
This case illustrates multiple opportunities for learning to understand and appreciate the perspectives of others; to engage in open, appropriate, and effective interactions across cultures; and to examine local, global and intercultural issues with care.

**Source:** Boix Mansilla, V. et al. (2019) *Signature Pedagogies in Global Education*.

Research on *Signature Pedagogies in Global Education* at the Harvard Graduate School of Education, Project Zero suggests that, at its best, quality teaching for global competence builds on six characteristics of learning worthy of consideration as shown in Figure 7: learning that is *whole, relevant, deep, social, long-lasting*, and "*in the world*" (Boix Mansilla & Chua 2016, Boix Mansilla & Jackson 2022). These qualities of learning are desirable in their own right when nurturing human potential. They also contribute to students' agency and participation in distinct ways. For example, *whole, relevant and social learning* is likely to breed engagement and intrinsic motivation to understand and act in the world. *Deep and long-lasting learning* is likely to yield better-informed actions and participation over time. "*In-the-world learning*" invites children and youth to recognise real issues that merit their attention and action.

This section examines the qualities of learning above, drawing on Melanie's Spanish class (Box 5) as a grounding illustration to show how carefully designed learning experiences can embody multiple qualities at once. The section includes additional examples from other disciplines, age groups, and countries to show how quality global competence development can be nurtured across the curriculum, along the lifespan, and around the world.

Figure 7. Educating for global competence: The learning we seek



## Whole Learning

Young people enter classrooms not merely as “Spanish”, “History”, or “Mathematics students,” but as full persons endowed with multiple interests, life experiences and potentials. When nurturing global competence in her Spanish class, Melanie recruits socio-emotional, cognitive, ethical and civic dimensions of learning. Students are invited to share about their childhood, consider the cultural influences that made them who they are today, and make portraits of their “future selves” after having studied the lives of influential adults of Afro-Caribbean and Latino descent in music, law, government, and literature. As a class, they discuss the role of diverse traditions and life experiences in the construction of better societies. Their use of Spanish past, present and future tense verbs become an instrument of self-expression.

*A whole person approach to global competence* insists on the interdependence of spheres of human development that have often unfolded in parallel strands both in research subfields and educational innovations. **Achievement is not limited to the development of cognitive skills but focused on the kind of persons our young people become, embodying self-understanding, managing emotions, and upholding values** (Boix-Mansilla et al. 2015, Council of Europe 2018). Philosophers have long challenged the separation of cognition and emotion that often characterised curricular and pedagogical efforts. They point to “cognitive emotions” as intricately part of learning, e.g. when students show “commitment to rationality”, “joy of verification” (Sheffler 1986, 2013, Neumann 2006), the “frustration of cognitive dissonance” or “anxiety generated by cognitive overload” (Elgin 1999). In recent years, neuroscientists have argued that emotions serve an orienting function in cognitive endeavours through selective attention and memory-encoding in the brain (Immordino-Yang & Fischer 2010, Immordino-Yang et al, 2018).

Teachers committed to educating for global competence recognise the rich cognitive, social, emotional, and ethical experiences associated with learning about the world (Bruner 1996, Fullan et al 2017, Malaguzzi & Cagliari 2016). In Melanie’s class, for example, students find joy in communicating with native Afro-Caribbean Spanish speakers, anguish in learning about slavery and dehumanisation, and intellectual humility in the face of the wisdom portrayed in a poem or a literary work. Ethical dilemmas are not uncommon when students learn about inequities in the right to human flourishing, or expand their universe of responsibility (Arendt 1958, Gardner 2006). Experienced teachers model these forms of learning themselves, evoking the ideas, emotions, relationships, and values with which they make sense of today’s world.

As this publication will show, across disciplines, regions and educational institutions, teachers engage the whole learner when they invite students to explore emerging phenomena like pandemics

and engage in responsible and informed action (Box 3); to understand and contextualise their own story using their voice and influence (Box 4); to find just and culturally sensitive solutions to a study of climate change in coastal communities (Box 6); to come to know themselves by participating in the traditional practice of story circles (Box 7); or to inquire about issues such as the spread of HIV- AIDS by engaging in conversations and data collection with peers (Box 9). In each case, teachers create opportunities for students to develop their capacity for critical thinking, emotional expression, collaboration, and ethical values at once. These teachers invite students to lean into the complexities and contradictions the world presents and engage as full persons or citizens with agency in navigating them.

## Relevant Learning

In her Spanish class, Melanie makes a point of understanding the background of the students she serves, many of whom are from West African, Afro-Latino and European descent, to make their learning experience relevant. Learning can be relevant in multiple ways: In some cases, relevance is personal. Understanding Spanish influences in students' daily life is a personal matter of recognising their own family roots, seldom addressed in textbooks or their dinner conversations. In other cases, relevance stems from the *power of big ideas* like "identity", "culture", and "syncretism" that they can apply extensively to illuminate a number of situations likely to appear in their lives. Still in other cases, relevance stems from their universal reach – as in the *number of people and regions affected* by the African diaspora, for instance, across the Americas and the European Union. Conversely, relevance may stem from uniqueness – as in the *unique moral dilemmas* involved, for example, in rejecting a religious practice of animal sacrifice while upholding the dignity of the people performing it. The issue of learning a language and understanding minority ethnic cultures is equally relevant to young people in other regions of the world, whether learning about the Malay in Singapore, the Indian minorities in the UK, or the Russian minorities living in Estonia and Latvia, to name a few. In other words, **relevant learning responds to the legitimate query "Why do we need to learn this?" by moving attention away from syllabi and exams and toward the intrinsic significance of proposed topics, questions, or experiences for students' lives and societies.**

Relevant learning plays a key role in students' intrinsic motivation as well as in understanding and constructing a further sense of self, and persisting in the face of difficulty (Bandura 1977). Research indicates that motivation to learn is associated with the value students attribute to the topics being learned, whether they are deemed useful to achieving life goals, connected to their identity and sense of self, or embodied in an enjoyable experience worth pursuing (Eccles & Wigfield 2002; Ackerman 1996; Ryan, R.M., and Deci, E.L., 2000). For instance, when fourth-grade students in South Africa and New York examine climate-change impacts on coastal communities (Box 6) they describe their experience as "talking about things that matter", participating and contributing to "grown-ups' conversations", and realising that they can "do something about climate change now." In turn, a student examining the relationship between HIV-AIDS and religious beliefs recognises that he may be getting at the root of consequential disparities across communities' responses to the disease (Box 9). The project matters not only to him personally but also to his community of friends, and to global efforts to mitigate contagion at large.

As examples in this publication show, a hallmark of educating for global competence with quality and equity are the numerous opportunities it presents to embrace relevant learning. Issues like making interdisciplinary sense of emerging phenomena like a pandemic (Box 3); understanding the experience of refugee families (Box 4); climate-change impacts (Box 6); learning about other

cultures (Box 7); and deliberating about planetary health (Box 16); loom large as themes that are likely to remain on the “relevance” radar for decades to come. This is the case as well for establishing a healthy relationship with someone new across differences (Box 15) or estimating population growth and the planet’s carrying capacity (Box 18). Teaching about them today prepares students to make decisions in the future through direct engagement with issues that matter (Gómez et al., 2021, Perkins, 2014).

## Box 6

### Relevant and deep learning in the fourth grade: Climate Stewards go global

#### U.S. and South Africa – Elementary School – Science (See Annex C for an extended version)

Kottie is an experienced public school elementary teacher working with students aged 10-12. Her unit on climate change illustrates the ways in which young students can build an understanding of complex environmental issues and develop a disposition toward environmental stewardship – a priority in the OECD global competence framework. Committed to deep learning, she hopes students will understand the dynamics of climate-induced sea level changes and appreciate how global phenomena may have distinct local manifestations and require locally informed action. Kottie’s modelling maquettes experience illustrates deep learning in and beyond science at the 4th-grade level.

To make the complex and unwieldy topic of climate change accessible, Kottie focuses the unit on melting polar ice caps and sea level rise in coastal areas in New York and Cape Town. Kottie invited students to build a maquette to help them visualise the melting polar caps and sea level rise as well as how such changes could affect landscapes and communities differently. Students created various coastal landscapes and placed small models of houses by the sea. Using ice and perforated plastic bags, students experiment with the rate at which the ice cubes placed on the higher regions melt and flood the lower levels. When students saw how their “houses” were swiftly swept away by the cascading waters or the rising water level, they became agitated. Many moved their “homes” to different coastal lands, where they eventually were flooded as well.



The students’ emotional response directed their attention to understanding why their “houses” could not be protected if the ice caps continued to melt and the sea levels rose. The students deliberated about how physical landscape and economic resources would affect their ability to survive in the created scenarios. This modelling learning experience enabled students to identify and manipulate key climate change variables, applying what they had learned to consider future scenarios. The experience brought key ideas to life, from understanding causal factors that are distant in time or space from their effects to the necessity of “preparedness” among inhabitants of coastal communities and the ways in which ocean-level rise would affect communities differently.

**Source:** Boix Mansilla, V. & Chua, F. (2016). *Signature Pedagogies in Global Education*

## Deep Learning

In her classroom, Melanie multiplies the opportunities to explore notions of identity and culture in depth, while learning Spanish. Worksheets designed to complete sentences with adjectives or verbs in the past tense from a given list are used but only rarely. Instead, students apply adjectives and conjugate verbs to describe photographs of their own childhood, interview schoolteachers and present their research to the class. The language is perceived as a gateway into a new world, and students' endeavour to learn in depth the Spanish language allows them to understand other cultures in deeper and more authentic ways.

In recent years, research addressing "deep learning" has called for more meaningful forms of student engagement in learning in schools. Recognising that acquiring information is not enough to prepare students for the world, research points to the importance of deeper, conceptual, and transferable forms of learning (Jaquith & Zielezinski 2018). Similarly, **deep learning for global competence involves the practice of applying knowledge and modes of thinking characteristic of disciplines like history, mathematics, science, the arts, vocations, and crafts in novel situations as students learn to investigate the world, take perspective, communicate across difference or take action** (Darling-Hammond 2005, 2008, 2013, Wiske, S. 1999). Because of its capacity to orient and empower learners to make decisions, this form of learning nurtures students' sense of autonomy and agency. In the example above (Box 6), Kottie's students do more than gather and memorise information about sea-level rise. Instead, they are developing the capacity to think like scientists, model multiple climate-change impact scenarios, identify relevant variables and causal relations. Most interestingly, students in Kottie's class have opportunities to delve in what could feel like the complex and overwhelming issue of climate change but they do so in a focused way (ocean-level rise in New York and Cape Town) without losing sight of their own power to make a small but tangible differences in consumption and raising awareness at home, at school and in their neighbourhoods. It is this balance between depth of disciplinary understanding and purpose and agency that invites students to delve in the complexities of an issue without losing hope.

Deep learning within and across disciplines invites reflection about what educators understand disciplines to be. Thinking like a biologist involves more than defining "ecosystems" and naming their parts exactly in the ways the textbook outlined. It requires that students apply big ideas, concepts and findings in biology such as "interdependence", "life cycles", "systems", and "tragedy of the commons" as well as the methods with which knowledge is constructed and validated in the discipline – hypothesis testing, field observation, data collection, and the like. This latter capacity is especially relevant in times of misinformation and "truthiness," when young people have unprecedented volumes of information and misinformation at their fingertips but lack heuristics to distinguish between the two (Wineburg et al 2018). Perhaps less frequently considered, deep disciplinary learning helps students understand how peering into a natural environment through the lens of biology enables them to "see" underlying patterns and interactions that may not be accessible to the novice mind and, in doing so, learn to recognise the purposes and possible applications that drive disciplinary work. Similarly, deep learning across disciplines or established crafts invites students to see how by applying different expert lenses to a given issue, new insights, questions, explanations, or solutions become possible (Wiske, S. 1999, Boix Mansilla, V.& Gardner, H. 2000, OECD 2018).

## Social Learning

Relationships of trust, care and understanding create the social fabric in which learning takes place. In her classroom, Melanie establishes a relaxed and warm atmosphere so that students can collaborate serenely on potentially sensitive projects, such as an infographic comparing religious practices across cultures. Students express a sense of “being known” that enables intellectual risk-taking when trying new Spanish constructions or sharing personal stories. Social interactions also allow students to calibrate their understandings with others and learn from available models. In this class, collaborative learning whereby students work in groups is a norm, as is interacting with visiting speakers and peers brought in digitally from the cultures under study, and occasionally travelling to experience cultural interactions directly. Laughter, challenge, thoughtfulness and bonding characterise the climate in which students develop global competence in relationship with others. PISA 2018 results show a negative association between students’ perception of discrimination in their school and their level of respect for people from other cultures (PISA 2018 Volume VI, Figure VI.8.10 - statlink: <https://doi.org/10.1787/888934171058>).

Learning is a social phenomenon. It occurs in a dynamic system of social activity. **Children grow up and develop global competence through interaction with others, in relationship and in connection with broader societal and cultural forces such as families, institutions, media, history, and the cultures in which they live** (Bronfenbrenner 1994, Lave & Wegner 1991, Wertsch 1985, Vygotsky 1978). As experienced teachers know, these social dynamics of learning, broadly conceived, are part of and set the conditions for the development of global competence. They are implicated in students’ perspective-taking, in refining their communication across differences, in calibrating their own beliefs with those of others. Attention to the social dimension of learning is especially relevant when students engage in complex cultural, political, or historical global and intercultural issues characterised by uncertainty, ambiguity, the possibility of being emotionally unsettling, and unintentionally excluding of particular student groups.

Learning with and about others is a pervasive practice in classrooms that embodies the kind of learning we seek. Akual and her fifth-grade peers (Box 4) have a chance to read each other’s stories and offer feedback. Further fostering perspective-taking, they celebrate the completion of their book manuscript by standing in a circle and drawing connections among stories with colourful wool threads, highlighting the many commonalities and differences among them that make their friendships warm and interesting. As we will see below (Box 7), a group of youth in Tunisia engage in the long-standing tradition of story circles. In their practice, listening carefully to others and suspending judgement becomes a central perspective-taking capacity. In Argentina, 10th-grade students in physics, music, history and art classes work in groups to inquire about the loss of pre-Columbian music in the Andean region. They have an opportunity to build relationships of trust over time with a group of First Nations descendants in a neighbouring community (Box 13). In so doing, they learn as much about themselves as they do about their young peers. These observations are of special interest given the fact that PISA 2018 showed that 9 out of 10 students know that listening to others is important. But, knowing about the importance of listening is not necessarily the same as being able to and inclined to doing so.



## Box 7

## Social Learning: Taking perspective – one self's and others' – through a timeless story circle practice

### Tunisia – Informal Education Youth Programme, students age 15-20

Yasmine, a trainee of the Arab Institute for Human Rights, has organised a number of Story Circle events in the city of Tunis, Tunisia. Story Circles, developed through UNESCO and used around the world virtually and in-person, are a structured yet adaptable intercultural methodology that invites participants to reflect and share their personal experiences within smaller groups of four to six people as they practice key intercultural skills such as listening and empathy. These Story Circles provide a way for people from different backgrounds to come together to learn from each other and to explore cultural similarities and differences through the sharing of personal experiences. Key to Story Circles is the role of listeners who are invited to be present, open and engaged, and who are challenged to listen for understanding (instead of the more typical way of listening for response). Shared stories remain in the smaller group as a way to preserve its intimacy as well as to create a safe space for sharing among those in the group; however, the lessons learned from these stories are shared with the larger group (Deardorff, 2020).

"The Tunisian community is diverse in the sense that young people have a different set of values and different visions of the future," Yasmine explains. She goes on to say, "I have found the Story Circles to be a crucial tool in supporting my work to address communication issues among youth," as Story Circles gives space "for human interaction, building relationships, and – most importantly – empowering young leaders... They were able to set their minds free from negativity, passivity, and unresponsiveness toward the other." Says her colleague Kheiredini, a trainer with a Tunisian non-governmental organisation (NGO), "This activity allowed young Tunisians from different regions, ages, and social classes to communicate, listen, and express themselves with confidence... They began to rethink their relationships with others through intercultural communication. The difference was also no longer a problem for them as they turned their diversity into positive assets."

Around 20 teenagers, aged 15–20, from different areas of Tunis participated in one such Story Circles session. To overcome the young people's initial resistance to personal sharing with peers they had just met Jasmine "tried to encourage them to listen respectfully, highlighting that Story Circles are not just about storytelling, rather they are about the interaction with the other. At the end of the session, they were surprised how well they were able to describe each other after listening to the stories." Kheiredini observed, "Participants immediately developed skills, such as empathy and mutual respect...The self-confidence, openness, and very positive engagement of these young people were remarkable." Yasmine concludes, "It was the personal, social and experiential nature of Stories Circles that shifted these youth's outlook and the skills they use in improving their engagement with other youth.... What they experienced allowed them to adopt a new vision toward others... changing their interpretations of the present and their visions toward the future of their communities."

**Source:** Deardorff D. (2020) *Manual on Developing Intercultural Competencies: Story Circles*. UNESCO: Rutledge.

## Transformational Learning

Throughout their educational journeys, young people can often point to a teacher, a project, or an experience that stayed with them over time, shifting their point of view, values, or worldviews. Several of Melanie's current and former students (Box 5) mentioned the long-lasting influence of their language class learning experience. Some highlighted, for instance, having faced challenges when asked to describe a Santería ritual featured in a brief video clip after agreeing not to use a series of words like *raro* (weird), *equivocado* (wrong), and *extraño* (strange) that would diminish this cultural practice and the people involved in it. Working on vocabulary and ethics together, students were invited to navigate complex forms of perspective-taking, involving ethical dilemmas, recalibration of personal views, and compassion across perceived differences. Recognising their own sense of agency in communication, students spoke of the impact of these complex experiences in preparing them to encounter challenging cultural dissonances in their everyday life. Some felt touched by the units' emphasis on valuing their own intercultural and linguistic straddling capacity as an asset characteristic of immigrant-origin youth. Still others felt transformed by the routine appreciation of Spanish language and culture, which in their minds developed an inclination to "want to continue to learn".

Underlying the PISA 2018 global competence framework is the expectation that what students learn about the world is not forgotten after a test or over the summer. **Transformational learning is here understood as learning that is long-lasting – a shift in insight, capacity, and mindset that remains with the students well after a unit of instruction is completed. It becomes part of students' worldviews, re-orienting their sense of self, the world, and the habitual ways of interacting in it.** Students spend many hours of their lives in school, and it is of the essence that the time invested in learning yields worthwhile transformations, particularly as we invite them not to master isolated skills but to *become global and interculturally competent persons*.

Central to such long-lasting transformational learning is the notion of "dispositions". Research at Harvard Project Zero working in a variety of geographical regions suggests that a disposition involves the **ability** to do things such as "examining a complex issue", "reasoning with evidence", "taking perspective", "communicating reflectively", and "assessing courses of action". It also involves the **sensitivity** to opportunities in the real world to apply these abilities in flexible ways and, finally an **inclination** to do so, unprompted, over time. Dispositions are not only about the capacity for transfer of what is learnt in school but primarily the development of active habits of mind that become part of our students' intellectual character and worldview. They shape the "kind of globally-minded person" a student will become. Because dispositions develop better through cultural immersion than by explicit transmission, teaching to nurture dispositions requires immersive forms of learning and enculturation to which we turn later in this publication (Boix Mansilla 2016, Ritchhart 2016, 2020, Rogoff 2003, Bronfenbrenner, 1977 1994).

Assessing transformative learning can be challenging because it requires that we gain a sense of what students do on their own, unprompted, and across contexts. Yet new comprehensive and phenomenological assessment approaches able to detect intercultural dispositions are beginning to emerge. For example, researchers at Intercultura, an Italian research centre associated with the American Field Service (AFS) student exchange programmes have developed an assessment instrument to gauge the impact of cultural exchange experiences based on careful observation of students' spontaneous global and intercultural competence behaviours and values expressed after several months or a year abroad (Box 8) (Baiutti and Ruffino, 2019).

## Box 8

## Nurturing and assessing transformative learning through deliberately designed intercultural exchange in study abroad

## Italy and Thailand – Secondary School

Alessandro attended a public upper secondary school in Udine, in the northeast of Italy. He lived for 10 months in Bangkok with a host extended family composed by a hosting father, mother, uncles, two sisters and one of their partners, and cousins. Like other students involved in this intercultural mobility programme, Alessandro was immersed in a cultural and social environment that was new to him.

But exposure alone was not enough to develop intercultural competence. To be effective, immersive experiences must be accompanied by structured intercultural learning opportunities. For example, students in Alessandro's cohort participated in learning sections, discussions, and activities before, during and after the experience abroad, facilitated by trained AFS/Intercultural volunteers and staff. Through these experiences, students were encouraged to reflect on and analyse their time abroad, their assumptions and worldviews. They were invited to experiment and adjust their behaviours and communication styles based on gained insights along the way. Through these activities, students learned to learn from their intercultural and international experiences. They developed a more nuanced understanding of their own and others' perspectives, as well as their capacity to engage others across cultural differences in increasingly open, appropriate, and effective ways. Of special interest is the way the impact of the experience as an opportunity for transformative learning was assessed. It involved the use of a detailed observation and monitoring instrument by which Alessandro's teachers and mentors were asked to document visible changes in values, curiosity about other cultures, open, appropriate and effective communication patterns – in unprompted situations during and after his study abroad.

**Source:** Baiutti M. & Ruffino R. (2020) American Field Service - Intercultura.

## “In the World” Learning

Underlying the concept of global competence is an appreciation for authentic and experiential learning. From their initial family and teacher interviews to the conversations with individuals of Afro-Cuban descent and, ultimately, direct interaction with people from Cuba in an investigation of culture and religion, the students in Melanie's class (Box 5) learn to use their budding Spanish with fresh engagement and curiosity. **Learning to navigate our complex, often unpredictable, and ambiguous world benefits from real-life experiences in which students engage with real people, real issues, real relationships, real contexts, and real audiences to explore real and relevant problems that call for real explanations, solutions or innovations.**

The power of learning *in the world* stems not only from the intrinsic forms of motivation it yields, but also from the ways it nurtures students' sense of agency. It prepares them to tackle complex issues and investigate open-ended questions under real-world conditions that are complex, dynamic, emerging, and multidimensional. Evoking “authentic”, “experiential”, “project-based” and “service-learning”, *in the world learning* prepares students to live in the future in our complex world through the very practice of understanding and taking action in the present.

*In the world* learning looms large among successful global competence teaching designs. We see it illustrated in Emily's class on COVID-19 where students learned to manage a complex emerging reality (Box 3). We also see learning *in the world* illustrated below. In a school in Mombasa, Kenya, a student leads a rigorous study of the relationship between young people's religious beliefs and their understanding of HIV-AIDS causes and prevention. The project ends with a series of health lessons the student prepares to guide his peers in his madrassa (Box 9). A school in southern India engages community elders as students begin to study local history and sustainable development. Community members are regular participants in this small school curriculum offer, as are colleagues with whom educators collaborate around the world (Box 16). In turn, a primary school in Scotland invites children to participate in an environmental awareness campaign by working closely with a community company to install bottle-recycling vending machines in their school and engage the neighbouring community to learn about climate change and our role in mitigating it (Box 21).

Through generative cycles of action in the world and informed reflection, this form of authentic learning prepares students to be adaptive and leverage their emerging disciplinary expertise to navigate complex problems or situations; increasingly distinguish essence from noise; manage social relationships; exercise agency; manage their self; calibrate values; and establish and reflect on standards of quality.

### Box 9

## Learning that is relevant, deep, and "in the world": Samir's investigation of HIV-AIDS

### Kenya – Secondary School – Independent Research Project

Samir attends an international school in Mombasa. Concerned with the spread of HIV/AIDS in his country and beyond, he notices that among his friends, religious affiliation seems to correlate with their knowledge and beliefs about the disease. His school requires that students in his grade prepare an independent investigation on a topic of their choice, with the support of one or more teachers.

Samir conducts a study of knowledge and beliefs about HIV/AIDS among Christians, Hindus, and Muslims in his city of Mombasa. The HIV/AIDS epidemic has affected millions of families in sub-Saharan Africa, he explains, and "a missing generation of young adults has left communities unable to pull themselves out of extreme poverty." He understands that learning about HIV/AIDS often intersects with cultural and religious values. What do members in each community know and believe about the causes of HIV/AIDS and its possible treatments? Do members of particular communities share similar views and, if so, what role do religious leaders play in shaping their communities' beliefs, knowledge, and attitudes about the disease?

Leaders, adults, and youth in the three religious communities complete a questionnaire. Applying research skills from social studies and content from biology, Samir structured the survey to capture popular beliefs and misconceptions about HIV/AIDS (its causes, transmission, and treatments) as well as scientific, biological explanations. He finds little variation within religious communities, but significant differences across them. Samir puzzles about the ethical responsibility of all religious leaders to teach about this problem in his country and abroad. After sharing his results at school and with his family, he seeks permission to offer health education for the young in his madrassa.

Samir's project illustrates not only what our young citizens are capable of when provided the opportunity and guidance to exercise their agency and address a global problem in local contexts. It also shows how genuine emotional commitments, research capacity and ethical deliberation inform one another in a project that is personally meaningful and socially relevant.

**Source:** Boix Mansilla, V. et al (2013). World Studies Extended Essay Guide, International Baccalaureate.

In sum, the kinds of learning described in this section shed light on the transformational aspiration that drives quality global competence education. **We aspire to learning that is whole, relevant, deep, social, transformational, and in the world.** Clarity about the kind of learning we seek directly informs daily practical decisions across educational systems – from the policymaking table to the professional development room, to the classroom's morning circle. Ultimately, and urgently, such clarity should inform our efforts to continue to reduce the "opportunity gap" (OECD 2019) in our educational systems by ensuring equitable access to global competence learning and the development of skills, attitudes and values for less advantaged students. From this standpoint, equity-driven practices will involve finding ways to get to know students as whole persons in their full – all too often untapped – potential; to ensure ample opportunities to engage in deep, social, and transformative learning; and to capitalise on and extend their informal expertise (cultural, linguistic) to tackle real issues affecting their lives and lives around the planet.

## An invitation to reflect

In this section, we explored the kinds of learning we seek in educating for global competence.

- What qualities of learning are more prominent in your current policy, leadership, or teaching practice? What qualities would you like to enhance?
- How might your practice look differently if you chose to improve it considering one or more of the qualities of learning we seek in global competence education?
- What specific actions come to mind to ensure that all children and youth can enjoy ample opportunities to engage in the kind of learning we seek (whole, deep, social, transformational, in the world)?
- What questions remain? What challenges might you anticipate?

**Box 10****Teaching for global competence with quality for all – Illustrative cases overview****Kenya – Secondary School – Independent Research Project**

A number of cases illustrate the principles and practices introduced in this volume. Cases represent the work of experienced educators from around the world working with students between ages 3 and 18. Most cases are associated with research programmes at the Project Zero, Harvard Graduate School of Education, AFS-Intercultura, and UNESCO which shed light on the rationales underlying instructional decisions and impact on student learning. For many cases, the selection process included (a) teacher nominations; (b) screening interview; (c) review of sample units; and in some cases (d) classroom observations. Criteria included: 1. Recognition of excellence in global education by independent professional community or award-granting organisation (e.g. Fulbright, the International Baccalaureate, UNESCO, municipality); 2. A pedagogical approach that engaged students in building understanding and developing agency; 3. Careful consideration of disciplinary and interdisciplinary foundations; 4. Thoughtful assessment strategy; 5. Teachers' capacity to document and reflect deeply about their practice; 6. Distribution across dimensions of global competence, student ages, disciplines, kinds of institutions, and countries. These case studies were developed through multi-day classroom observation at critical teaching points, extensive teacher and student interviews and qualitative analysis of materials and transcripts (Boix Mansilla & Chua, 2016). Additional cases were developed to shed light on educational practices characteristic of high-performing countries revealed by the PISA 2018 global competence assessment and to include emerging contemporary contexts (e.g. digital stories among refugees). These cases stem from key stakeholder interviews and analysis of available documentation.

**List of case studies by age group**

Level and context	Country/ Subject	Description
<b>Early Childhood (Ages 2-5)</b>		
Educating for global competence in the early years (Box 12)	Japan/ U.S. Environmental Studies	Global Environmental Stewardship – From Love to Action Teachers used and adapted the global competence framework to prepare our youngest learners to explore home and school cultures and investigate, value and protect the environment. Over time, children develop a deep emotional connection with nature, which is seen as the foundation for environmental awareness and participation in life.
Selecting Topics that Matter While Navigating World Challenges (Box 17)	Greece – Piraeus Early Childhood	Teaching young children in refugee contexts in Piraeus, Greece. Teachers drew on digital story-telling for a collective account of migration journeys. The project invites children with diverse backgrounds to participate in the narrative and physical representation of their lives.

Level and context	Country/ Subject	Description
<b>Elementary (Ages 6-12)</b>		
Teaching for Global Competence is not an “add-on” but a new approach to curriculum and instruction (Box 1)	U.S. - immigrant-origin students Math	Marissa’s Story: I have to teach them Math! Seven- and eight-year-olds in Washington D.C, U.S use mathematics as a lens to interpret and make informed decisions on issues that matter to communities and to our collective well-being.
Quality opportunities for all children and youth: Investigating family migration stories with empathy (Box 4 and Annex A)	U.S. - immigrant-origin students English	Ten- to twelve-year-olds in Maine, U.S engage in the Many Stories Library Project, leveraging stories to help students develop an understanding and appreciation of the richness of their intercultural school community.
Understanding our Students: Portrait of a Child (Box 15)	U.S. - immigrant-origin students English	A teacher learns to bridge cultural barriers through a series of portraits of students
Relevant and deep learning in the 4th grade: Climate Stewards Go Global! (Boxes 6 and 20 and Annex B)	U.S./South Africa Science	Students aged 10-12 in New York, U.S. and Cape Town, South Africa explore together the particulars of sea-level rise and the impact of melting polar ice caps in their regions. Students build a foundation in understanding environmental issues and supporting sustainability.
Creating global school cultures that teach community values and sustainability in the elementary years (Box 21)	Scotland Environmental Sciences, Values	In this vibrant elementary school, educators leverage Scotland’s flexible and values-centered curricular policy to create a culture of global engagement and environmental awareness. Students across ages and disciplines go beyond learning “about” the SDGs they have ample opportunities to become “disruptors” of the status quo on behalf of the well-being of the planet and society.
<b>Secondary School (Ages 13-18)</b>		
A grounding example to reflect about quality learning (Box 5)	U.S. Spanish	“El Pasado Vive” Afro-Caribbean Influences in the Spanish Classroom. Students aged 15-17 learn the Spanish language in depth as a window to understand other cultures in deeper and more authentic ways, viewing language as a gateway into a world for which they develop respect and admiration.

Level and context	Country/ Subject	Description
Secondary School (Ages 13-18)		
Nurturing and assessing transformative learning through deliberately designed intercultural exchange (Box 8)	Italy/Thailand Mobility/Study Abroad	Through examining the study-abroad experience of a 16-year-old from Udine, Italy to Bangkok, Thailand, this case considers the support and resources that support international learning opportunities to help people develop the knowledge, skills, attitudes and values needed to create a more just and peaceful world.
Learning that is relevant, deep, and <i>in the world</i> (Box 9)	Kenya Biology, Social Studies, Comparative Religions	Samir's Investigation of HIV-AIDS In this case study, teachers support a student to conduct an independent interdisciplinary investigation of a topic of his choice: HIV/AIDS beliefs across religious communities in Mombasa, Kenya.
Drawing on multiple disciplines to protect cultural traditions at risk (Box 13)	Argentina Physics, Music and Art	Students in the 9th grade respond to the loss of cultural diversity by carefully designing sikus made of recycled paper, which produce tones on a pentatonic scale. They bring the instruments to the community of origins.
Connecting with communities on- and offline: Planetary Health through Intercultural Digital Exchange (Box 16 and Annex C)	India Digital exchange English/Sciences	Students aged 12-15 in Bihar, India connect with students around the world on the Out of Eden Learn platform, examining together the complex interactions between environmental changes and human health in their own communities and in the wider world.
Deep understanding of relevant issues in the globally competent mathematics classroom - A population growth lab (Box 18)	U.S./ Romania Mathematics	The World Population Lab challenges secondary students aged 15-17 in New York, U.S. and Bucharest, Romania to use math to explore the phenomenon of world population and the concept of "carrying capacity". The lab and students' explorations link to global issues of environmental sustainability and socio-economic development and interdependence.
COVID-19: Making sense of complex emergent global issues (Box 3)	Netherlands High School & museum Sciences, Public Health, Art	In this case, a collective interdisciplinary mapping approach and interactive digital museum collections are employed to unveil the complexities of contemporary epidemics such as Ebola Zika and COVID-19.



Level and context	Country/ Subject	Description
<b>Policy Context</b>		
Policies of continuity, national reach and local agency (Box 25)	Colombia National Education Ministry	This case offers context for Colombian students' notably high performance in global competence. Building on a tradition of peace and citizenship education, Colombia's national efforts invite locally-relevant innovations, foster dialogue and give voice to educators across the educational systems, especially to historically unheard communities.
<b>Museum and Out-of-School Programmes</b>		
Social Learning: Taking perspective – one self's and others' – through a timeless story circle practice (Box 7)	Tunisia Youth Programme	With a facilitator, young people learn to appreciate personal and family story-sharing traditions with special emphasis on listening.
Re-Imagining Migration in the Museum (Box 14)	U.S. Youth and adults Visual Arts	Participants explore representations of human migration in the arts to create grounding metaphors to understand migration as our shared human condition.
<b>Professional Development Settings</b>		
Envisioning and nurturing well-grounded and well-rounded effective global competence teachers (Box 23)	Singapore	Ministry of Education vision and actions associated with preparing humanities teachers to adapt and deliver a quality curriculum in the classroom.
Teaching for global competence and creating a shared identity in a young and diverse society (Box 19)	UAE	This case examines the policies and practices that seek to promote a multicultural ethos in the construction of a collective identity of the UAE including its efforts to place local traditions in dialogue with global outlooks. Curricular and professional development policies emphasise: character and morality, the role of individuals and communities in societal well-being as well as civic and cultural studies.
Setting conditions for sustained teacher growth (Box 24)	China	Teachers participated in a longitudinal teaching and inquiry system around the topic of educating for global competence across subjects.



## 03 How and where to educate for global competence?

Ubiquitous opportunities to educate for global competence across scopes, ages, disciplines, institutions, and geopolitical outlooks.

Teaching for global competence entails an invitation to shift from pedagogies centred in knowledge transmission and memorisation toward more dynamic alternatives (Dede 2020, Perkins 2014, Tichnor-Wagner et al 2019). Simply adding more continents, capitals and rivers to an already full curriculum will not suffice. Neither will it guarantee that students develop competence and dispositions such as the capacity to examine issues of local, global, and intercultural significance; develop perspective; relate across differences or take action to improve conditions. Typically, **teaching for global competence is a matter of shifting our approach to teach the curriculum by infusing it with opportunities to explore world issues, consider local – global dynamics, and practice global competence values, attitudes, and skills.**

Proponents of global competence education have often recommended the repurposing of well-established pedagogies for the global classroom. These include co-operative or group

learning (Council of Europe, Asia Society-OECD 2019); interdisciplinary themes (Reimers & Chung 2019), community-based learning (Oxfam 2014, Mesa et al., 2019); digital exchanges (Stevens Initiative 2019); portfolio assessments (Asia Society, 2011) or working with sources from distant places (Koziol, 2012; Lapayese, 2003; Merryfield, 2008; Vaino-Mattila, 2009 and Vincent-Lancrin et al., 2019). These approaches have been well documented beyond the global competence education field and offer productive directions for practicing global teachers. Yet teaching for global competence with quality at scale and around the world requires, first, that we recognise the great variety of contexts and conditions under which educators seek to prepare youth for the world. This will allow us to broaden the range of entry points to – and educator participation in – quality teaching and learning for global competence, and underscore the notion that **all educators have an opportunity to do quality work.**

## **There are multiple ways to teach for global competence with integrity**

When approaching the PISA 2018 global competence framework, education practitioners do well in reinterpreting the ideas proposed with their contexts in mind: “How will these ideas help **my students, in my particular school or region?** How will I modify **what and how I teach** to prepare the young for the world?” What **barriers and obstacles** are worth anticipating? Perceived obstacles to global competence education abound. To overcome them, it is important to recognise them from the start. Left unattended, they are likely to limit opportunities students have of becoming more globally competent as well as the possibility of devising policies of scale. For example, teachers often sense the need for more clarity about what is meant by global competence or greater expertise in world regions, and events. At times, teachers feel the need to learn how to connect global competence to their own disciplines. Quite often, the challenge is based on misperceptions about global competence education, e.g. global competence is best treated in social studies, history or literature classes; or it is most appropriate for older students or “capable learners” – a luxury of elite schools and fluent speakers of the local language. Teachers feel they have limited time to design and add new authentic, community-based or collaborative projects to their already full curricula. They may express legitimate concern about how to manage students’ emotional responses, especially while facilitating difficult conversations. Some also share a concern that teaching for global competence might compromise students’ appreciation of their own cultures, values and traditions in favour of more dominant global “Western” narratives and sensibilities when in fact informed critical approaches enrich perspectives in global competence education.

To address educators’ concerns we must see that there are **many ways to teach for global competence with integrity** in schools, museums, learning centres, and contexts around the world. In what follows, this section discusses variations in curriculum and pedagogy that bring the world into the classroom and students into the world, working across ages, disciplines, learning environments and cultural and geopolitical contexts.

## **Educating for global competence with different scopes**

While teachers may design rich multifaceted projects of the kind described earlier (Boxes 4, 5, 6, 9) they can also choose to teach for global competence by making small, yet consequential, shifts within the curriculum they have. For example, in a small and meaningful curricular extension of a unit on European political movements of the 1960s, Andrew invites his students to connect what they have learned to more recent student movements in Latin America and Hong Kong. This 30-minute discussion alerts students to patterns in human behaviour around the world.

**Box 11****Many ways to teach for global competence with integrity**

There is no single way to create opportunities to teach for global competence. Yet it is through consistent opportunities to Examine Issues, Understand Perspectives, Interact Across Cultures and Take Action for Collective Well-being that these key dispositions may be cultivated. Quality teaching for global competence can take place:

**With different scopes:** Rather than focusing on a single project, opportunities for cultivating global competence can occur, ranging from a small global extension within a unit a teacher may be required to teach to larger cross-school collaborative projects designed to open up students thinking about topics of global significance.

**Across age groups:** Rather than waiting until the later stages in secondary school to explore topics of global and intercultural significance and cultivate global competence dispositions, teachers across age groups begin in age-appropriate ways.

**Across the curriculum:** Teachers of math, physical education and science have as much to teach about the world as their colleagues in social studies, literature and art. Educating for global competence can provide key opportunities across disciplines to deepen disciplinary understanding and a sense their student learning has real-world implications.

**Across learning environments:** Educators across cultural institutions are finding new meaning in their work as they commit to educating for global competence. They are creating greater access to global competence development among youth in informal educational settings.

**Across cultural and geopolitical outlooks:** Educators around the world, holding diverse cultural and geopolitical perspectives, can enrich our capacity to educate for global competence with diversity, equity sustainability, and collective well-being in mind.

Another small modification when teaching a mandated topic involves nurturing a particular global thinking capacity with the aid of accessible *global thinking routines* (Project Zero 2020). For example, a teacher seeking to nurture students' capacity to *examine topics of local, intercultural, and global significance* can extend her unit on narrative text briefly by including a story about education activist Malala's life in Pakistan, thus inviting cross-cultural connections and awareness of other people's stories. This teacher may also employ a "3Whys" global thinking routine. Global thinking routines are accessible micro-interventions designed to nurture global competence through ongoing use over time. For instance, Akual's teacher (Box 4) infuses her curriculum with "3Whys." For every important topic they learn, students reflect, sequentially: *Why might this topic matter to me? To my people and my place? And to the world?* The routine is designed to foster students' capacity to connect personal, local, and global spheres and discern the significance of a given topic. A series of thinking routines are included in Box 23 below.

When educating for global competence over time, teachers become able to take advantage of small-scope daily teachable moments and combine them with more ambitious units or projects.

### ... across age groups

From a very young age, children’s knowledge, skills, attitudes, and values are being shaped. Rather than waiting until the later stages in secondary school to explore topics of intercultural and global significance and cultivate global competence dispositions, teachers across age groups should ask themselves how students can begin in age-appropriate ways.

In the examples below (Box 12), early childhood teachers help students develop love and sense of agency around environmental preservation. Quality global competence teaching can and must begin in the early years. For example, research shows that infants notice racial differences as early as six months. As early as preschool, they may begin to exclude peers of different ethnicities from play (Delpit, 2012). But students also bring natural curiosity about the world into our classrooms. They are intrigued by peers living far away and learn to take perspective. For instance, in a collaboration between Japanese and U.S. early-childhood educators, children learn to care for their natural environment beginning at age three (Box 12).

#### Box 12

### Educating for global competence in the early years: Global environmental stewardship – From love to action

#### Japan/U.S. – Early Childhood – Environment

Norie, a pre-school teacher based in Tokyo, Japan and Marla, her colleague in a public early childhood school in the U.S., are collaborating in a project that explores the development of global competence among our youngest students. Specifically, these teachers and their colleagues are exploring the development of global environmental stewardship among children ages 3-5. *What are **the habits of mind** associated with global environmental stewardship?* The group ponders, *what kind of **experiences and learning opportunities** might nurture children’s capacity to understand and act on behalf of the natural world?*

The group concludes that the key to caring for the planet is moving students’ hearts, their curiosity, and their capacity to care. When children experience a sense of awe, wonder, and belonging, they develop a loving appreciation for the natural world including the sense of being part of something larger than themselves, something worth caring for. Equally relevant is that children have ample opportunities to inquire slowly with all their senses – to observe nature with engagement, looking deeply, touching, smelling, listening, tasting, experimenting with nature to see beyond what first meets the eye.

The children in Marla’s class begin by reading a book about the Big Bang that marked the origins of everything and explains “We are all stardust.” Children create their own artistic and conceptual responses to the driving metaphor of shared origins. Their responses reveal how children ages 4 and 5 can envision the deep bonds that tie them to nature.



To deepen children's relationship with nature and their sense of awe, Norie takes children to the park in Tokyo regularly. In what began as an exploration to look for cicadas in summer, children noticed dragonflies, pond skaters, acorns and fallen leaves. They heard the sounds of stones falling into the pond and footsteps on a gravel road. Together they listened and walked around, and began to imitate the sounds of nature: 'Potchaan' (sounds of stones falling into the pond) and 'Buku Buku' (the sound of bubbles). Norie shares, "As teachers we secure time to be in touch with our feelings, and experience nature without hurrying to the destination. . . We give space for children to stand, slowly and calmly. Children want to understand the world by touching and thinking.



At the end of a year dedicated to nurturing global environmental stewardship, teachers and students prepare a school parade celebrating the animals, forests, and plants.

In sum, pre-school children today will grow up into a world in which nature may come to be perceived as much as a source of threat, violence and risk associated to extreme weather events as of peace, nourishment, and enjoyment. Nurturing a love and personal connection with the natural environment and an appreciation for the interconnectedness of life on the planet sets the foundations for a life-long journey of becoming better environmental stewards, countering purely extractionist mindsets and empowering children to take action.

**Source:** Boix Mansilla et al. (2019) Global Children Project - Project Zero - Poppins Institute for Child Science & School within School, Washington DC.

### ***...across the curriculum***

Understanding phenomena such as transnational production chains, global youth cultures, and the impact of technology in daily life demands both disciplinary and interdisciplinary approaches. Far from being limited to social studies, global competence education can take place across domains. For example, in a virology unit in biology (Box 3) Emily engages students in creating a conceptual mapping of COVID-19 to inform viewers about the virology underlying the pandemic as well as the political, economic, and human rights issues surrounding the spread and the management of the disease. Emily's work illustrates how, while disciplinary understanding is essential for an informed global competence, most issues of global, local, and intercultural significance are best addressed through interdisciplinary approaches. Similarly, to estimate when population size might reach the planet's carrying capacity, students in Steve's 11th-grade mathematics class plot the data to determine whether an exponential curve or a logarithmic one would represent the phenomenon best (Box 18). As shown below (Box 13), Sofia's sikus project demonstrates a similar emphasis on interdisciplinary learning, integrating music, physics and art to understand and preserve endangered pre-Columbian cultural traditions.

**Box 13****Drawing on multiple disciplines to protect cultural traditions at risk****Argentina – Grade 9 – Physics, Music, Art**

Sofia was puzzled over her music teacher's assertion that globalisation is increasing the homogenisation of music heard by youth, and, as a result, traditional pre-Columbian rhythms, cultures, and artifacts from the Andes region are disappearing. How can these traditions be preserved? To address this problem, Sofia's class conducted an in-depth study of Andean musical, artistic, and cultural heritage. After weighing the options, the class decided to create a sustainable initiative to promote the survival of pre-Columbian artifacts and music, which Sofia documents in her final report.



Bringing together teachers in music, physics and art, the class built a series of *sikus* (traditional Andean flutes) with recycled materials. Carefully designed to produce tones on a pentatonic scale, the *sikus* were made of recycled paper and illustrated with carefully selected and stylised traditional Andean art motifs. To further help preserve this cultural tradition, the class proceeded to teach migrant children in a very underserved neighbourhood school how to produce, decorate, and play sustainable *sikus* themselves. Reflecting on

her experience, Sofia writes that the project entailed “a new phase in a process that goes from discrimination, racism, and intolerance to acceptance, admiration, respect, and inclusion of all inhabitants in our cities, their practices, and cultural expressions.”

**Source:** Boix Mansilla V. Jackson T. (2022) *Educating for Global Competence Preparing youth to engage the world*.

**...across learning environments**

Global competence learning does not just take place in schools but in cultural institutions, community centres and non-profit organisations too. These institutions enjoy considerable freedom in terms of the issues they foreground and the learning experiences they create. Cultivating global competence through the curation of special museums exhibitions, innovative programming, and educational offers can bring a renewed sense of relevance to existing museums and offer unique learning opportunities for students through school-museum partnerships. For example, artists often speak to the issues of their times, reveal cultural perspectives, express ideas, and deliver critique. Experienced museum docents can engage students in close observation and interpretation of works of art as windows to distant worlds, people, and places (Box 13). They can invite open conversation and the sharing of perspectives, envisioning worlds, deliberating across differences, examining metaphors.

**Box 14****Reimagining migration in the museum****U.S. – Museum education – Professional development and youth programme**

As part of a seminar on human migration, museum educators at the Smithsonian Museum of American Art, Beth and Phoebe, invite a group of teachers to examine the work of Chiura Obata, a Japanese artist who lived in California, and was made a prisoner in a Japanese internment camp during World War 2. Participants spent time looking closely at his depiction of a bare cypress tree growing in between rocks in the high deserts, surviving intense winds erosion. The relationship between the work of art and the topic of migration felt unclear at first but, with good facilitation, participants began to unveil ideas about transplantation, adjustment, and individual resilience in inhospitable environments. Looking closely at Obata's work invited learners to consider the artist's perspective and the experiences that seemed to inform his work. Through dialogue across differences in the gallery the group began to create a metaphor to talk about the integration of immigrant families in their city. Participants learn that migration is a shared global human experience, past present and future, and stand ready to examine the issue carefully through various perspectives and through careful deliberation.



**Source:** Smithsonian American Art Museum, Re-imagining Migration, Harvard Project Zero. [reimaginingmigration.org](https://reimaginingmigration.org).

**... across geopolitical and cultural outlooks**

Teaching for global competence is not neutral. While teachers around the world may teach about the industrial revolution that transformed living conditions, economies and social organisations around the world in the 18th century, perspectives on industrialisation are likely to differ across contexts. For some, industrialisation may represent the cornerstone of an era of scientific ingenuity. For others, the term may suggest a contemporary aspiration for social and economic development in post-colonial times. Still others may view rapid industrialisation as a menace for the natural resources that have sustained communities over the centuries. Global competence teaching invites students to critically consider multiple perspectives on industrial revolutions before crafting their own (Andreotti, 2006 Hauerwas et al 2022).

In fact, if teaching for global competence is always situated in contexts that inform our perspectives, teaching with quality also needs to be inclusive, equity-driven and reflective.



It invites teachers to ponder whose voices, values and perspectives are most prominent in our curricula? What other voices and perspectives are needed? What forms of local, national, and global civic identities does our work promote? What messages are our students receiving about the value of their own and others' histories, languages, and cultures in the global sphere? An English-language learning programme for children ages 8-11 that was popular in Brazil a few decades ago illustrates such a reflective, globally-situated and culturally-rooted approach to global competence education. Anthropologists creating it understood Brazil as part of the developing Global South and appreciated the country's marked historical racial, cultural, and religious syncretism. Mindful of context and the global power relations surrounding it, the programme's stated purpose was that children learn to appreciate their country's unique natural and cultural diversity and learn to use the English language to share their stories with the world and collaborate with others to preserve it. The programme interrupted established power narratives in North-South dynamics as children and educators alike increased their own culturally rooted global competence (Appiah 2006).

In sum, as the variations in teaching for global competence suggest, there is no single way to create opportunities to teach for global competence. Entry points abound and so does the urgency of preparing the rising generations for the world. As this section has shown, teachers can make time for innovations of viable scope. Teachers of math, physical education and science have as much to teach about the world as their colleagues in social studies, literature and art. Educators across cultural institutions are finding new meaning in their work as they commit to educating for global competence. Increasingly, educators engage teaching for global competence with rising geopolitical awareness. They value diversity, sustainability, equity and collective well-being and participation in an intercultural dialogue (Gómez-Barreto et al., 2021; Kerkhof, 2018; Kopish et al., 2019; Ukpokodu, 2010; Zong, 2009).

## An invitation to reflect

In this section we asked: "How can we teach for global competence with quality?" We examined variations in global competence teaching, and posited that all teachers can teach for global competence with quality. Understanding the many ways and contexts in which global competence education can take place opens new windows, ideas, or possible collaborations into this work.

- How would you describe your current practice vis à vis the variations here described? How might you modify your practice along these continua and why?
- What new ideas, possibilities, partnerships come to mind now that you think about educating for global competence in your context?
- What challenges do you see in teaching for global competence with quality in your context?
- What about educating for global competence would you like to learn more about?



# 04

## Turning to practice: How can we nurture global competence with quality for all?

Four guiding questions, principles, and practices

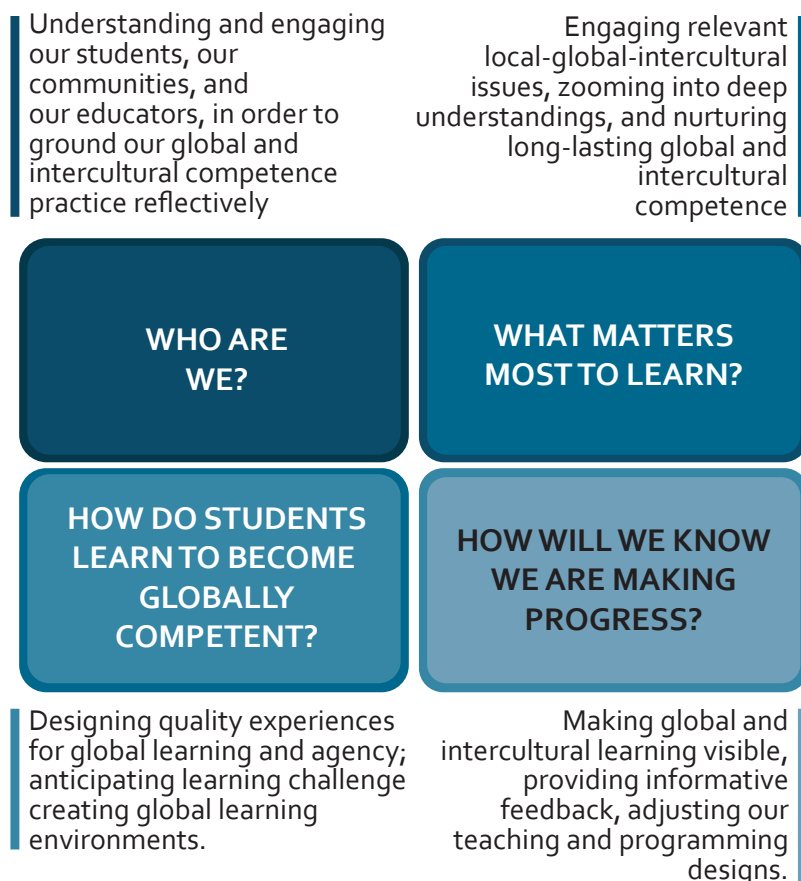
The examples above illustrate the range of opportunities that educators have to cultivate global competence. To respond with quality and for inclusion, educators must revisit four perennial questions about teaching and learning pertaining to context, curriculum, instruction, and assessment, respectively as shown in Figure 8. These questions are relevant to teachers, facilitators, curriculum designers, administrators, and policy makers alike.

- Who are we?
- What matters most to learn?
- How do students learn to become globally competent?
- How will we know we are making progress?

This section examines the four questions considering their significance for global competence education. In each case, the section offers principles for decision making and illustrates

key points with examples of practice. As a reader you are invited to turn your attention to your practice, whether in creating policies, leading schools, teaching children, designing curriculum, or running a museum or an NGO.

**Figure 8. Education for Global Competence: Four questions**



## Who are we?

### *Understanding our students, communities, and educators*

#### Understanding our students

A strong education for global competence begins with understanding and building relationships with our students. Understanding our students is not merely a matter of assessing their skill in our disciplines, but rather one of gaining insight about their worldviews, their interests, their thinking, their values as well as the broader contexts in which their lives unfold, i.e. their families, their communities, the media (Bronfenbrenner, 1997). In fact, recognising students in their full human potential is essential to building trust, nurturing whole learning and empowering students to flourish.

Global competence educators will be particularly interested in understanding the cultural, linguistic, and religious diversity in their classrooms and schools. The funds of knowledge students possess become essential assets to enrich learning experiences for all. Culturally responsive classrooms recognise and celebrate this diversity as an asset, thus embodying a core global competence value. In the same vein, equity-informed global educators are likely to pay attention to the power relations and systems in which their students are immersed. For instance, in educating newly arrived immigrant students who do not speak the dominant language, teachers' emphasis may be to strengthen their voice. These students can be good observers and

especially capable of perspective-taking, as the Pisa 2018 results have shown. Yet they may also feel their views do not matter to others, or worry about the language barriers they experience. In turn, other students in the same school may benefit from an emphasis on being more empathetic and listening more deeply and with care.

How might we come to understand our students better? Options abound. We can listen to their questions, concerns, and desires, seeking to understand their worldviews. One-on-one conversations during break and making home visits can allow some understanding of context. In some cases, creating small, informed student “portraits” to discuss with colleagues can open the door to understanding and trust (Box 14). Understanding students in context will yield more informed decisions, such as exposing relatively isolated and homogeneous students to other cultures (Box 18) or designing learning experiences to challenge students' inclination to exoticise distant cultures (Boxes 4, 5, 20).

## Box 15

### Understanding our students: Portrait of a child

#### U.S. – Elementary school - age 9 – English

In an elementary public school in a small northern city, a writing programme has been at the centre of teachers' attention this year. Extensive professional development has prepared teachers to identify forms of support to ensure that students' written production improves over time.

Laura (pseudonym) receives Hamdi's story about the time when his family arrived “to America.” The story included a dialogue in which his rather upset grandmother insisted on going back to Somalia. Hamdi, too, prefers Africa to the United States as illustrated in the picture accompanying his writing. “In Africa” people have names attached and stand together as a group on the sand under the sun. In “America” children are labelled, as “boy” or “girl” and snow is omnipresent. Laura understood that Hamdi's story mattered to him, yet knowing little about Somalia and the conditions of their arrival she felt nervous about responding to the substance of the story. How to approach what seems like a serious family situation? What to say to Hamdi without offending him or making a mistake? Worried, she chose to offer feedback on spelling and punctuation first.



Source: World in Portland Project, Portland Public Schools, Harvard Project Zero.

Uneasy about her own response she and her colleagues decided that she would interview Hamdi and his family to create a portrait of this student to share with her colleagues. Together they would draw on the portrait composed of images and text to begin a conversation about how to prepare to embrace a growing population of immigrant and refugee families arriving in their school. “The longest trips I ever took was just a few miles down the road to the wonderful home of my student,” Laura explains.

**Source:** World in Portland Project, Portland Public Schools, Harvard Project Zero

## Understanding our communities

Communities offer multiple windows into the world. They are permeated with environmental, geopolitical and migratory forces that play out in local ways. New neighbours, international food markets, shops, holidays, films, and Internet news carry stories of migration, life experiences, cultural and linguistic traditions, and events from places close and far. A sensitivity to local-global and intercultural dynamics in everyday life enables teachers to find local partners, volunteers, and sites for meaningful learning and action projects “in the world.” Furthermore, schools themselves can become agents of change in their communities, e.g. by putting together public exhibitions, concerts, and workshops that elevate the community’s cultural capital and contribute to meaningful learning for all.

How might we come to understand our communities and their connection to the world? Examples abound. For instance, responding to its fast-growing immigrant population from Somalia, South Sudan, Afghanistan, Iraq, and Syria, an elementary school in Maine hosts a “Rise and Shine” programme. Every morning for 30 minutes before class, teachers, parents and community members teach beadwork, yoga, art, writing, knitting, international dances, and math games. The programme celebrates diversity and deepens community bonds while preparing students for learning with a sense of belonging and joy. A room in the school is reserved for immigrant-origin mothers, mostly from Somalia and South Sudan, who gather and sew together over coffee and conversation.

Once the community surrounding a school becomes a space for global competence learning and action, new opportunities arise. For instance, a school may collaborate with the local park so that every year 10th-grade students organise an exhibition to inform the public about the local impacts of climate change. Or students in the sixth grade may publish a book of world recipes and stories shared by their families and local community members. “In the world” community-based initiatives of this kind offer ample opportunities to examine local-global issues, take perspective, build relations across difference and take action – and to do so in intrinsically motivating ways. Ritualising these forms of engagement enables educators to gain local and topical expertise year after year. It also enables students to put their academic work to the service of building better societies – not in a distant future but right away. For example, in the outskirts of Buenos Aires, students ages 15-17 gather local water samples to test their quality as part of a new school-run community water-testing lab in their science department. They return results to family households with filtering recommendations. They plot results on a local map, which they share with government officials and request water filters for public schools. In both cases, recommendations are illustrated by successful solutions from around the world.

Global competence educators bring multiple tools to the task of making sense of and building relationships with community members. A neighbourhood walk designed to “find the world in our town” allows a group of teachers to map opportunities to help students see that “the world is here”. Conversely, local community engagement can prepare students to tell their own stories to distant audiences.

Communities may be local, but they are also digital and global. It is through development of relationships and partnerships with local communities but also participating in virtual ones that teachers can bring the world into the classroom and prepare students for reflective and responsible participation as local, global, and digital citizens.

### Box 16

## Connecting with communities on and offline: Planetary health through intercultural digital exchange

### Bihar, India – Multi-age school – English, Science

The Loka School is located in a rural village in Bihar, India. Its vision is to offer an education that is both locally rooted and globally connected. Students are expected to become active members and change makers in their community so the school consistently looks for opportunities for students to interview community members and bring their findings and viewpoints to the classroom. It is a way to give voice to and preserve local know-how, wisdom and perspectives, school leaders explain.

While direct dialogue with community members is one important way for students to make sense of the local instantiation of the global issues they study, interacting with people around the world is also considered essential. For instance, to understand the dynamics of global health, teachers and students participate in an online learning curriculum and digital community called Out of Eden Learn. Its Planetary Health curriculum helps Loka students to envision future scenarios and possible actions in their community to foster environmental sustainability. The digital platform pairs these students with students in the United States (Danville, California; Chicago, Illinois), and China (Shanghai). The curriculum follows a unit design that foregrounds student inquiry, encouraging them to find things out for themselves, to make their own connections, to pursue their own interests and support meaningful sharing and discussion with a larger community (local and global).

To support students intercultural interactions, teachers draw on a “dialogue toolkit” embedded in the digital platform whose purpose is to promote thoughtful comments and meaningful discussions, and sustain collaborative groups. Students go beyond surface exchanges that are typical of social media. Instead they practice raising questions, naming their own perspective, describing details that stand out in another student's post and “snipping” i.e. clipping or quoting portions of text in commenting, thus signaling active “listening”. With the aid of this toolkit and the platform, students are not only learning about topics of international significance, but they are also supported in engaging in open, appropriate, and effective interactions across cultures. Furthermore, they become active participants in a new digital community, drawing on new perspectives to understand Planetary Health.

**Source:** Tishman S. et al (2020). Out of Eden Learn Project, Harvard Project Zero.

## Understanding our educators

Finally, situating our teaching practice calls for ongoing reflection about who our educators are and what they bring to schools and other learning settings. If understanding the whole student matters, so does understanding the whole teacher, curriculum developer, or community facilitator. Global educators bring a wealth of informal expertise in the form of family backgrounds, travel experiences, readings, out-of-school activities, and passions that should not be simply checked at the door in the name of professionalism. In a school in Edinburgh, Scotland, a teacher whose hobby is horticulture works with students to transform a section of the school yard into a vegetable garden. This opens the door for students to apply their learning in science, art, and math, connecting the garden with larger questions of food security, equity and well-being. Global competence education benefits from teachers', leaders', and facilitators' full engagement in meaningful learning with students and from spaces of dialogue, where such learning opportunities can be discussed and choreographed.

Educators' experience in other cultures contribute greatly to good global competence teaching. Reflective interaction with people from other cultures at work, in the neighbourhood, through digital exchange or travel, renders cultural lenses visible, revealing values, assumptions, and patterns of behaviour that they might have deemed universal. Quality teaching for global competence requires that educators cultivate self-understanding, combining curiosity and appreciation for other peoples' lives, norms, and experiences with a healthy dose of scepticism about their own beliefs. Teachers may ask: Why does teaching for global competence matter to me? What biases or blind-spots about a region or a given population might I be bringing to my teaching? What do the patterns of student participation and the atmosphere I create in my classroom reveal about my cultural assumptions? What is the purpose of my teaching in today's world? What would I like to learn next to improve my practice?

At the heart of a reinvigorating renewal of the teaching profession is a fully engaged and reflective educator able to deliver on quality global competence pedagogies large and small. These educators learn to view themselves as lifelong learners who participate actively in local and professional communities and citizens of the institution, the community, the country, and the world. We address the question of how to support educators working with children and youth later in this publication.

## What matters most to learn?

### *Relevant issues, deep understandings, and global competence*

Educators in schools, museums, and community centres make decisions about the relative importance of some topics over others, often by allocating more time and striving for greater depth when a topic is deemed more relevant. Whether making small curricular extensions or engaging in more ambitious projects, teaching for global competence calls for deliberation and discernment about the relevant issues – local, global, and intercultural – that learners should explore; the particular understandings they hope learners will construct; and the specific global competence capacities, attitudes and values to be nurtured.

### *Engaging relevant issues*

Effective global competence practices address topics that are **visibly relevant to students and the societies** in which we live. Teachers, curriculum developers, and policy makers may select topics that are relevant because of their global reach (e.g. climate change adaptation); because they reveal something important about what it means to be human (religious beliefs and human

behaviour); because they embody ethical dilemmas worth anticipating (e.g. human cloning research). Experienced educators also ask: *How likely is it that students will encounter this issue in their future?* Global issues like migration, global health, intercultural dialogue, and transnational governance are best seen as systemic and recurring and therein lies their curricular promise: How can international borders be managed humanely in a world of mass migration? How is climate change affecting coastal communities around the world? (Box 5) What can be done to preserve cultural heritage that rapid globalisation is putting at risk (Box 13)? Do nations have a responsibility beyond their borders to mitigate the effects of a global pandemic (Box 3)?

Crafting such relevant topics also requires that educators consider the significance these might have for students. How does this topic connect with students' current interests, experiences, and contexts? For example, students' own experiences of moving from one place to another can ground an exploration of physical and symbolic, just and unjust borders. Local climate impacts may reveal for students the importance of understanding the issue globally as well. Students are more likely to engage intrinsically with issues to which they feel connected and that they see matter to adults in their lives and to societies around them. Seeing these topics addressed by the media, by communities, policy makers, and the like provides opportunities for students to transfer what they learn beyond the school walls. Ultimately, by engaging in these relevant systemic issues throughout their education and finding opportunities to examine them critically; consider multiple perspectives including their own; engage in dialogue and relationships across difference; and take action, our young are likely to be prepared to meet the future with relevant experience and hopefully more agency.

A global issue such as human migration, for instance, is worth teaching because migration is a shared human experience, which binds us to early humans who populated the planet over the millennia. It is also worth teaching because of its global reach and ubiquitous presence. The displacement of 281 million international migrants today (United Nations 2020) affects the lives of millions left behind as well as those they met upon arrival, shaping political alliances, nationalist retreats, and humanitarian engagements. In the coming years, climate-driven migration will continue to increase. It is an issue of growing significance, which students would do well to understand. To unveil students' personal connection to the migration phenomenon, a unit on this topic can begin by collecting family or neighbourhood experiences with migration to launch an investigation into why people leave their homes and what hopes they bring as they begin a new life in the country of arrival. In some contexts, grandparents may be the family members sharing experiences of migration. In other contexts, it may be children themselves (Suarez Orozco et al 2020). Teachers in Piraeus, Greece offer a telling example of how newly arriving young refugee children and their peers might find comfort, express emotions and feel reassured and hopeful about their future under the most challenging circumstances (Box 17).

### ***Focusing on deep understandings***

Relevant global issues are often complex. Understanding them requires more than having access to and remembering extensive bodies of information about them. Instead, teaching local, global, and intercultural topics with quality for all requires that we focus on *deep understanding* and the development of *global competence*. Relatedly, it requires that we frame the issues in ways that will be manageable and invite depth. How to approach topics as complex as climate change, sustainability, migration, to name a few? The answer lies in having clarity about a few key desired learning outcomes for students in the form of big ideas and competences and exercising strategic curation of the topic at hand.

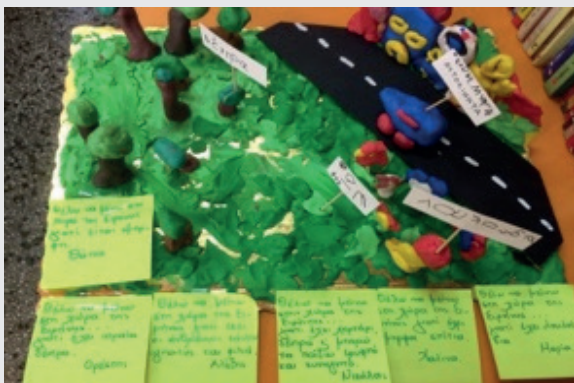


**Box 17****Selecting topics that matter while navigating world challenges****Piraeus, Greece – Early childhood – in refugee contexts**

The influx of migrants and refugees to Greece has put local authorities that work intensely with state organisations and NGOs under considerable pressure to provide protection and accommodation to asylum seekers and vulnerable children. Teachers need to identify meaningful ways to successfully integrate refugee boys and girls into the public schools alongside their Greek peers. They must manage the unique obstacles faced by refugee children who must deal with disrupted families, insecure housing and a rising discrimination under a politically polarized climate in the region (OECD 2019). Against this backdrop a kindergarten school in Piraeus explores a story telling-based approach to engage newly arrived children who do not speak Greek and begin to integrate them with their local peers. The arrival of refugees in mass is not new to either group. Which is why the teachers and leaders involved opted to invite the children to create a shared story of migration and to do so as a stop motion digital story.

With the use of children’s books, artwork and boundary objects (collage, clay, puppets, and other mediums) teachers engaged children in discussing and sharing digital stories within a curriculum framework centred on questions called the Reimagine Migration Learning Arc. Questions help learners develop an informed perspective on their shared experiences of migration.

- Moving stories: We all have a story of migration. What is my story? What is yours? In what ways do those stories help us understand who we are?
- Life before migration: Where do we come from? What was it like before the journey (ours or others’)? Why do people leave their homes?
- The journey: What do people experience as they move from one place to another? In what ways are people’s migration journeys similar and different from one another?
- How can we take action toward more inclusive and sustainable societies? What issues related to migration do we care about and why? How can we use our voice and spheres of influence to create and sustain inclusive and welcoming communities?



Through a series of conversations and a distribution of roles according to capacities, this project of story-sharing enabled refugee children to be heard and understood, and to be contributors to a collective product. Under different circumstances, inviting children to recall a traumatic journey would not be advisable. However, by constructing a story with others whose experience they shared, and creating a story that is not strictly “their own” children found space to share as much as they felt comfortable. Furthermore, by doing so through multiple forms of representation, children experienced an important form of belonging and recognition.

Stories are powerful, the group of teachers concludes, because they give children a voice and help them connect with others in different ways. Through stories children discover how similarities bring people together and differences bring them even closer. Helping children develop the habit of seeing their lives as stories (Moriarty, 2015) helps them slow down and empower them to share their hopes and fears openly and vulnerably in front of a receptive audience. Most of all, it helps students to make sense of their lives and respect other perspectives. For students in Piraeus, the sharing of stories through drawings was the first step to becoming knowable to others.

**Source:** Melliou, K. et al (2020). Stories of Reception Project – 6th PEKES Attika Piraeus.

Understanding a topic involves becoming able to think about it informed ways; asking questions; making interpretations based on evidence; and examining multiple perspectives with the aid of concepts and modes of thinking pertaining to the disciplines or forms of expertise students learn in school. In other words, zooming into deep understandings requires that we identify “big ideas” or “disciplinary ways of thinking” to gain depth. In the case of human migration, for example, teachers may want students to understand that people leave their homes for many complex sets of reasons. In this case students may need to understand constructs such as “*complex causal reasoning*” and “*push and pull factors*” mobilising decisions to leave the home. They also need to think about the complex dynamics of “living transnationally” now that people increasingly remain in contact with those who stay in the home country, often providing “*social and economic remittances*” that are transforming the new and the old country. Students may need to understand that cultures are permeable and identities complex, and appreciate how specific writers, artists and musicians have treated the issue (Box 5).

In their efforts to nurture deep understanding of complex issues, experienced educators often zoom into an aspect of the issue and a case. Consider for instance Kottie’s focus on causes of sea-level rising and its consequence for coastal communities in New York and Cape Town. Her selection makes the problem accessible to her fourth-grade students without losing sight of the complexity of the issue as students experiment with multiple causes and community scenarios (Box 6). Applying big ideas such as “melting polar caps”, “greenhouse gases”, and “carbon molecules” yields deeper understanding. These concepts can inform students’ explanations, stories, products, proposed solutions, and new questions in ways that would not be possible to the uninformed eye. They are not ideas students must merely define and remember but apply flexibly over time. In so doing students can be empowered not only to think more deeply about the selected cases, but also to transfer such understanding beyond them.

How might educators zoom into deep understanding? Characteristically, educators focus their teaching on concepts and skills proposed in each local or national curriculum. Experienced global educators read such curricula carefully to find opportunities to connect elements of it to the world around them and to emerging topics of interest to their students. Clarity of learning goals informs effective teaching and allows educators to be flexible and responsive in the ways they arrange learning experiences. Remaining open to emerging opportunities for deep understanding is important – whether through building on a surprising turn in a class discussion, a news piece in that morning’s newspaper, a student’s expressed interest, or an emerging local or world event that had not been considered during planning. For example, Steve’s mathematics unit on population growth (Box 18) was inspired by a morning radio programme he heard on his way to school one day. He saw in the interviewed scientist’s account of population growth an opportunity for students to apply what they were learning about functions to real issues. Exponential and logarithmic functions were “big ideas” he knew students would need to learn; “population growth” and our “planet’s carrying capacity” were added to the syllabus as an opportunity to apply mathematics to a meaningful, vexing, and ethically charged problem.

**Box 18**

**Deep understanding of relevant issues in the globally competent mathematics classroom – A population growth lab**

**Ithaca, U.S. – Grades 11-12 – Mathematics**

The message on the wall adds urgency to the work. A large projection of the world population is continuously updated, showing how many people are born each second on the planet. How fast is the human population growing? Are there really too many people on our planet? How many people can our planet actually carry? When will we reach such carrying capacity? What are the relevant variables associated with our planet’s capacity to sustain our lives with limited resources of food, water and energy? Questions of this kind drive Steve to annually lead a “World Population Lab” that challenges students to use math to explore the phenomenon of world population and the concept of “carrying capacity”. Specifically, students are invited to apply their understanding of logarithmic vs exponential curves onto real population data sets. The idea of a world population lab came to Steve like many of his ideas – from listening to a public radio report on his drive to school.

This counter shows the current worldwide population, based on our regression. We wrote a **program** in JavaScript & html which, once per second, uses the current time to calculate the population based on our logistic function. It's pretty shocking how fast the population grows; seeing it in real time really puts the problems of overpopulation in perspective!

current population  
based on our logistic regression

**7608716767**

Steve realises that a large number of his students have had minimal opportunities to interact with people outside of the Ithaca community. “I’ve never actually worked with anyone... or even have actually spoken with anyone from another country,” one student claimed. Steve hopes that students in his mathematics classroom will learn to work with those of different backgrounds and experiences. He emphasises collaborative problem solving and asks students to bring their own perspectives to the issue they are exploring. In addition to the diversity within groups, Steve often takes things a step further by having his students work with research partners from countries around the world. In addition to the group-based project work the lab centres around, students have the opportunity to work alongside research partners in Romania and Spain.

A focus on global competence is visible in the classroom even if not explicitly posted. Steve understands that developing a deeper and more nuanced understanding of many global issues requires examining variation across contexts, which can be supported through collaborative learning and research with young people in different parts of the world. Working with peers whose experience of population growth differs offers opportunities for students to refine their communication and learn to take perspective.



**Source :** Boix Mansilla V. (2019). Signature Pedagogies in Global Education. Harvard Project Zero.

### ***Nurturing long-lasting global and intercultural competence***

The capacities, values and dispositions that students will develop are the very *raison d'être* of global competence education. It matters that students develop the capacity to examine local, global and intercultural issues; take perspectives; build relationships across a difference; and take action toward more inclusive and sustainable societies. It also matters that they develop an appreciation for human dignity and diversity. Experienced teachers hold these learning goals in mind fluidly, finding occasions to foster their development daily and over time. They often choose to foreground specific competencies and values in a given unit or project. They do not aim to teach all competencies all the time. In a unit on human migration centred on why people leave their homes, a teacher may foreground opportunities for students to practice “perspective-taking” with regard to migrants’ experiences and “examining issues” as they consider the broader political, economic, and environmental forces shaping these individuals’ lives. “Taking action” might be addressed only later in the project. Another unit or project, however, may pivot first toward “taking action”. Having learned about the fragility of our natural environment, a group of teachers at School within School

(Box 12) invite their students to organise a parade around the neighbourhood to raise awareness. Working over several weeks in the study of endangered around the world, these students “adopt” a butterfly, a bee, a dolphin, a coral reef, or a forest and create masks and banners for their “Save the Earth Parade” on Earth Day.



**Source:** Boix Mansilla et al (2019) Global Children Project – Project Zero - Poppins Institute for Child Science Tokyo & School within School, Washington DC

In some cases, long-lasting global and intercultural dispositions can be nurtured more systemically through policies that bring coherence and depth to a child’s education throughout his or her formal schooling. The United Arab Emirates, for example, has embarked on an ambitious educational reform geared to preparing all youth for knowledge economies and global multicultural societies (Box 19).

## Box 19

### Teaching for global competence: Creating a shared identity in a young and diverse society

#### United Arab Emirates – Policy and Programming

Since its establishment in 1971, the United Arab Emirates (UAE) has experienced a rapid demographic expansion and, with it, profound cultural transformations for local communities that inhabited this south-eastern region of the Arabian Peninsula. Today the UAE hosts workers and families from over 200 countries. With 90% of its student population representing non-citizen residents, the UAE education system seeks to serve a broad variety of families across public and private school spheres. The Ministry of Education serves the UAE populations in public schools with multiple curricula options. These coexist with a number of international curricula from countries such as the United Kingdom, Australia, the United States, and the Philippines provided by private international schools that serve non-citizens primarily and UAE citizens in smaller measure.

How does a young federation of emirates, whose local population of students is a minority in its own land, advance an educational framework that is at once open to international curricula and pedagogies characteristic of other cultures, while also preserving elements of the local culture? What forms of education ensure a balanced preservation of emirati culture, religion, economic and social institutions in the UAE?

Education plays a central role in the UAE’s stated aim to become a leading voice in the international arena in the 21st century. Teachers in the UAE are at the heart of the conversation about the future of education, policy leaders explain. A number of educational initiatives seek to create a

climate of appreciation for global competence and cultural diversity for teachers and students from early childhood to tertiary education. Policies emphasise respect for different religions and the right to education for all children across gender, age, language, religion and disability. Teachers are encouraged to invite students to connect their own personal and cultural experiences to the community and the world with curricular frameworks that foreground capacities such as problem solving, collaboration, and global and intercultural competence. Because curriculum innovations go hand in hand with pedagogical ones, teacher education programmes foreground culturally-responsive diversity education and the construction of an inclusive institutional climate.



A multicultural ethos plays a central aspirational role in the construction of a collective UAE identity. It comprises efforts to place local traditions in dialogue with global outlooks. Introduced in 2017, the “Moral Education” course is a curricular manifestation of these multicultural aspirations. Offered across public and private schools inviting contextual adaptations, the course aims to provide “young people of all nationalities and ages in the UAE with universal principles and values that reflect the shared experiences of humanity”. Four pillars serve as the foundations of a course meant to engage not only teachers but also school leaders, families and communities in the education of the young.

- **Character and Morality:** An effort to nurture honest, tolerant, resilient and persevering individuals.
- **Individual and Community:** An effort to understand self, family and kinship and the role of individuals in the well-being of society.
- **Civic Studies:** An introduction to UAE’s history and governments for all students regardless of nationality addressing questions such UAE’s heritage, symbols, what should be preserved and how, and intercultural relations.
- **Cultural Studies:** Foregrounds the interconnectedness of shared human cultures. Highlights the role of oral traditions in preserving UAE heritage and looks at the impact of trade, travel and communication on culture.

**Source:** Educational Affairs Office of the Crown Prince Court and independent program reviews.

In sum, clarity about what educators deem most relevant for students to learn matters. It helps establish target learning goals and inform how student progress is monitored and supported. Students are more likely to become autonomous learners when they too understand the significance of the issues they study, and the deep understandings and global competencies they are working to develop.

## **How do students learn to become globally competent?**

### ***Designing experiences, anticipating challenges, creating global learning environments***

Students learn best when they are motivated and engaged intellectually, socially and emotionally. They learn when they are challenged to apply knowledge to novel situations. They learn when they receive informative feedback and appropriate scaffolding. Deep transformative learning is always the result of wrestling with ideas, of processing emotions, of “thinking with” the information given. It is the fruit of meta-cognitive reflection over time aided by learning environments that embody a culture of global competence. In this way, students can exercise agency toward understanding and engaging in the world in and beyond their immediate context.

### ***Designing quality experiences for global learning and agency***

A creative and essential aspect of effective teaching for global competence is the design of learning experiences. Of special relevance are experiences that offer ample opportunities for students to develop agency in examining issues; learning to take perspectives; communicating and relating to others across difference; and taking action toward a more sustainable and inclusive world. In quality learning global experiences students apply knowledge in novel situations to build understanding. They have opportunities to connect their local realities to the world; engage cognitively, socially, and emotionally; develop a personal position on a topic; and reflect on their values.

Not all “activities” are powerful global competence learning experiences. “Drawing a picture of an immigrant family” may be engaging but will not necessarily foster global competence capacities *per se*. In contrast, creating one that “shows the forces and complexities shaping the family’s decision to leave their homes” requires a deep understanding and application of available information about economic, geopolitical, and environmental conditions paired with more intimate experiences of migration, family dynamics and degrees of choice.

Educators sequence experiences strategically to yield meaningful learning journeys. They introduce students to the chosen topic in ways that engage them genuinely as whole learners (cognitively, socially, emotionally) and reveal the significance of the issue they will explore. They design further experiences to help students develop deep understandings or skills effectively. They may pay special attention to students’ voices and work to offer good feedback. For example, a teacher working in Germany began the unit on migration by inviting students to gather family stories (emigrations-immigrations) and chart journeys on a world map. She proposed that students compare their class map to a United Nations map of migratory flows, asking: What can we hypothesise about why people leave their homes given what we have learned about our families and by examining these two maps? What would we like to learn more about? The experiences place students in the role of meaning-makers and agents of their own learning.

Quite often, a unit or project begins with learning experiences that engage students personally, elicit their early beliefs (thus making an initial assessment possible), and form a curiosity mindset for further inquiry. Next, students are invited to make sense of and wrestle with key concepts and skills. For instance, they may draw on readings and graphs to construct a taxonomy of reasons why people leave their home, and then apply the categories to a set of personal stories of immigrant persons. Experiences such as discussing various countries’ asylum policies and processes allow for ample opportunity to deepen understanding and put the competence to practice. Units and projects often conclude with a moment of synthesis which could range from a memo

reflecting on students' own learning journey to a public exhibition, a theatre play, or an action project. Along the way, good learning experiences maintain the student as the agent of learning (OECD 2030). Experiences are designed in such a way that it is the student who is posing questions; finding information; reasoning with evidence; drawing conclusions with others; taking perspectives; comparing and reconciling points of view; listening attentively; exploring multiple ways to communicate with various audiences; and taking collective action.

Materials matter. To design learning experiences that foster global competence, teachers must select the materials (readings, images, documentaries, maps, objects, places) that will serve as provocations to ground an assignment, centre a conversation, and consider interpretations. Museums, libraries, and digitised collections can support educator's work. An interesting marker of the global orientation in a classroom is the degree to which the materials and provocations teachers use and bring to the classroom for close examination reflect the world in which we live.

### ***Anticipating learning challenges***

Another consideration in designing learning experiences to nurture global competence involves anticipating opportunities, learning challenges or sensitive issues that students might encounter in a unit or project. Students bring prior thinking and beliefs to their encounters with the world. Anticipating the powerful ideas, cultural knowledge, language skills and the kinds of stereotypes or oversimplifications students may hold matters in the design of experiences that seek to reinforce productive insight and revise misconceptions. For example, when teaching about migration, teachers like Marissa (Box 1) may seek to foreground the rich bicultural experiences her students hold. She may create learning experiences that require some understanding of Spanish to include her emerging bilingual students more fully in meaningful learning and contribute to the learning of the group. At the same time, she may find the topic to be a sensitive one for families – especially for families whose members might be in liminal legal status. In other cases, a teacher may find that students reproduce xenophobic or stereotypical views they have heard in the media. Still others may find it especially challenging to have multiple, sometimes contradictory, causes for leaving home and migrating to another country.

Anticipating learning opportunities and challenges enables educators to curate provocations (e.g. stories, videos, images, artifacts) and design experiences that are likely to foster global competence (e.g. observing, examining, considering perspectives, discussing, proposing a solution). They may foreground the dignity and value of all people, regardless of status. They may invite students to work in groups to create a concept map of the many causes for a given family's departure. They may develop a lesson strictly addressing the question of stereotypes and how they work in our mind as Kottie, our climate science teacher, did when connecting students across continents below (Box 20). Melanie, did so too when teaching Spanish Afro-Caribbean rituals (Box 5). As did Steve when considering intercultural collaborations in mathematics class (Box 18).

### ***Creating global learning environments***

Learning experiences like the ones in the examples introduced so far foster global competence through direct instruction (Boxes 1, 5, 6, 15). Yet global competence values, habits of mind and dispositions are also quite likely to develop through students' participation in a school or classroom culture where examining global issues, taking perspective, relating and communicating across differences, and taking action for sustainability are the air they breathe, part of "the way we do things here". Throughout their education journeys students encounter consistent messages – explicit and implicit, intentional and unintentional – about who students are; what they can



achieve; the kind of learning that is expected and valued in a classroom; the ideas or aspects of the world that matter most. Messages take the form of patterns of interaction: who is grouped together; what students see on the walls; the languages spoken in the playground. Educating effectively for global competence and transformative learning involves attending to these matters of school climate and culture, and creating learning environments that teach.

**Box 20**

**Anticipating learning challenges: Climate stewards go global (2)**

**U.S. and South Africa – Elementary School – Science**

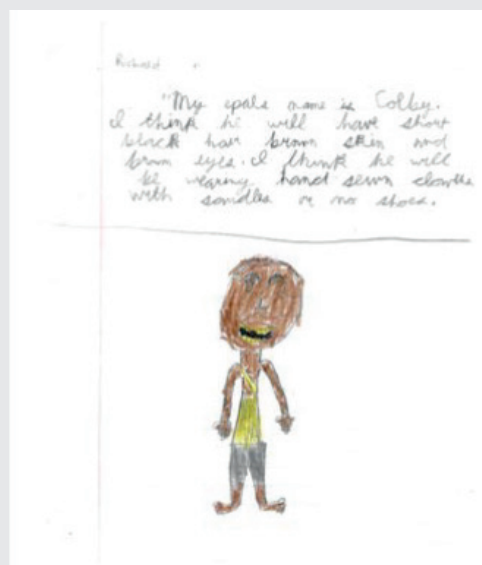
In her unit on climate change, Kottie has anticipated that learning demands may confront students. She has designed specific activities to target these challenges accordingly:

1. *Climate change can feel daunting for children, perhaps impossible to solve or ameliorate.* In response, the unit invites children to take action – deliberate about possible solutions and recognise their spheres of influence. Furthermore, students are encouraged to take action with equally concerned peers in Cape Town in South Africa with whom they have been collaborating, sharing about their lives, the causes and impact of global warming and, now, possible actions.



2. *Climate change presents important causal reasoning demands.* Causes and consequences are far apart in space and time, making it difficult for students to see connections. Children are likely to propose that atmospheric temperature is rising “because there are many cars that put hot smoke in the air” than to advance a more complex explanation involving carbon molecules, the sun, distant polar caps, and a nebulous greenhouse effect. Anticipating this challenge, Kottie includes the maquette activity, concrete three-dimensional models for students’ experimentation. The model enables students to understand that the causes for the phenomena we see such as sea rising are complex and often far apart in time and space.
3. *Collaborations with e-pals in South Africa can reveal existing cultural stereotypes.* Curious about students’ conceptions of their peers prior to seeing an image of them for the first time, Kottie invited students to draw what they thought their friends from South Africa would look like. Making students think visibly revealed important misconceptions. Some students drew dark-skinned children living in poor or less developed communities – in one case “missing

some teeth and with no shoes". The ideas, children explained, when the misconception was discussed, came mostly from popular media. When students saw their e-pals for the first time, and traded personal and family stories, they were surprised not only to see that their e-pals were not physically what they had imagined (many of them were fair-skinned like themselves), but also that they had more in common with them than expected (they had pets at home, or played soccer, or enjoyed the same computer games). Forced to revise their initial ideas about their e-pals, the students began to reframe their conceptions of South Africans and treat popular presentations of cultures more critically.



**Source :** Boix Mansilla & Chua (2016) *Signature Pedagogies in Global Education*.

For example, teachers, school leaders, and curriculum designers have ample opportunities to create an environment for learning about human migration that models appreciation for diversity; exhibits empathetic and inclusive dialogue as a norm; and features students' questions about migration in school hallways. Living and breathing such global school cultures over time enhances the likelihood that students and teachers will develop not only global competence skills but a more long-lasting global outlook. Similarly, the Scottish national "Curriculum for Excellence" places learners at the heart of education. Rather than mandating extensive content coverage, it aims at supporting students to become successful learners, confident individuals, responsible citizens, and effective contributors. Because nurturing values, virtues and dispositions invokes immersive experiences, schools benefit from moving beyond the "acquisition" of knowledge and skill to forming persons who exhibit the desired dispositions over time. Box 21 illustrates how one school leveraged the emphasis on transformational learning to nurture environmental stewards and disruptors for good.

Transformative learning takes place through thousands of micro-interactions as students "breathe" a culture of global competence day in and day out in their school. In these classrooms and schools, global competence and intercultural sensitivity are valued, visible and actively promoted. Through daily actions, teachers, administrators, and support staff convey *expectations* about the kind of thinkers and globally competent persons students will become. Their use of *language* signals that they value cultural and linguistic diversity and honour students' cultural identities. Their actions *model* curiosity about the world and commitment to learning and participation. They honour trusting *relations* by giving them *time*, and they use *space* – classroom walls, hallways and neighbourhood – to immerse students in the world. Ultimately, these educators make global thinking a regular feature in their classrooms' tapestry (Boix Mansilla 2016, Council of Europe 2018, Ritchhart 2019). Long-lasting learning stems from the internalisation of these core practices and values over time.

## Box 21

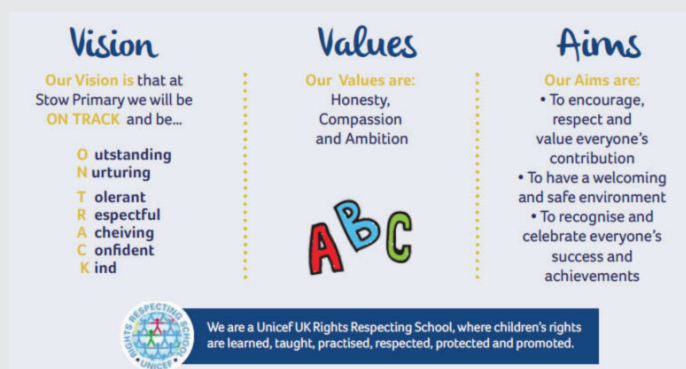
## Creating global school cultures that teach: Community, values, and sustainability in the elementary years

### Scotland – Elementary School – Interdisciplinary

Perched on the hills of the Scottish Borders, Stow Primary School exemplifies a transformative education approach to global competence education. At the school, a commitment to the UN Sustainable Development Goals is palpable, as is the message that “everybody can be a disruptor” on behalf of the Earth and more inclusive societies. “Everything we do links to our own vision and values,” school leaders explain, underscoring the importance of engaging the whole school community, and viewing every experience as an opportunity for learning to care for the planet and for others.

**What makes this school work?** The school exhibits a transformative education centred on long-lasting dispositions. It pivots on a whole school culture in which the aspiration to become “disruptors” in defence of sustainable and inclusive societies becomes part of the air children breathe. Multiple cultural forces are at play:

- **Visibly shared values and expectations:** Becoming voiceful and informed environmental disruptors of the status quo in the name of more sustainable living is an expectation that students encounter ubiquitously in the school. From a parent-created tree that honours nature, values roots, growth and aspiration to the time spent investigating nature outdoors, and community engagement efforts to clean up and bring innovations to the school, the messages students receive embody the shared values and aspirations of this school community.
- **Multiple opportunities to engage in relevant learning:** Throughout the year children find multiple opportunities to address environmental issues across the curriculum. Young children learn about recycling, contemporary ecological art, study the life of plastic and engage with environmental activists. SDGs and environmental stewardship are not limited to a lesson or unit but are part of an ongoing repertoire of learning opportunities.
- **A strong sense of local-global community and belonging:** An inclusive community places children as inquirers at the centre while also engaging adults, families, and also community organisations near and far – all able to contribute perspectives and insights. School leaders explain that very often the themes they addresses with children stem from close reading of the local and global news and longstanding partnerships with local community organisations.



**Source:** Educational policy and school leaders interview and school team student learning documentation.

*Routines* are essential for the formation of habits of mind. They are constitutive of a classroom and school culture and can be designed to foster the transformative learning that quality global competence education aspires to promote. All classrooms have routines that students learn to accommodate to during their first days of school. These are routine ways in which students sit in a classroom, put away their backpacks, greet, move in the school. Museums, too, operate with routines. Quite often routines are designed for the orderly choreographing of learners' behaviour. Understanding the power of routines for developing habits, researchers at Project Zero proposed to infuse learning environments with "thinking routines", micro-interventions designed to foster particular kinds of higher order thinking habits. For instance, in classrooms where teachers ask regularly, "What makes you say so?" are likely to lead students to develop a habit of providing evidence for their claims. Similarly, "global thinking routines" have been proposed to infuse learning environments with expectations and opportunities to engage the four dimensions of global competence. For instance, a "3Whys" routine consistently asks students why something they are learning matters to *them*, to *their* people and to *the world*, thus nurturing a disposition to reflect about significance and make connections across spheres. Other routines such as "Step in Step out Step Back" or "Circle of Viewpoints" are designed to engage students in the habit of perspective-taking. Box 22 includes examples of such global thinking routines. Key to their effectiveness is their applicability across ages and disciplines, their emphasis on making students' own thinking visible, and to yield greater agency and transformative learning when employed consistently over time.

## How will we know we are making progress?

### ***Making global and intercultural learning visible, providing informative feedback, adjusting instruction***

Assessment presents important challenges and pedagogical opportunities when it comes to a multifaceted construct like global competence. Global competence involves cognitive, socio-emotional, ethical and civic dimensions of human development that defy easy or single measures. Assessing and supporting progress in student global competence development requires a deliberate effort, clarity of purpose, adequate instruments, and a good sense of markers or criteria for success.

Purposes vary and so do suitable instruments. Seeking to characterise students' preparedness for an interconnected world across countries (OECD-PISA 2018) may benefit from performance indicators that can work at scale. In contrast, understanding how a particular group of students are making sense of a complex cultural practice with which their values disagree is likely to benefit from more in-depth conversations marked by active listening.

In all cases, assessing global competence well requires that educators are deliberate about the particular aspects of global competence they seek to nurture and assess, and that they make student learning visible, shedding light on this dynamic, multifaceted, life-long, and non-linear process. Because the very purpose of assessing is to improve global competence development among individuals, groups or nations, quality assessment must yield informative feedback to students, teachers, administrators or policy makers. Students will benefit from supportive feedback to deepen their global preparedness. Educators will benefit from data to improve their practice. In what follows we turn to three key elements of assessment: *making students' global competence visible; providing evidence-based feedback to students; and using evidence to improve programmes and teaching practices.*

## ***Making global and intercultural learning visible***

Making students' global competence learning visible enables educators not only to see what students are coming to understand about the issues and cultures under study but also how. Journal entries, reports, class discussions, brief questions used as "exit tickets" in a lesson, informal conversations, poems or works of art are powerful learning experiences that invite students to wrestle with ideas. They also offer essential windows into students' views, theories, interests, and feelings, shedding light on students' insights, wonders, and misconceptions. When such insights, wonders, and misconceptions remain invisible, they escape the possibility of celebration or correction.

***How can educators make students' global competence learning visible?*** Effective assessment requires planning as well as an open disposition to take note of emerging student insights. In quality efforts, assessment has a clear purpose; is aligned with global competence learning goals; takes place diagnostically at the beginning of a unit or project; unfolds formatively over time; and sheds a summative light on what students have learned and how they are able to apply what they have learned to new situations at the end of a unit.

Educators seeking to nurture global competence design learning experiences that simultaneously honour, advance, and demonstrate multiple dimensions of global competence learning. For example, when teaching about human migration, educators may seek to nurture empathic perspective-taking toward migrating families (a perspective-taking socio-emotional goal) (Box 4). A *journal entry* commenting on their family experience of migration can offer a window into students' values, feelings and relationships. A *classroom discussion* can set norms for students with which they can view other families' experiences with openness and appreciation, while also revealing students' perspective-taking and communication capacities. Seeking to foster students' understanding of complex reasons why families leave their homes (an examining global issues/cognitive goal), teachers may pay special attention to complex causal maps of "push and pull" migration factors. Here, an experience such as working in groups to construct such a conceptual causal map will reveal students' causal reasoning, perhaps illuminating powerful ideas worth emphasising and possible misconceptions worthy of further and clarification. This performance-based approach aligns learning goals, learning experiences, and assessment criteria, and makes assessment inseparable from the learning process.

Educators count on a broad repertoire of tools to make students' learning visible. These range from a brief informal "check-in" with a student during class and the very work students produce to a sentence completion "routine" such as "I used to think... and now I think...", which potentially sheds light on conceptual shifts students have experienced. In fact, the thinking routines described in the previous section offer an interesting set of tools with which to make learners' global competence visible. Educators can use these accessible micro-interventions over time to give voice to learners' thoughts and nurture transformative learning. Box 22 introduces a few examples of such routines. They are invitations for learners to reason openly by not presupposing fixed correct or incorrect answers. They also enable educators to note a learning demand or misconception and design their teaching in more informed ways. For example, we saw how Akual's teacher invited a recasting of the purpose of writing and the significance of their family stories when using the "3Whys" routine of "Why does this story matter to you? To your people? And to the world?" (Box 4, 15, 17, 18). When used repeatedly, routines can help learners develop not only global competence skills, but dispositions or habits of mind, leading each student to *become a globally competent person over time*.

## Box 22

## Global Thinking Routines

## The 3 whys

A routine for nurturing a disposition to discern the significance of a situation, topic, or issue keeping global, local, and personal connections in mind.

1. Why might this [topic, question] matter to me?
2. Why might it matter to people around me [family, friends, city, nation]?
3. Why might it matter to the world?

## Step In - Step Out - Step Back

A routine for nurturing a disposition to take social/cultural perspective responsibly.

## Step-In step-out step-back

- Choose:** Identify a person or agent in the situation you are examining.
- Step In:** Given what you see and know at this time, what do you think this person might feel, believe, know, or experience?
- Step out:** What else would you like or need to learn to understand this person's perspective better?
- Step back:** Given your exploration of this perspective so far, what do you notice about your own perspective and what it takes to take somebody else's?

## Circles of Action

A routine for organizing one's understanding of a topic through concept mapping:

## What can I do to contribute...

1. In my inner circle (of friends, family, the people I know)?
2. In my community (my school, my neighbourhood)?
3. In the world (beyond my immediate environment)

## How Else and Why?

A routine for cultivating a disposition to communicate across difference

- |   |  |
|---|--|
| 1. <b>What</b> I want to say is...                | Student makes a statement and explains intention   |
| 2. <b>How else</b> can I say this? & <b>Why</b> ? | Student considers intention, audience and situation to reframe (language, tone, body language) |
| 3. <b>How else</b> can I say this? & <b>Why</b> ? | Student considers intention, audience and situation to reframe (language, tone, body language) |
| 4. (repeat question)                              |  |

**Source:** Boix Mansilla, V. (2020). Global Thinking Routines, Project Zero Thinking Routines Toolkit .

Some educators utilise a “Student Portfolio” as a way to make student learning and growth over time visible. For example, Asia Society’s Graduation Performance System invites students to curate samples of their work that illustrate global competence growth over time, associating them with a series of accessible “I can” statements connected with the four dimensions of global competence. Educators might also consider making global competence learning visible using a series of descriptors included in the Council of Europe’s Reference Framework of Competences for Democratic Culture. Tested by volunteer schools and teachers in 16 member states, these descriptors include capacities such as “listening carefully to different people,” or “noticing how people with different cultural affiliations respond in different ways to the same situation”. Such capacities become visible in class discussions, in play outside the classroom or in deliberate teaching designs that invite students to use them visibly (Council of Europe, 2018, Volume 2). Another comprehensive assessment tool was advanced by the Italian NGO Intercultura as a set of guidelines teachers can use to document student growth in informal, unprompted contexts. These indicators are especially important because they reveal the formation of mindsets. For example, a student’s spontaneous progressive inclination to learn words in a new language in order to include an immigrant-origin peer suggests the emergence of a global competence disposition. Conversely, a xenophobic joke likely to hurt a peer in the classroom suggests the need for more targeted learning ahead.

### ***Providing informative feedback***

***What kind of feedback will serve students (or any learner) best?*** A good assessment of students’ global competence learning pivots not only on educators’ ability to notice what and how students are learning but also on their capacity to offer informative feedback and adjust instruction.

Alignment between articulated learning goals, assessment focus, and feedback matters, as does explicit criteria for students to review in preparation for learning. For example, in assessing student’s perspective-taking capacities, a teacher may seek to support students to move from more ethnocentric to culturally responsive views of migration. To make this expectation explicit they may say: “If we really want to understand why people leave their home and come to live in our city, we need to try to see the world through their eyes, holding off judgment and staying open-minded... Let’s give this a try!” Criteria or performance expectations of this kind can be shared informally or included in a rubric that students can use to monitor their own progress. Explicit criteria and expectations invite greater student autonomy as well as informed self and peer assessments.

Because global competence educators often find themselves tackling relevant yet rather ill-defined issues with their students, anticipating quality criteria is not always possible. Explorations might yield unanticipated forms of student growth, so remaining open to including emerging assessment criteria matters. For instance, a unit on Afro-Caribbean migration in Melanie’s Spanish class (Box 5) might not have originally included the design of a series of street art portraits honouring the diversity of the local community. But once students proposed the idea and the school accepted, new learning experiences and criteria on participatory community practices and art creation were considered.

Students may receive feedback from peers, teachers, community members, and visiting experts depending on their focus. They can also self-assess their work and learning process – a practice likely to enhance their agency as learners. Quality feedback contributes not only to student learning but also to fostering nurturing environments for open dialogue about learning, about the

world and about becoming more globally competent persons. Learners benefit from feedback that points to their achievement (what students did well) and indicate further opportunities for growth. Attention to informative and caring feedback is especially relevant in global education contexts where the problems under study are often ill-defined, where multiple perspectives are sometimes conflicting and topics can be personal and sensitive.

### ***Adjusting instruction***

***How can students and educators draw on ongoing assessment efforts to further good teaching and learning?*** Experienced global competence educators draw on their ongoing assessment in order to adjust and reorient their teaching, and further support student learning. A habit of observing students attentively, noticing learning achievements and challenges can directly inform instruction. A dynamic cycle of close observation, documentation of student work (Post-its, reflections, images, notes taken during group discussion) sharpens teachers' capacity to "listen", grounds their reflection about student learning, and informs next steps. For instance, Marissa (Box 1) was able to listen to her students' interest in the hurricane situation in Puerto Rico. This informed her unanticipated inclusion of mathematics as she engaged students in finding solutions. In turn, Kottie (Box 6, 20) observed that her students were holding important stereotypes about peers on the other side of the ocean. Taking note of this challenge, the following year she chose to include a lesson on stereotypes designed to reduce the likelihood students would fail to capture other people's full dignity. Similarly, teachers working with refugee children in Greece were initially concerned by the prospect of inviting young children to share potentially triggering stories of arrival and reception. Close observation of children's engagement around a story book on the topic indicated to the teachers that children were more open to share difficult stories with others who had experienced similar paths. They were able to express themselves only after being invited to do so with visual, bodily, and aesthetic means rather than purely verbally. Teachers realised that by inviting multiple expressive languages in a dialogue among peers whose experiences echo their own, they were opening new windows for collaboration, self-expression, and healing for all children (Box 17).

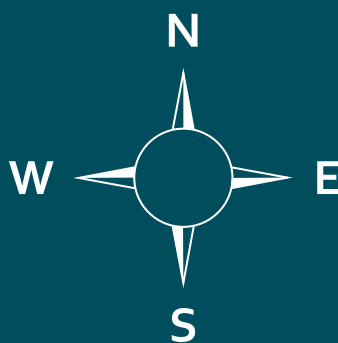
In sum, when turning to practice, educators interested in nurturing global competence can revisit perennial questions of curriculum, instruction, and assessment with the world in mind. Because this approach to education is *about, through, with, and for* the world, it invites educators to remain attentive to contemporary local, global and intercultural issues, becoming more globally competent themselves over time. Box 23 summarises the guiding questions and actionable principles that professionals in education can use to nurture global competence among our young, across settings, disciplines, ages and geographical contexts. Walking the global competence talk requires that educators situate their practice by asking, "Who are we?" and seeking to understand their students, communities, and themselves reflectively and critically. It requires educators to reflect on what matters most for students to learn and consider broad relevant issues as well as the specific aspects of these issues they would like students to understand. It calls upon educators to design and sequence learning experience able to change students' worldviews and think about the perennial question of assessment, making students' thinking visible, offering feedback and adjusting instructions.



## An invitation to reflect

In this section, we turned our attention to educational practice. We posed four perennial questions in education and considered actionable principles to support quality designs of lessons, units, courses, programmes, museum tours and the like. At this time, you are invited to turn to your own practice and find inspiration to evaluate and improve your design. To do so you are invited to use a “compass point” thinking routine.

- I. Select a unit, course, programme you are advancing or about to implement.
- II. Revisit Figure 7 to support your reflection about qualities and possible improvements in your design. Identify one guiding question to begin your reflection: e.g. “Who are we?” Or “What matters most to learn?”
- III. Then explore the compass point questions below reflecting individually or with others about your design.



<b>E = Excited</b>	What excites you about this aspect of your design? What's the upside?
<b>W = Worrisome</b>	What do you find worrisome about your design as it now stands? What's the downside?
<b>N = Need to Know</b>	What else do you need to know or find out about your design? What additional information would help you to evaluate things?
<b>S = Suggestion</b>	What is your current stance or opinion about this aspect of your design? How might you move forward towards improving the design?

**Source:** Harvard Project Zero: Thinking Routines Toolkit.



## **The educator we need: How can we prepare ourselves to teach for global competence with quality?**

---

As discussed in the earlier sections, teaching for global competence with quality can be done at multiple scopes, across ages and disciplines, and in various geopolitical and cultural contexts. It requires educators to consider who we are in context, what matters most to teach, what kinds of experiences will yield the kind of learning we seek and how to monitor learning for support. Any educator can learn to teach for global competence by beginning with small steps such as connecting their teaching with global news developments, engaging students in welcoming their new foreign-born peers at school. Educators seeking to learn more may ask: What key forms of expertise might lead individuals to become accomplished global competence educators? What are important shifts in mindsets that global competence educators might go through in developing such forms of expertise and how might such expertise be nurtured over time?

This section addresses these questions, illustrating main points with examples from policy makers in Singapore (Box 23) and a school network in China (Box 24). It begins by outlining how in learning to teach for global competence, educators must progressively develop and integrate various forms of expertise aspects shown in Figure 9.

Figure 9. Education for global competence: Educators' expertise we need



## Becoming a global teacher: integrating forms of expertise

### *Understanding students and learning*

**Understanding students in context:** Educators must learn to **understand their students** and their learning in context. This entails becoming curious about students' backgrounds, cultural or linguistic assets, which can be integrated into their teaching. Curiosity about students' interests, human potential and motivation is important as well so as to engage them and promote their agency as local and global inquirers and citizens of their communities, their nation and the world. Viewing students as capable; connecting with them emotionally; and considering the values and mindsets they bring to learning about and living in the world are important markers of experienced teachers' dispositions.

**Understanding global competence learning:** Educators will benefit from understanding how learning unfolds generally and the **unique opportunities and learning demands associated with global competence**. For example, early in life children build intuitive theories about how the social and natural worlds work. These often guide their interpretations of the world around them. They may believe that history is a matter of good vs. bad people where the good people must win. In intercultural encounters students may believe that knowing one person from another culture entails understanding it fully; they may obliterate differences or exoticise others. These stereotypes (which educators must also check in themselves) are likely to interrupt the development of perspective-taking or deep understanding if unaddressed. Educators' capacity to anticipate learning demands can inform their instructional designs in powerful ways.

### *Understanding global pedagogies*

**Understanding global pedagogies:** Teachers will benefit from developing a broad range of **signature pedagogies in global education** where learning experiences are uniquely suited to nurturing global competence. For instance, teachers may learn about the power of **stories** and

**case studies** to embody multiple global and local dynamics, making complex issues accessible to students (Box 20 and Annex A). They may learn to engage students in **digital exchanges** (Annex C) or community action projects. In some cases, they may learn to design experiences for students to connect local realities with larger global phenomena (Box 18) or to navigate the most challenging cultural differences (Box 5). In all cases, global teachers learn to design experiences that move beyond mere activities that keep students busy. They learn to create conditions for students to exercise their own sense making, construct their understanding, and develop their voice, and influence.

**Facilitating group work:** Educators may also benefit from understanding **how to work with groups of students** in ways that celebrate their diversity, navigate conflicting points of view, strengthen bonds and belonging, and facilitate difficult conversations. Schools, classrooms, and museums are social and emotional environments, and facilitating dialogues across differences is sometimes a delicate art. Educators benefit from learning to give voice to opposing views, prepare youth for compassionate listening, ensure good listening.

**Creating cultures of global competence:** Learning environments play an essential pedagogical role in nurturing transformational habits of mind. They send powerful messages to students about our expectations for student agency and growth; about whose perspectives matter; about social cultural inclusion and student empowerment. Teachers will benefit from learning how to **create learning environments that embody cultures of global competence** through the deliberate use of spaces, languages, relationships, and opportunities to reflect about and take action in the world.

### ***Understanding inter-disciplines and perspectives***

**Disciplines as lenses into the world:** Preparing to teach for global competence require that teachers develop a deep yet flexible understanding of the disciplines they teach – biology, mathematics, history, literature – so as to see them as lenses to make sense of and take action in the world. (Box 18, Box 5). It is this conceptualisation of the content students encounter in school and in cultural institutions that strengthens student agency and their sense of relevance in learning. Over time, teachers learn not only to promote this dynamic view of the disciplines they teach but to enrich their local and global reach by considering, for instance, emerging global histories, intercultural influences in literature and art or the application of mathematics to modelling local and global phenomena.

**Inter-disciplines and perspectives:** Developing the curiosity and flexibility of mind to seek connections across disciplines and perspectives is a beneficial disposition for developing teachers to cultivate. Unfolding phenomena such as climate change, urbanisation, trade, migration or land conservation are best understood through multiple complementary lenses. And while teachers may not need nor be able to develop advanced expertise in disciplines other than their own, they will benefit from learning to inquire, communicate and collaborate across disciplinary and cultural borders.

**Communicating in multiples languages:** In an increasingly diverse, interconnected and mobile world, straddling cultures and languages is at a premium. Teachers benefit from sharing their own home languages when different from the language of schooling or their appreciation for new languages. This models an ideal disposition for students. Languages are windows into culture as well as reflections of identity. They function therefore as a gateway to connect with, engage, inspire and nurture young people who also seek to broaden their communicative capacities and openness of mind in a diverse world. Humans communicate through multiple languages verbally, visually and bodily. These can all be deployed to foster connection and understanding.

## ***Understanding the world and self***

**Informal experiential global expertise:** Educators bring their own informal knowledge, experiences, and perspectives to their interactions with students and the curriculum. Preparing them for quality work involves recruiting such expertise reflectively. Travel; friends or family members from other cultures; films or novels from around the world enjoyed for pleasure; regular reading of world news; or a personal interest in North-South relations or sustainable consumption are important assets for teachers to share with their students. They offer inspiration and personal connection. They often enable educators to feel more secure when teaching about a region and culture they are personally familiar with. This informal expertise, which needs to be considered self-critically as well, is especially relevant when educators embark on the teaching of issues that, by their interdisciplinary nature, might fall outside of their formal training and expertise.

**Understanding global dynamics critically:** A quality marker of teacher preparation for global competence education is the degree to which in-service or future teachers express interest in and understanding of complex global dynamics critically. While the world is too complex to be understood “in full”, teachers benefit from gaining fluency in particular global competence themes related to their areas of instruction and with a commitment to more inclusive, just, and sustainable societies. For instance, experienced teachers are inclined to inquire about an issue such as climate impact; seek to understand and explain why and how it is taking place; compare its manifestations across locations; and inquire about the connection between local and global dynamics and notice inequalities, such as the concentration of climate related vulnerabilities in the poorest regions of the world. These exemplary teachers are inclined to “take the pulse” of emerging phenomena or discoveries in their area of interest. They can consider multiple perspectives critically and evaluate possible courses of action. These teachers do not expect to hold expert-level knowledge in their minds but rather to think flexibly, critically, and generatively about the topics at hand, drawing on their growing disciplinary and interdisciplinary expertise.

**Understanding self, reflectively, as professionals and citizens of the world:** Finally, and importantly, when educators develop their capacity to nurture global competence among children and youth, they often confront complex issues, draw connections between the lives and perspectives of their students and others. They find ample opportunities to reflect on themselves. They find themselves learning, forming their own opinions, coming to understand their own place in the world. In so doing educators must remain reflective about the perspectives they bring to their interaction with youth – remaining critically aware of the affordances and limitations of their own situated upbringings, world views, and biases, whether explicit or not.

Quite interestingly, as teachers learn to become *global* teachers, they often find new meaning in their work – they reframe the very purpose of their efforts. No longer are they simply preparing children for the next grade or the end-of-year exam. Instead, they view their task as one of preparing children and youth to contribute to the construction of inclusive and sustainable societies, present and future. Teachers’ professional preparation often results in a new professional identity and a long-lasting interest in unfolding world events. Concomitantly, their curriculum often comes to address the dynamism of emerging local and phenomena.

## Nurturing global educators: What leaders and policy makers can do

Developing the abovementioned capacities matters and so does creating structures for adequate growth. Consider, for instance, the case of Singapore, a country uniquely committed to teachers' preparation whose students performed exceptionally well on the PISA Global Competence assessment. Humanities teachers, develop the capacity to teach a curriculum that is regularly updated to keep students abreast of key local and global issues and developments (Box 23). The Ministry of Education situates the purpose of the humanities as a lens into the world and the role of humanities teachers as one of empowering youth to understand their world.

### Box 23

### Envisioning and nurturing well-grounded and well-rounded effective global competence teachers

**Singapore Ministry of Education, Humanities Professional Development – Secondary School**

#### ***Who are the humanities teachers we envision and what dispositions do they bring to their teaching?***

Humanities teachers in Singapore have strong subject knowledge and a deep passion for their teaching subjects. Many join the teaching service because they seek to share this passion with their students, and believe in the value of a humanities education in preparing students to thrive in the future.

Through their preparation, they come to embrace the belief that a humanities education is crucial in developing their students' understanding of themselves and the world around them. In subjects such as history, geography and social studies, teachers focus on deepening students' identity and knowledge about Singapore, while understanding the interrelationships between local, regional, and global developments. In so doing, they understand their country's position in the world. Teachers model their passion, knowledge, dispositions, and values.

#### ***What matters most for teachers and students to learn?***

Teachers are supported in developing the key competencies articulated in the national Framework for 21st Century Competencies and Student Outcomes through the humanities subjects. Here, core values and competencies that are increasingly important for students to have in a fast-changing and complex world include global awareness, socio-emotional competence and cross-cultural skills. For example, through geography and social studies, students are exposed to topics like climate change, the driving forces of globalisation, racial or religious conflicts and terrorism. The framework allows for an inquiry approach to teaching the humanities, encouraging students to ask questions about the world around them; seek and analyse different perspectives; manage ambiguity; and use sound reasoning and judgment to decide on their stand, based on sound moral values. Teaching and Learning Syllabus and Teaching and Learning Guides provide support. The humanities curriculum is reviewed and revised once every six years to keep students abreast of key local and global issues and developments.

***What learning experiences will foster teachers' capacity to teach and assess global competence best?***

Continuous teacher professional development is key for teachers to implement curriculum changes in content, pedagogy and assessment. A tight nexus of stakeholders ensures that professional development is responsive to teachers' needs. Professional development conducted by academics, teacher leaders and relevant agencies deepens teachers' subject-matter knowledge and pedagogical expertise in inquiry and discussion-based pedagogies.

**Collegial collaboration** is particularly important in encouraging pedagogical innovation and expanding teachers' knowledge of global and local issues. Schools create **Professional Learning Teams (PLTs)** and teachers collaborate in Networked Learning Communities (NLCs) to support adoption of new pedagogical strategies and refine their practice. Teacher leaders and academics are often engaged as knowledgeable others to deepen the professional discourse of PLTs and NLCs. PLTs provide support and encourage teachers to analyse assessment data to obtain valid insights about students' learning in a timely manner and discuss how instruction can address students' misconceptions and learning gaps, and improve their learning in formal and informal contexts.

The preparation of humanities teachers involves viewing teachers as avid learners themselves. They have opportunities to conduct inquiry-based learning through learning experiences such as investigation of **geography, history and social studies issues**. These experiences incorporate field-based learning and learning journeys to museums, community organisations, private companies and government agencies, providing them with opportunities to engage different stakeholders and observe the impacts of local and global developments.

**Source:** Singapore Ministry of Education, 2021.

If policy makers like the ones in Singapore can enhance the macro conditions for educators' growth, professionals working in schools can also employ local strategies to support the type of transformation needed. Consider the case of a school in Guiyang, China (Box 24). In this case, school leaders give careful considerations to the structures, patterns of interaction and strategic ongoing support that teachers need when learning to become effective globally competent professionals.

**Box 24**

**Setting conditions for sustained teacher growth**

**Guiyang, China – teacher development programme**

At the Weiming School in Guiyang, China, a group of eight educators meets weekly to share documentation of student learning in projects they have designed to cultivate global competence. Using a "Ladder of Feedback" protocol, teachers: (a) ask questions of clarification; (b) state what

they value about what they see; (c) only then offer questions, ideas and recommendations. In such a professional learning community, teachers support one another in their efforts to include global competence education in their teaching. The PLC was part of a rich system of regular meeting points that enabled teachers to learn new ideas; inquire in the classroom; reflect with others; redesign and try again. Elements include:

- **Cross school seminars** that bring together educators, experts, and new research-based ideas to spark innovation.
- **School-based professional learning communities** designed to sustain small group collaborative learning over time (depicted above),
- **Teacher-led inquiries** through which teachers develop a habit of investigating viable innovations in their practice (a unit, a thematic thread), revising and improving their practice over time.
- **Yearly Exhibition** of teachers and students' learning where teachers reflect about their practice with others, deepening their understanding of how to teach for global competence with quality while strengthening the sense of community among teachers at the school.

In reflecting on the role of teacher-sharing sessions, one teacher shared, "I think it's advantageous to use the Ladder of Feedback in our learning community, not only in looking at what happened in the classroom, but also looking forward to where one is going. This way, questions and suggestions can be accepted and influence the future direction of the learning experience."

This suggestion embodies the spirit of in school-based professional learning communities, one that encourages reasonable risk, mutual growth, learning and the cultivation of everyone's ability to educate for global competence.

**Source** : Boix Mansilla, V., & D. Wilson. (2020) What is Global Competence, and What Might it Look Like in Chinese Schools?

For policy makers, practitioners and families interested in advancing global competence education, Colombian and Scottish students' performance on the Global Competence PISA assessment offers significant reasons for hope. Students in these countries did far better on global competence than predicted by their reading, math, and science performance as shown in Figure 4, prompting the question of why this might be so. In Scotland, for instance, a relatively recent "Curriculum for Excellence" favours a broad "General Education" for children from early learning to the third year of secondary school. The curriculum places learners at the heart of education. Recognising the lifelong nature of education and learning, it does not mandate extensive content coverage. Rather, it seeks to help children and young people to become successful learners, confident individuals, responsible citizens, and effective contributors. Schools enjoy ample opportunities for tailoring curricular content to themes that are deemed relevant to various local communities and connected to the world broadly. Perhaps most notably, emphasis goes beyond the "acquisition" of knowledge and skill to "becoming" persons who exhibit the four identified dispositions over time. Successful schools are able to leverage such clarity of aims and curricular flexibility to prepare youth to become local-global citizens (See Box 21).



In Colombia, (Box 25), efforts to nurture global citizenship in this country is built on a long-standing tradition of peace education geared to foster social cohesion and dialogue in a society fractured by violence. Of special interest in this case are the affordances of continuity in policy efforts paired with an emphasis on educators as key transformative actors, especially those in historically underrepresented communities.

## Box 25

### Policies of continuity, national reach, and local agency

#### Colombia – Peace and global citizenship education – Policy leaders and scholars

For over a decade Colombia has engaged in a process of democratisation and peace-building, geared to overcoming the armed conflict that afflicted its society in the past. Multiple educational policies sought to support these efforts, preparing young people to participate in the construction of more peaceful local and regional societies. Examples include the National Ministry of Education's efforts such as the National Human Right education plan of 2003; basic standards of citizenship competencies in 2004; the 2013 Law for Living together in schools; and the 2015 peace education initiative, "Cátedra de Paz". among others. These policies and associated practices have provided an especially fertile ground for a more recent UNESCO-led effort to infuse global citizenship initiative across the curriculum (Velazquez Niño 2020).

For instance, Colombia's Basic Standards of Citizen Competencies establishes the minimum learning goals that all students in the country should achieve at the end of each education cycle:

"As the group of school grades progresses and considering the development of boys and girls, it is expected that they will expand their scope of action. The youngest learn the citizenship skills necessary to function constructively in their close environment (family, classroom). Subsequently, civic competencies grow in complexity and the scope of action widens. Thus, then, it is expected that by the end of the 11th grade, young people will have developed the necessary citizenship skills to, for example, participate constructively in initiatives in favour of non-violence, in political decision-making, and make use of the mechanisms of democratic institutions to protect and promote human rights at the local, national and global levels." (MEN, 2006, pp. 153-154)

Colombia sheds light on key opportunities embodied in global competence/citizenship education at scale, including societies fractured by multiple forms of violence.

First, UNESCO-informed global citizenship innovations were not proposed as replacements of prior efforts. Rather, they considered what was already happening in educational spaces and invited further reflection on the relationships between the local and the global. For example, teaching about peace-building challenges in Colombia enriched the lessons learned from similar processes in Northern Ireland and South Africa. (MEN, 2018, p. 80)

Second, in a decentralised educational system that does not have a national curriculum, global citizenship education draws broadly on teachers' capacity to engage students in authentic and, often, project-based learning experiences. New forms of democracy and global citizenship education centre on (a) ongoing dialogue about themes that are of interest to students and local communities; (b) group work and non-institutionalised spaces for participation; (c) the use of digital technologies and the Internet to connect with other abroad; and (d) efforts toward innovative qualitative assessment practices. (Velazquez Niño 2020)

Third, by giving rise to locally developed Global Citizenship education practices that place community interests in dialogue with global dynamics, Colombian efforts illustrate how a global competence initiative can offer a legitimate platform to historically unheard voices (Velazquez Niño 2020). Indigenous and economically, socially or linguistically marginalised communities contribute important and enriching perspectives to the intercultural dialogue on themes such as the promise and peril of globalisation, the possibility of sustainable living, and the nature of solidarity and community.

**Source:** Trayectoria, prácticas y aportes de la Educación para la Ciudadanía Mundial en Colombia, Aguilar Diaz, Velazquez interviews, document analysis.





## **Big picture thinking: Educating the whole person for an interconnected world**

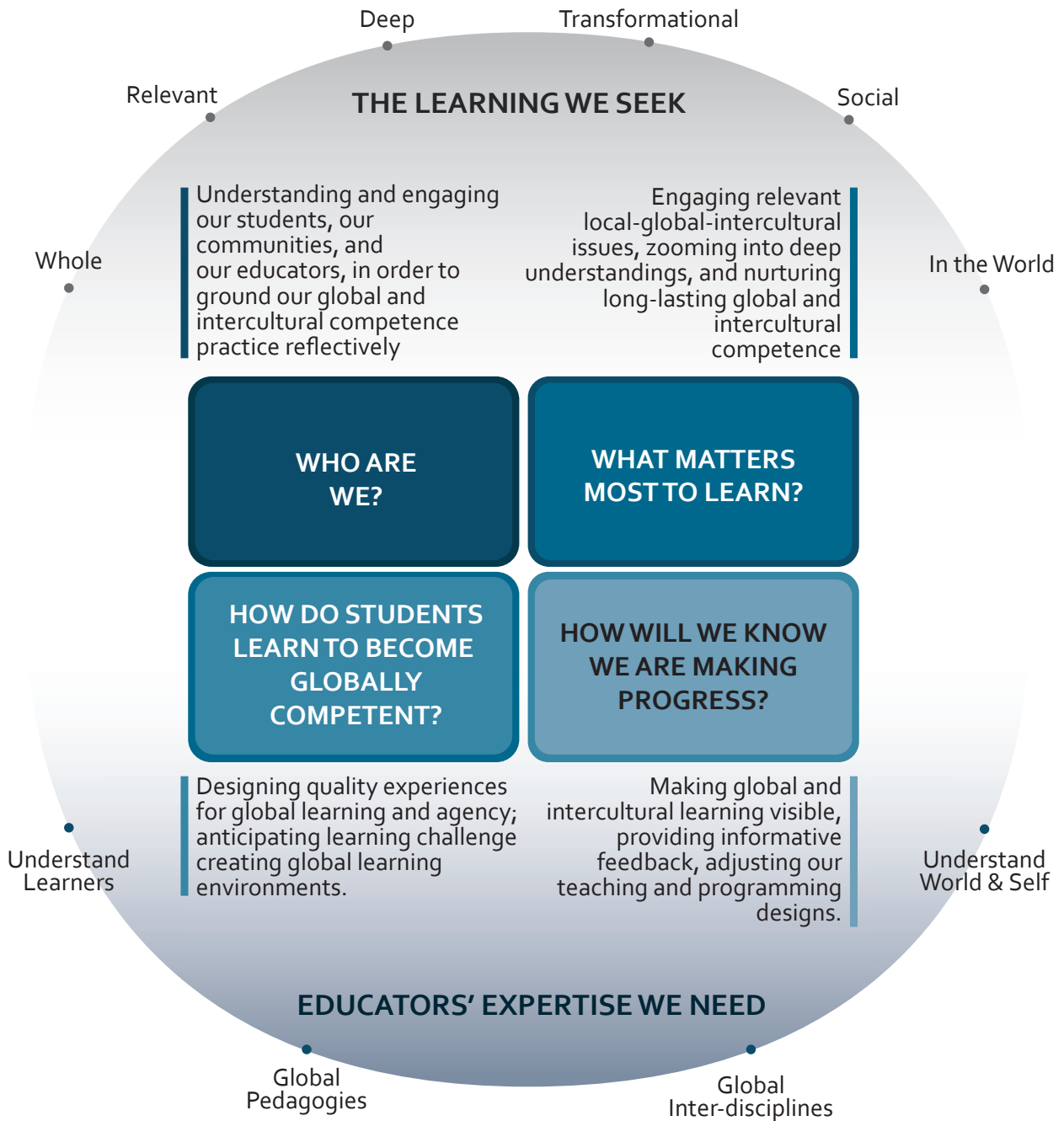
---

We live in a world full of dilemmas, one that increasingly requires a powerful compass with which to navigate the forces shaping our lives within and beyond our immediate environments. A compass that guides us to empathic perspectives whereby we build relationships across differences within the broader context of an unequal a complex, diverse and mobile world. A strong ethical and civic compass that points toward respect for human dignity and appreciation of diversity, that shows us how to recognise when these values have been violated and take action on behalf of others. Education today is no longer about acquiring information but about ensuring that all children and youth can construct the compass that will empower them to craft fulfilling lives and contribute to more just, inclusive and sustainable societies.

For professionals in education – teachers, school leaders, policy makers, and non-formal educators – these are exciting and overwhelming times.

The fundamental assumptions guiding the educational systems that trained us in the past are being revised in favour of a new paradigm of teaching and learning for our times. What we need are guiding principles on which to ground daily decisions. We need questions that can bridge old and new approaches and inspire new and actionable thinking. This publication offers a comprehensive framework shown in Figure 10 for educating the whole person for an interconnected world.

Figure 10. Educating for global competence: An integrative framework



The framework proposes six core invitations.

**An invitation to recalibrate our views of learning:** To move beyond learning as a cognitive process of knowledge acquisition and retention toward learning that: engages the whole person (cognitively, socio- emotionally, ethically, aesthetically); is relevant to learners, societies and our times; is informed by disciplines and inter-disciplines and brings about long-lasting shifts in mindset or disposition. Learning that is co- constructed with others and emerges from real engagement in authentic world contexts.

**An invitation to understand education in context:** To move beyond one-size-fits-all industrial metaphors of schools toward a human-centred and ecological understanding of students, educators, and communities in which they live. Increasing clarity about the question of “**who we are**” and how our identities and positions in local-global contexts critically inform our world views and educational priorities when preparing youth for the world.

**An invitation to focus on relevant curricula:** To move beyond a curriculum focused on basic information about countries or states toward a curriculum that foregrounds visibly relevant local global and intercultural themes, deep understandings, values and transformative dispositions. An ongoing reflection about “**what matters most to learn?**” can yield a dynamic curriculum able to respond to emerging phenomena and engage teachers and youth intrinsically. In such a view of the curriculum, students are expected to address real world issues through what they learn, leveraging disciplines like biology, history, or the arts as “lenses” for deeper understanding of their environment and the world. Leveraging their moral and civic lenses to participate in the construction of more inclusive and just societies.

**An invitation to rethink how students learn to become globally competent best:** To move beyond requiring simple memorisation of information about the world to the design of learning experiences in which students find agency in examining issues; learn to take perspectives; communicate and relate to others across difference; and take action toward a more sustainable and inclusive world. Learning experiences that anticipate learning demands and learning environments in which global awareness, understanding and engagement are the norm.

**An invitation to deepen our assessment practices:** To move from forms of assessment that are solely focused on information retention to assessing local, global and intercultural competence deliberately, *making students’ global competence visible; providing evidence-based feedback to students; and using evidence to improve programmes and teaching* particular aspects of global competence they seek to nurture and assess.

**An invitation to re-calibrate teacher preparation for an interconnected world:** To move beyond a generic teacher preparation that does not address global matters to preparing teachers for the specific demands of global competence education: learning to understand students in contexts and their global learning deeply; learning to deploy global pedagogies; working across disciplines; understanding world issues and themselves in the world critically.

The invitations above anticipate a possible journey – one in which we revisit perennial questions of education with an eye on the whole person and today’s interdependent world. Embarking on such a journey entails an exciting and urgent process of growth. All educators have the opportunity to teach for global competence and to do so in ways that are meaningful to students, themselves and society. Research indicates that more teachers are choosing to bring the world into their classrooms. Signs of this include teachers’ greater capacity to work in learner-centred environments;

their curiosity and enjoyment of learning about the world; shifts in their conceptions of the disciplines they teach; and openness to collaboration with peers (Boix Mansilla and Chua 2016; Tichnor-Wagner et al, 2019). The path toward becoming a globally competent teacher is often one of professional *and* personal transformation. It involves developing a global mindset whereby teachers bring curiosity about the world and other cultures to their work and their lives, and find opportunities to “see the world in our local experiences” with nuance, creating a culture of global competence in their classrooms.

Important developmental shifts are involved. Educators evolve from feeling that they do not have time to add a new unit to their packed curriculum to realising that teaching for global competence is about *bringing a new mindset* to their relationships with students and community, to the topics they already teach, and the environments they create in the classroom. Educators also grow from seeing students through the lens of their disciplines (“my math student”) to honouring them as full persons and being aware of their global connections. These relationships set the conditions for culturally responsive pedagogies and facilitate difficult and open-ended conversations. Teachers also change from feeling unprepared and lacking in sufficient knowledge about world regions and issues to realising that teaching for global competence involves using the disciplines they know as lenses through which to make sense of new issues; model values and dispositions to investigate the world; develop perspective; and build relationships across differences for students. Finally, teachers often grow from believing that global competence education is more suitable to elite students, older students, or social studies classes to recognising that it is not a luxury but a necessity in today’s world, and that all children and youth have the right to learn about our world, about other cultures, and about their own place in it. Ultimately, experienced teachers understand that learning to teach for global competence is a journey – a journey of self-transformation embodied in cycles of reflection about practice and informative feedback. This enlarges our collective sense of the profession, its meaning for children, youth and societies and the role each educator plays.

As stated in the beginning of this publication, today’s societies stand across multiple tensions: tension between infinite economic growth and the protection of our planet’s delicate ecosystems; between the financial economy and the real economy; between the wealthy and the poor; gross domestic product and the well-being of people; between technology and social needs; and between governance and the perceived voicelessness of people. At this historical juncture, whether we follow a path tilted toward an unwavering respect for human dignity and appreciation for diversity, a search for more sustainable and inclusive societies or fall into further polarisation, hatred and exclusion, it pivots, in some measure, on our capacity to educate our youth for the world, nurturing the knowledge, skills, and values here explored. It is without doubt an exciting time to be a professional in education.

# Annex A

## The Many Stories project

### U.S. – Elementary – English

#### Who are we? Understanding our students, our contexts, and ourselves

It is not 7:30 am yet, and children and families, old and new to the city of Portland in Maine, arrive at school. They are moving quickly, excited to jump into their 30-minute “Rise and Shine” workshops on yoga, art, writing, gym, knitting, international dances, and math games meant to create community and prepare students for learning with joy. Workshops are taught by teachers, parents and community members. Nancy and her fifth-grade teaching peers understand why these early gatherings matter: they have witnessed rapid demographic changes in their school over the last decade, specifically welcoming a large number of immigrant-origin families. The percentage of immigrant families in particular has increased from 6% to 27% over this time period. A large number of these families arrived through refugee settlement programmes from countries including Iraq, Afghanistan, Eritrea, Mexico, Guatemala, Syria, Somalia, South Sudan – regions suffering conflict and extreme climate conditions. The “Rise and Shine” programme helps make the school a welcoming place for this very diverse, multilingual and dynamic community.

Knowing what each child has to offer is a priority for Nancy and her colleagues who understand the need to adapt what they teach to make it relevant to students’ lives. This includes students whose first language is not English. To know students better, teachers create brief “portraits” of students made up of images or quotes from interviews with the children themselves and their families. Sometimes, they visit students’ homes to build a richer sense of each child’s personality, social bonds, interests, contexts. When they are together, Nancy and her colleagues often discuss the news of rising xenophobia in the state, adding urgency to their need to respond to diversity in their classrooms. Each of these teachers brings to this work a strong personal and professional commitment to equity in education. “The Many Stories Library” project helped turn this commitment into action. Inspired by Nigerian author Chimamanda Ngozi Adichie’s talk “The Danger of a Single Story”, Nancy and her colleagues decided to repurpose their regular English curriculum, seeking to appreciate their students’ rich cultural backgrounds. Embedding the project within the school’s English curriculum has allowed each fifth-grade class since the launch of the project to experience and add to the growing library, to share their collective investigations of identity, culture and diversity in a published book that can be found in public and school libraries across Portland.



## **What matters most for my students to learn and why? Focusing on relevant world issues, deep understandings, and global competence**

### ***Framing local-global issues that matter***

The Many Stories Library Project used stories as a way to shed light on the diversity of Portland, Maine. The teachers who launched the project saw stories as a particularly useful tool to help students learn about other peoples' perspectives and empathise with others. In this project, stories were leveraged to help students develop an understanding of the richness of their intercultural school community and provide a scaffolded opportunity to engage in dialogue across difference. This scaffolding came in the form of analysing story collections to identify missing stories; reflecting on their own identities to understand how their own experiences could add complexity to existing "single stories" about certain identities; interviews with family members allowing students to communicate intergenerationally; and writing and sharing their writing which pushed students to navigate questions of what stories matter to the world and why. Structuring the project in this way enabled students to think about not only what single stories are, but how they could impede intercultural understanding, and the ability to be appreciative of others' views.

### ***Focusing on global competence and deep understanding goals***

Embedding the Many Stories Library Project within the school's fifth-grade English curriculum allowed students to learn about writing mechanics and writing as a method to communicate ideas with others. In addition to developing writing skills, the project had explicit learning goals to help students develop global competence by providing opportunities for students to:

- Reflect on their own identities and cultures (Understanding Perspectives & Interacting Across Cultures)
- Consider whose voices and experiences were represented and missing from stories in their school libraries, or the stories they wrote themselves (Examining issues)
- Reflect on how literature opens a window to the world, and how it embodies perspectives (Understanding Perspectives & Interacting Across Cultures)
- Write and publish a powerful story that excels in literacy standards and provides readers a window into the author's or narrator's world (Taking action)

## **What learning experiences will foster my students' global competence best?**

### **Designing experiences, curating provocations, anticipating challenges**

#### ***Designing experiences and curating provocations***

Throughout the project, students developed global competence by engaging in a number of key learning experiences supported by powerful materials and thought provocations in the form of videos, images, and narratives. For example:

#### ***Reflecting on identities through the "Danger of a Single Story"***

Students began by watching Adichie's "Danger of a Single Story" video. After reviewing vocabulary they might not know, educators invited students to reflect on how single stories can perpetuate stereotypes about a people or place, prompting students' thinking about why stories, their own stories in particular, might be important to contribute to the world. Afterwards, they helped students connect the idea of "single stories" to their own experiences to help them think about

how each of them held a complex multifaceted identity through “Identity Charts” (image below). In pairs, students discussed similarities and differences between their charts, and when they came across things that they thought were stereotypes; and brainstormed “the other side of the story” that might emerge from their own experiences that could counter the stereotypical single story they had identified and what benefits there may be for the world if we seek to consistently view these fuller stories.



### **Exploring school libraries for single stories**

Students visited the school library, looking for books about their own and their peers’ countries of origin. They asked questions such as: Is everyone here represented? What happens when some stories are not told? Students found that not everybody’s country or culture was represented in their library. There was one book about Iraq and no books about South Africa. While there were a few books about countries like Somalia or South Sudan, these books tended to focus on general facts such as the country’s location and population. The need was clear: their school library would need a more representative collection of stories, and the children could contribute by sharing their own.

### **Conduct and analyse family interviews**

Children, often with their teachers, conducted interviews with family members as a way of finding stories that they wanted to write about. These interviews served as primary sources for students, and also as a way to connect with and build relationships within families. For example, Akual, a fifth-grade student, shared that through the family interviews and resulting project she learned about her own family’s stories about leaving South Sudan. After an interview she conducted with her mother she learned that her uncle said he came from the Lost Boys of Sudan, and upon sharing with her teacher, the class watched a documentary about the Lost Boys. For Akual, learning about the Lost Boys through both interviews with her family and the documentary helped her reflect on why perspectives in understanding history and storytelling matter: “Some people know the Lost Boys as a group of boys who were *lost*. They were not lost. They were captured.” Akual learned that the perspective of the person who is telling the story or history matters because it frames what is seen as “truth”.

### ***Participating in writers' workshop and consultations***

For several weeks, students focused on the writing of their stories – preparing sections, scenes, turning points, drafting, sharing, and revising. Throughout these phases, teachers and writers from the Telling Room, an educational non-profit based in Portland, held consultations with the young writers, playing the role of an intelligent reader, identifying phrases that were less clear or sharing the mental image of a description produced. They inquired about the young writers' intention, pointed their attention to a word or phrase, or the effect of a new paragraph or punctuation choice on the reader. These writers' workshops and consultations helped students visualise their audience and detect the effect of language choices on readers' interpretation of their story.

### ***Learning from and sharing stories***

Students learned from one another's stories throughout by reading the stories themselves, and through thinking, sharing and participating in collaborative editing and writing exercises that led to the final pieces. Towards the end, writers read these initial pieces aloud while the rest of the class was prompted to think about their own connections to the story. Those who heard something in the story that resonated with them were given one end of a piece of string, the other of which was held by the authors. By the end of the readings, these strings formed an intricate web that connected everyone in the class – visually communicating the connections we form through our stories.

### ***Publishing their stories***

A major motivation for students (and teachers) in the Many Stories Project was knowing that their writing would have an audience – in and outside of school – and that their stories would be published as a "real book." Having their writing taken seriously in this way fostered students' own identities as writers and, as a result, agents of change. Specifically, students began to see that writing was not just about the mechanical organisation of words on a page but a way to give voice to their experiences and ideas, to connect with others.

### ***Anticipating challenges***

For teachers and students, it was, at moments, challenging to balance a focus on the mechanics of writing and the deeper purpose of writing as a form of communication and the importance of finding a topic that is worth writing about. Key to this process was allowing time for relationships and the creative process to unfold. In particular, the "art" of listening was central to creating an environment that allowed students to share intensely personal stories with both their peers and educators. Part of this "art" was continuously casting perspective-taking as a way to show respect for others' points of view.

## **How will we know my students are making progress? Making my students' learning visible in order to support it further**

### ***Making students learning visible***

Given the project's focus on writing, the deeper purpose of writing as a form of communication, and the importance of finding a story angle that emphasised the students' unique background or family story, assessment took many forms and occurred at multiple times. The mechanics of writing were monitored throughout the process, focusing on things such as clarity of audience, word choice, and argument or narrative structure. Students also received feedback about the research process, for example, on interview questions. This furthered students' work towards learning how to

investigate the world and take perspective. Teachers also monitored students' understanding of the key concepts examined by the project such as culture and identity through conversations with the students or by paying attention to risks of stereotypes in stories. For example, often in conversations teachers gently challenged students' beliefs about culture as being fixed, as something that others who are different "have," and tied solely to national origin or religion. This opened up the possibility of people inhabiting multiple cultures at one given time. Feeling comfortable sharing personal stories became a key indicator of students' interactions in informal contexts in relation to cognitive, emotional and civic learning.

## Annex B

# Climate stewards go global!

### U.S. – Elementary – Science

#### Who are we? Understanding our students our contexts and ourselves

*My interests are broad, and I've enjoyed teaching reading, writing, math, social studies, and science. However, I became engrossed in environmental studies when I began teaching it as part of the required curriculum here in New York State about 20 years ago. Helping children understand the connections in the natural world is exciting because it fascinates the children and gives them many "Aha!" moments. I can't help but have the feeling that I'm teaching something really important when kids can begin to understand the many cause-and-effect relationships in the natural world, and the often-unforeseen consequences when one side of the relationship is changed by human intervention. (UCSB, 2020)*

For over 25 years, Kottie has been an elementary school teacher working with students ages 10-12 at Cottage Lane Elementary School, a public school in New York State. Kottie's professional identity is deeply influenced by her commitment to the continuous study of climate change and preparing the next generation to address it. Kottie is a member of the National Oceanic and Atmospheric Administration "Planet Stewards" programme, which is working to bring quality environmental education into classrooms. She received a Fulbright grant to spend a year in South Africa where she studied environmental science and met the teacher with whom she would later partner. Collectively, these experiences have helped her realise "that human-induced climate change, with its global repercussions, is the main driver that affects all species on Earth."

Kottie realises that teaching climate change to fourth-grade students "can be scary" and yet she knows her students well and is persuaded that they can engage in the topic with depth as long as her project finishes on a hopeful note of their taking some form of action. In her classroom, Kottie creates an atmosphere of joy and celebration of learning, and students are actively engaged with her and one another. Her school community is very close to the coast, which means that students in her class all have personally experienced climate-related change in landscape and weather. Kottie draws on the students' funds of knowledge that emerge from their lived experiences to ground their learning. In doing so, she keeps the following mission in mind:

*It (climate change) needs to be better understood by the public. The quality of life of today's children depends on it. That's where teachers come in. We're in a position to affect societal change by educating today's children about the basic causes and effects of climate change, and the actions they can take now to slow it down.*

In sum, Kottie’s clarity of purpose, her deep understanding of her students and her capacity to leverage local realities to help her students meet learning goals adds to the authenticity and depth of her practice.

### **What matters most for my students to learn and why? Focusing on relevant world issues, deep understandings, and global competence**

Kottie is interested in nurturing environmental stewardship through the study of climate change as a dynamic local and global phenomenon, i.e. “a global challenge that affects everyone, everywhere.” (United Nations, 2020). Her unit illustrates the ways in which, at a very young age, her students can begin to build a foundation in environmental issues and support sustainability – a topical priority in the OECD global competence framework.

Kottie understands that learning about climate change matters because populations the world over are adding carbon dioxide to the atmosphere exponentially.

Climate change is complex and unwieldy as a topic. To make it accessible, Kottie focuses the unit on the particulars of sea-level rise in coastal areas in New York and Cape Town, and the impact of melting polar ice caps in these regions.

Climate Stewards Go Global! has three global competence-related goals:

- Understand the dynamics of climate-induced sea level changes (Examining Issues)
- Understand how global phenomena like climate change has distinct local manifestations and require locally informed action (New York & Cape Town) (Examining Issues & Taking Action)
- Develop the capacity to work with peers across cultures in an authentic way to address a common global problem (Interacting Across Cultures & Understanding Perspectives)

What learning experiences will foster my students’ global competence best? Designing experiences, curating provocations, anticipating challenges.

Kottie created a series of lessons for her students to learn important Earth Science concepts while also building their literacy skills through the reading and writing of informational texts on the topic. Four learning experiences stood out in nurturing student’s global competence in this unit.

### ***Exploring climate change with the use of maquettes***

To help her students visualise how the melting polar caps raise sea levels, and how such changes could affect landscapes and communities differently, Kottie invited students to build a maquette. Students placed tiny models of houses on the lower levels of the maquette, and then experimented with the rate at which the ice cubes placed on the higher levels melted and flooded the lower levels. When they saw how their “houses” were swiftly swept away by the cascading waters or the rising water level, the students became agitated, and many moved their “homes” to different parts on the lower levels but found that the result remained the same. The students’ emotional response directed their attention to understanding why their “houses” could not be protected if the ice caps continue to melt and



the sea levels rise. The students deliberated about how the landscape and economic resources would affect their ability to survive in the created scenarios. The experience brought several key ideas to life, from understanding causal factors that are distant in time or space from their effects to the necessity of “preparedness” among inhabitants of coastal communities and the ways in which ocean rising would affect communities differently.

### ***Exploring the impact of climate change locally***

The maquette experience was followed up with a second learning experience investigating various other cases of impact. Kottie showed them photographs of the devastation wrought by Hurricane Sandy in their own neighbourhood and other locations. She also brought them on walks to survey actual scenes of destruction. Students read books on the impact of climate change and watched a BrainPOP movie on global warming and its effects. As they studied impacts in communities far away as well as their own, students wondered: what causes weather, how do we impact it, and how does it impact us? As the students began to digest the causes and consequences of climate change across the cases they studied, key concepts like global warming, greenhouse effect, pollution, the Keeling Curve, and others began to make sense both as relevant features of each case and clear trends overall.

### ***Exploring the impact of climate change internationally***

The maquettes illuminate the confluence of factors that shape the differential impact of ocean rising in various communities, preparing the students to compare them with real communities next. In a third learning experience, students were invited to deeply reflect on the impact of climate change not just on the east coast of the United States but also in Sun Valley, Arizona and Cape Town, South Africa through a digital exchange. Teachers provided students opportunities to ease into the collaboration (sharing name, age, family, interests, food, and questions) and as the students became increasingly comfortable with one another and more confident about their ability to communicate with peers halfway around the world, Kottie invited the children to share their understanding of the causes and impacts of global warming in the two different locations through the use of e-blogs. The blog exchanges were opportunities for her students to develop the habit of comparing the impact of the same phenomenon in different locations and understand how context was important in understanding responses to global warming. For instance, students discovered that the impacts of sea level rising on the economy was serious for Cape Town, where many live off the tourism industry.



### ***Exploring actions to reduce the impact of climate change***

For students, global problems can feel daunting in their magnitude and calamitous in their consequences, often coming across as impossible to solve or ameliorate. In a fourth learning experience within her unit, Kottie supported her fifth-graders in taking action to reduce their carbon footprint by providing opportunities for them to work with peers in a different context – Cape Town in South Africa. The students wrote blog entries that introduced their e-pals to how they lived as well as shared ideas about the causes and impacts of global warming and how they might take action to alleviate global warming. Through their communication with fifth-graders in Cape Town, Kottie's students came to see that they were not alone in their endeavour to combat global warming. Both classes in different locales expressed their concerns about the impact of global warming (e.g. sea levels rising), and shared their ideas for how they could realistically take action against climate change in their blog entries. In the debrief following the Skype lesson where the students saw their e-pals for the first time, Kottie's students expressed how pleased they were that there were similar ideas presented by both classes (e.g. riding bikes to school), as well as how they learned from their e-pals alternative methods that they had not thought of (e.g. growing bamboo which create 30% more oxygen than trees). When they saw young people their age as invested as they were in their efforts to find solutions to global warming, Kottie's students were more inclined to view taking action as possible and, in fact, necessary.

### ***Understanding complex causality***

Learning about climate change presents important causal reasoning demands. Causes and consequences are far apart in space and time, making it difficult to see connections. For example, it is easier for the mind to believe that atmospheric temperature is rising "because there are many cases that put hot smoke in the air" than to advance a more complex explanation involving carbon molecules, the sun, and the greenhouse effect. Furthermore, the unintentional causes of particular events are sometimes difficult to see, making complex explanations a challenging learning achievement. Anticipating this learning demand, Kottie includes concrete three-dimensional models for students' experimentation and creates opportunities for students to understand that the effects of climate change can lead to changes that are often far away from the initial emissions. Because the collaborating Cape Town class emphasised the effects of climate change on tourism while Kottie's class focused on the science of climate change, the unit supported students in understanding the multiple intertwined causes and effects of climate change.

### ***Confronting stereotypes***

The collaboration with the Cape Town students provided opportunities for Kottie's fifth-graders to not only come to know their peers from a different culture but placed them in situations where they had to confront their own preconceptions about South Africans. When they were first asked to imagine what their e-pals were like, some students in Kottie's class described dark-skinned children living in poor or less developed communities. The ideas, they explained, came mostly from popular media. When they saw their e-pals' photos for the first time, and traded personal stories about themselves and their family, the students were astounded by two realisations: their e-pals were not physically what they had imagined (many of them were fair-skinned like themselves) and they actually had more in common with them than expected (they had pets at home, or played soccer, or enjoyed the same computer games). Forced to revise their initial ideas about their e-pals, the students began to reframe their conceptions of South Africans as well as question popular presentations of cultures in popular media.



## **How will we know my students are making progress? Making my students' learning visible in order to support it further**

In the learning experience designed by Kottie, we see many opportunities for her to observe students developing thinking about climate change. These opportunities include the construction of the model and reflections about the impact of rising water levels in local and international communities. As she walks around the classroom, she troubleshoots and provides additional feedback. As students learned about varied contexts and situations, additional opportunities were provided for students to write, raise questions and discuss climate change, allowing the teacher to better understand their developing contextual understanding of this global issue.

By modelling and making her own learning visible, she is communicating a notion that we have responsibility to the planet and environment through our actions and choices, and one of the most important actions that students can take is to continue to explore and seek to understand this complex topic beyond the duration of this unit.

## Annex C

# Exploring planetary health through intercultural digital exchange

### India – High School – English

#### Who are we? Understanding our students, our contexts, and ourselves

Charlotte is a co-founder and teacher at the [Loka School](#), which she describes as “a small school with big dreams.” The school is located in a rural village in Bihar, India. Its vision is to offer an education that is both locally rooted and globally connected. The vision is deeply connected to Charlotte’s perception of the current moment in village life. “The wonder and beauty of our village,” she explains, “is that the way of life is still connected to nature... and because development has not fully come in, we still have some opportunities: The children can do things differently. Loka has not yet been spoiled by ‘destructive development.’” (Out of Eden Learn, 2020)

Charlotte expects her students to become active members and change-makers in the community, and consistently finds opportunities for students to interview community members and bring their findings and viewpoints to the classroom. She also understands that, while direct dialogue with community members is one important way for students to make sense of the global issues they study, interacting with people around the world is also essential.

One way students have done this is by participating in an online curriculum on the topic of Planetary Health. The curriculum is offered by *Out of Eden Learn*, a free, online, intercultural exchange programme developed at Project Zero, a research centre at the Harvard Graduate School of Education. The Planetary Health curriculum was developed by the Out of Eden Learn team in collaboration with the [Planetary Health Alliance](#) at Harvard’s T. H. Chan School of Public Health. It is one of several Out of Eden Learn “learning journeys”. These are 8 to 12-week learning experiences in which students in classrooms around the world explore their local communities and interact online with students in different settings to share their findings and make connections. (Out of Eden Learn, 2020) Each semester, participating schools from around the world are separated into internationally diverse learning groups of similar age, who embark on a shared learning experience together.

#### What matters most for my students to learn and why? Focusing on relevant world issues, deep understandings, and global competence

Understanding planetary health, or the relationship between human health and environmental change, is a priority for Charlotte and her students: “It’s such an urgent topic, something that’s so

close to all of us. We're talking about our planet, our home, our shared home." Charlotte and her students understand that because they live in a special place in the world that is still somewhat pristine, they have important insights to share about environmental sustainability and conservation. They also understand that there is much to learn about other contexts and cultures, as well as their own. The Planetary Health curriculum has helped Loka students begin to envision future scenarios for development in their community and to reflect and take action towards environmental sustainability. The Out of Eden Learn digital platform paired Loka students with students in the United States (Danville, California; Chicago, Illinois), and China (Shanghai). Charlotte emphasises the importance of looking toward the future and to "what people expect and wish for that future." She says:

*What we're trying to think of now is how to encourage the children not just to go back to the past. It's a good thing to look back to the past and say how did we do it then and how was that connected to the planet and our health, but also to think into the future ... Is there a new way of thinking we can apply?*

Because the issue of planetary health is complex and multifaceted, clarity about target learning goals is essential. Four learning goals are targeted in Out of Eden Learn's Planetary Health curriculum (Out of Eden Learn, 2018). Students are encouraged to:

1. Begin to take on a Planetary Health Lens, which means learning to notice and appreciate the complex interactions between environmental changes and human health – in their own neighbourhoods, and in the wider world (Examine Issues, Understand Perspectives)
2. Appreciate how their everyday activities connect to broader natural systems (Examine Issues)
3. Feel empowered to investigate topics related to planetary health on their own and across cultural contexts and differences (Examine Issues and Communicating)
4. Develop a sense of agency with regard to planetary health by identifying ways that their own actions and aspirations can make a difference (Take Action for Sustainable Development)

## **What learning experiences will foster my students' global competence best? Designing experiences, curating provocations, anticipating challenges**

The Planetary Health Unit features four key learning experiences:

- I. **Walking with Health in Mind:** Students take a slow walk in their own neighbourhoods, noticing things that may have an impact on their own health, the health of people in their community, and/or the health of the environment.
- II. **Uncovering the Big Idea of Planetary Health:** Students read and view resources related to planetary health. Then, they draw on their work from Walking with Health in Mind, to choose one human health impact and one environmental change and make a concept web connecting the two.
- III. **Zooming in, Reporting Out:** Students identify an issue or topic related to planetary health that particularly interests them, then investigate it and share their findings.
- IV. **Exploring What We Can Do:** Students identify a few choice-points in their everyday routines where they make choices that might impact planetary health. Then, they select one

choice-point and consider alternative choices that would be healthier for their communities and the planet. Finally, they create a resource that informs others about the issue and persuades them to adopt similar changes in their own communities (Out of Eden Learn, 2018).

Charlotte appreciates the accessible nature of a unit design that grounds student inquiry, encouraging them to find things out for themselves, to make their own connections, and to pursue their own interests. As in any inquiry-based learning project, students need support in crafting questions, accessing reliable knowledge, and making well-grounded interpretations – support which Charlotte found on the platform and in dialogue with her peers.

### ***Anticipating challenges***

**Moving beyond superficial digital exchange:** Like many digital exchange platforms, Out of Eden Learn engages students in social media-like, asynchronous online exchange. Students post their work on the platform, which is open to all classrooms in their assigned learning group; other students make comments on the posts, the original student then comments back, more students join in, and so on. This social media-like design has its promises and challenges. On the one hand, it offers easy familiarity: students know how it works and can readily participate. On the other, it presents characteristic challenges of digital exchange. For one, students' responses to one another's posts can be short and superficial: "likes" that don't really engage with the depth of thinking behind a post. Additionally, misconceptions and missteps can arise in intercultural exchange, even when students have the best of intentions.

To help address the challenge of superficial exchange, Charlotte drew on a Dialogue Toolkit (Out of Eden Learn, 2018) whose purpose is to promote thoughtful comments and meaningful discussions in online learning communities. It consists of a set of 'moves' that students can make that help move them beyond surface exchange. Dialogue moves include raising questions, naming one's perspective, "snipping" (clipping or quoting portions of text in commenting) and describing details that stand out within another student's post. The Dialogue Toolkit is embedded in the digital platform. Charlotte and other teachers support strong dialogue by modelling its 'moves' in in-person communication or reflecting on the purpose of thoughtful dialogue in digital exchange (Out of Eden Learn, 2020).

### ***Understanding others***

Out of Eden Learn developed the Three O's framework on intercultural exchange, which helps students become alert to their own misconceptions and blind spots. An explanatory video and related resources are embedded in the platform. The Three O's framework specifically helps students recognise and navigate:

- Overgeneralisation: whereby students may make comments about whole groups of people as if everyone's experience or perspective were the same.
- Overconfidence: which involves overestimating how much one knows or understands about a phenomenon or group of people, leading to a lack of curiosity or appropriate humility about the limits of one's knowledge.
- Othering: which is revealed by implicitly or explicitly conveying that one does not consider people from another group to be quite one's equal, perhaps through a dismissive or overly pitying tone (Out of Eden Learn, 2018).

## **How will we know my students are making progress? Making my students' learning visible in order to support it further**

The digital platform, by its very nature, makes students' learning visible through postings, images, projects, comments and responses. Looking across these digital artifacts, Charlotte and her peers can identify powerful thinking and learning in action and areas where students need support. In digital exchange groups, students can receive feedback not only from their teachers but also from peers within and beyond their communities.

Ultimately, the most important way in which students' learning becomes visible is in the spontaneous choices, values, and behaviours that students exhibit in their daily lives. As Charlotte notes, "We believe in education that is more than gathering information; it's about behavioural change, about *being* the change... In the end it's about what we do every day, how we spend our time, and how we choose to change what we do. And that's the change this [curriculum] brings."

# References

**Aguilar, N., Diaz, J., & Velásquez, A. M.** (en prensa), Trayectoria, prácticas y aportes de la Educación para la Ciudadanía Mundial en Colombia, *Revista Colombiana de Educación*.

**Aldridge, J. et al.** (2016), "Students' perceptions of school climate as determinants of well-being, resilience and identity", *Improving Schools*, <http://dx.doi.org/10.1177/1365480215612616>.

**Andreotti, V.** (2006), *Soft Versus Critical Global Citizenship Education*, Policy & Practice (Centre for Global Education), 3, 40-51.

**Appiah, A.** (2006), *Cosmopolitanism: Ethics in a world of strangers* (1st ed., Issues of our time), New York: W.W. Norton & Company.

**Appleyard, N. & McClean, L.** (2011), Expecting the Exceptional: Pre-Service Professional Development in Global Citizenship Education, *International Journal of Progressive Education*, Jun2011, Vol. 7 Issue 2, p6-32.

**Arendt, H.** (1958), *The human condition*, Chicago: University of Chicago Press.

**Asia Society.** (2010), International perspectives on U.S. education policy and practice: What can we learn from high-performing nations? <http://asiasociety.org/files/pdf/learningwiththeworld.pdf>.

**Asia Society.** (2020), Global Competence Outcomes and Rubrics. Retrieved on November 1st, 2020, from <https://asiasociety.org/education/global-competence-outcomes-and-rubrics>.

**Bandura, A.** (1977), *Social Learning Theory*, Englewood Cliffs, NJ: Prentice-Hall.

**Barrett, M., M. Byram, I. Lázár, P. Mompoin-Gaillard and S. Philippou** (2014), *Developing Intercultural Competence through Education*, Council of Europe Publishing, Strasbourg.

**Baiutti, M.** (2018), Fostering assessment of student mobility in secondary schools: Indicators of intercultural competence, *Intercultural Education*, 29(5-6), 549-570.

**Boix Mansilla, V.** (2016), How to be a global thinker, *Educational Leadership*, Vol.74/4, pp. 10-16.

**Boix Mansilla, V. and H. Gardner** (2007), "From teaching globalisation to nurturing global consciousness" in Suárez-Orozco, M. (ed.) *Learning in the Global Era; International Perspectives on Globalisation and Education*, University of California Press, California, pp. 47-66.

**Boix Mansilla, V. & F. Chua, F.** (2016), Educating for the 21st Century. *Signature Pedagogies in Global Competence Education: Understanding quality teaching practice*. Springer.

**Boix Mansilla, V., M. Lamont, & K. Sato.** (2016), Shared Cognitive–Emotional–Interactional Platforms, *Science, Technology, & Human Values*, 41(4), pp. 571-612.

**Boix Mansilla, V., & Wilson, D.** (2020), What is Global Competence, and What Might it Look Like in Chinese Schools? *Journal of Research in International Education*, 19(1), pp. 3-22.

**Boix-Mansilla, V. & Wilson, D.** (2021), *Educating for Global Competence in Chinese Classrooms*, Foreign Language Teaching and Research Press.

**British Council** (2013), *Culture at Work: The Value of Intercultural Skills in the Workplace*, British Council, United Kingdom.

**Bronfenbrenner, U.** (1977), *Toward an experimental ecology of human development*. *American Psychologist*, 32(7), 513–531.

**Bronfenbrenner, U.** (1994), Ecological models of human development. In *International Encyclopedia of Education* (2nd ed., vol. 3). Oxford, UK: Elsevier.

**Brubacker, R. and D. D. Laitin** (1998), Ethnic and nationalist violence, *Annual Review of Sociology*, Vol. 24, pp. 423-52.

**Bruner, J. S.** (1976), *The Process of Education*, Cambridge: Harvard University Press.

- Bruner, J.** (1996), *The culture of education*, Cambridge, Mass.: Harvard University Press.
- Council of Europe** (2018), Reference Framework of Competences for Democratic Culture, Volume 1: *Context, concepts and model*, Strasbourg: Council of Europe Publishing.
- Darling-Hammond, L., & J. Bransford.** (2005), *Preparing teachers for a changing world : What teachers should learn and be able to do* (1st ed.). San Francisco, CA: Jossey-Bass.
- Darling-Hammond, L. & F. Adamson.** (2013), *Developing Assessments of Deeper Learning: The Costs and Benefits of Using Tests that Help Students*, Stanford Center for Opportunity Policy in Education.
- Darling-Hammond, L.** (2008), *Powerful learning : What we know about teaching for understanding* (1st ed.). San Francisco, CA: Jossey-Bass.
- Deardorff, D. K.** (2006), *Identification and assessment of intercultural competence as a student outcome of internationalization*, *Journal of Studies in International Education*, 10(3), 241-266.
- Deardorff, D. K.** (2013), "Promoting understanding and development of intercultural dialogue and peace: a comparative analysis and global perspective of regional studies on intercultural competence", report prepared for UNESCO Division of Cultural Policies and Intercultural Dialogue, UNESCO, Paris.
- Deardorff, D.K.** (2020), *Manual for Developing Intercultural Competences: Story Circles*, UNESCO/Routledge.
- Delors, J. et al.** (1996), *Learning: The Treasure Within*, Paris, UNESCO.
- Delpit, L.** (2012), *Multiplication is for White People: Raising Expectations of Other People's Children*, New York: the New Press.
- Eccles, J.S., and A. Wigfield.** (2002), Motivational beliefs, values, and goals, *Annual Review of Psychology*, 53, 109–132. [doi.org/10.1146/annurev.psych.53.100901.135153](https://doi.org/10.1146/annurev.psych.53.100901.135153).
- Elgin, Catherine Z.** (1999), "The Heart Has Its Reasons." In *Considered Judgment*, edited by C. Z. Elgin, 146-69, Princeton, NJ: Princeton University Press.
- Fullan, M., J. Quinn & J. McEachen, J. Joanne.** (2017), *Deep Learning*, Thousand Oaks: Sage Publications.
- Ferreiro, E. & Teberosky, A.** (1979), *Los Sistemas de Escritura en el Desarrollo del Niño, Siglo XXI*.
- Gardner, H.** (2006), *Multiple Intelligences: New Horizons in Theory & Practice*, Cambridge: PerseusBooks.
- Gardner, H.** (2006), *Five minds for the future* (1st ed.). Boston, Mass: Harvard Business School Press.
- Gaudelli, W.** (2016), *Global Citizenship Education*, Taylor and Francis.
- Gehlbach, H., Brinkworth, M. E., & Wang, M.T.** (2012), The social perspective-taking process: What motivates individuals to take another's perspective?, *Teachers College Record*, 114(1), 197-225.
- Gomez Barreto et al.** (2021), *Handbook of Research on Promoting Social Justice for Immigrants and Refugees Through Active Citizenship and Intercultural Education*, IGI Global.
- Hayden, M., & J. Thompson.** (2000), *International schools & international education: Improving teaching, management & quality*. London : Sterling, VA: Kogan Page; Stylus.
- Helliwell, J. F.** (2003), *Globalisation and Well-Being* (Brenda and David McLean Canadian Studies), Vancouver: UBC Press.
- Immordino-Yang, M.H., and Fischer, K.W.** (2010), *Brain development*. In I. Weiner and E. Craighead (Eds.), *Corsini Encyclopedia of Psychology* (4th ed., pp. 254–256), New York: John Wiley & Sons.
- Immordino-Yang, M.H. Darling-Hammond L. and Krone, C.** (2018), *The Brain Basis for Integrated Social, Emotional, and Academic Development: How Emotions and Social Relationships Drive Learning*, Aspen Institute, Last retrieved from <https://eric.ed.gov/?id=ED59633708/01/2021>.
- James, C.** (2014), *Disconnected : Youth, new media, and the ethics gap* (John D. and Catherine T. MacArthur Foundation series on digital media and learning), Cambridge, Massachusetts: The MIT Press.
- Jaquith, A. Zielezinski, M.** (2019), Evaluation Deeper Learning Retrospect and Prospect, Stanford Center for Opportunity Policy in Education, Last retrieved from <https://hewlett.org/wp-content/uploads/2018/12/Evaluating-Deeper-Learning-Brief.pdf>.
- Jones, S. & Doolittle, E.** (2017), Social and Emotional Learning: Introducing the Issue, *Social and Emotional Learning*, Princeton Brookings.
- Karmiloff-Smith, A.** (1992), *Beyond modularity : A developmental perspective on cognitive science (Learning, development, and conceptual change)*. Cambridge, Mass.: MIT Press.
- Klein, J.** (2002), *Interdisciplinary Education in K-16 and college*, New York, College Board Publications.
- Kymlicka, W.** (1995), *Multicultural Citizenship : A Liberal Theory of Minority Rights*, Oxford University Press, Oxford.

- Lapayese, Y.** (2003), *Toward a Critical Global Citizenship Education*, *Comparative Education Review*, 47(4), 493-501.
- Lave, J & Wenger, E.** (1991), *Situated Learning: Legitimate Peripheral Participation*, Cambridge: Cambridge University Press.
- Lee, E.** (2019), *America for Americans : A history of xenophobia in the United States* (First ed.), New York, NY: Basic Books.
- Lesaux, N., & Siegel, L.** (2003), The Development of Reading in Children Who Speak English as a Second Language, *Developmental Psychology*, 39(6), 1005-1019.
- Malaguzzi, L., & P. Cagliari.** (2016), *Loris Malaguzzi and the schools of Reggio Emilia : A selection of his writings and speeches, 1945-1993* (Contesting early childhood), Abingdon, Oxon ; New York: Routledge.
- McFarland, Sam, Hackett, Justin, Hamer, Katarzyna, Katarzyna-Miller, Iva, Malsch, Anna, Reese, Gerhard, & Reysen, Stephen.** (2019), Global Human Identification and Citizenship: A Review of Psychological Studies, *Political Psychology*, 40(S1), 141-171.
- Merryfield, M. M.** (2008), "Scaffolding social studies for global awareness", *Social Education*, Vol. 72/7, pp. 363-366.
- Mesa, M., Zúniga García-Falces N., Cabezudo, A., Hatcher, R., Revilla González, F.** (2019), *Educación para la ciudadanía: De lo local a lo global*. Centro de Investigación para la Paz.
- Neumann, A.** (2006), 'Professing Passion: Emotion in the Scholarship of Professors at Research Universities.' *American Educational Research Journal* 43 (3): 381-416, 420-24.
- OECD** (2017), *Healthy People, Healthy Planet: The role of health systems in promoting healthier lifestyles and a greener future*, OECD Publishing, Paris, <https://www.oecd.org/health/health-systems/Healthy-people-healthy-planet.pdf>.
- OECD** (2019), *OECD Future of Education and Skills 2030: OECD Learning Compass 2030*, OECD Publishing, Paris, [https://www.oecd.org/education/2030-project/teaching-and-learning/learning/learning-compass-2030/OECD\\_Learning\\_Compact\\_2030\\_concept\\_note.pdf](https://www.oecd.org/education/2030-project/teaching-and-learning/learning/learning-compass-2030/OECD_Learning_Compact_2030_concept_note.pdf).
- OECD** (2020), *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/d5f68679-en>.
- Out of Eden Learn** (2018), *Dialogue Toolkit*, <https://learn.outofedenwalk.com/dialogue-toolkit/>.
- Out of Eden Learn** (2018), *Special Learning Journey: Introduction to Planetary Health* <https://walktolearn.outofedenwalk.com/2018/10/18/uncovering-the-big-idea-of-planetary-health/>.
- Out of Eden Learn** (2018), *Understanding Culture(s): Promises and Pitfalls of Out of Eden Learn and Other Intercultural Digital Exchange Programs* <https://walktolearn.outofedenwalk.com/2018/10/18/uncovering-the-big-idea-of-planetary-health/>.
- Out of Eden Learn.** (2020), *Exploring Planetary Health* (Video) [https://www.youtube.com/watch?time\\_continue=83&v=JV41A1NYu5E&feature=emb\\_title](https://www.youtube.com/watch?time_continue=83&v=JV41A1NYu5E&feature=emb_title).
- Oxfam GB.** (2015), *Global Citizenship in the Classroom: A guide for Teachers*, Oxfam.
- Perkins, D.** (2014), *Future Wise Educating our Children for a Changing World*, San Francisco: Jossey Bass.
- Perkins, E. & T.Grotzer.** (2005), Dimensions of Causal Understanding: the Role of Complex Causal Models in Students' Understanding of Science. *Studies in Science Education*. 41:1, 117-165, <http://dx.doi.org/10.1080/03057260508560216>.
- Postman, N.** (1995), *The end of education : Redefining the value of school* (1st ed.), New York: Knopf.
- Reimers, F.** (2017), *Empowering Students to Improve the World in Sixty Lessons. Version 1.0*, CreateSpace Independent Publishing Platform.
- Reimers F. Chung C** (2018), *Preparing Teachers to Educate Whole Students* (Eds) Cambridge: Harvard Education Press.
- Ritchhart, R.** (2015), *Creating cultures of thinking: The 8 forces we must master to truly transform our schools*, San Francisco: Jossey-Bass & Pfeiffer Imprints, Wiley.
- Ritchhart, R., M. Church, & K. Morrison.** (2011), *Making Thinking Visible* (1. Aufl. ed.) San Francisco, Calif: Jossey-Bass. Rivkin, S., E. Hanushek & J. Kain. (2005), *Teachers Schools and Academic Achievement*. *Econometrica*, Vol 73 No. 2, 417-458.
- Ritchhart, R., & Church, M.** (2020), *The Power of Making Thinking Visible*. Newark: John Wiley & Sons, Incorporated.
- Rogers, J., M. Ishimoto, A. Kwako, A. Berryman, C. Diera.** (2019), *School and Society in the Age of Trump*. Los Angeles, CA: UCLA's Institute for Democracy, Education, and Access.
- Rogoff, B.** (2003), *The Cultural Nature of Human Development*. New York: Oxford University Press.
- Ruffino, R.** (2012), Intercultural education and pupil exchanges, In *Council of Europe, Intercultural competence for all, Preparation for living in a heterogeneous world* (pp. 63-94), Strasbourg: Council of Europe Publishing.
- Ryan, R.M., and E.L. Deci.** (2000), Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67. <http://dx.doi.org/10.1006/ceps.1999.1020>.



- Scheffler, I.** (1986), "In Praise of the Cognitive Emotions." In *Inquiries: Philosophical Studies of Language, Science, and Learning*, edited by I. Scheffler, 347-61. Indianapolis, IN: Hackett Publishing Company.
- Scheffler, I.** (2013), *Of Human Potential* (Routledge Revivals) (Routledge Revivals), London: Taylor and Francis.
- Scuole Internazionali.** (2020), *About Scuole Internazionali*, Retrieved on October 1st, 2020 from <http://www.scuoleinternazionali.org/Homepage-ita/>.
- Sen, A.** (2007), *Identity and Violence: The Illusion of Destiny*, Penguin Books, India.
- Selman, Robert L, & Byrne, Diane F.** (1974), A Structural-Developmental Analysis of Levels of Role Taking in Middle Childhood, *Child Development*, 45(3), 803.
- Suárez-Orozco, M.** (2019), *Humanitarianism and mass migration: Confronting the world crisis*, Oakland, California: University of California Press.
- Swidler, A.** (1986), *Culture in Action: Symbols and Strategies*, *American Sociological Review* 51:273-86.
- Tichnor-Wagner, A., Parkhouse, H., Glazier, J., & Cain, M..** (2019), *Becoming a Globally Competent Teacher*, Alexandria: Association for Supervision & Curriculum Development.
- Tourbier, M.** (2020), The council of Europe's competences for democratic culture: Employing Badiou and Plato to move beyond tensions in the values it promotes, *Educational Philosophy and Theory*, 52(1), 22-33.
- UCSB.** (2020), Kottie Christie-Blick Contemplates a Career in Teaching, UC Santa Barbara The Gervitz School, <https://education.ucsb.edu/alumni-news/kottie-christie-blick-contemplates-career-teaching> (Retrieved September 1st, 2020).
- UNESCO** (2014), *Teaching Respect for All*, UNESCO, Paris.
- UNESCO & Institute for Economics and Peace** (2020), *Measuring intercultural dialogues: A conceptual and technical framework*, UNESCO, Paris.
- United Nations.** (2020), The 17 Goals. <https://sdgs.un.org/goals> (Retrieved September 9th, 2020).
- US Environmental Protection Agency** (2015), *Climate Change Basics*, US Environmental Protection Agency.
- United Nations** (2019), Population Facts. [https://www.un.org/en/development/desa/population/migration/publications/populationfacts/docs/MigrationStock2019\\_PopFacts\\_2019-04.pdf](https://www.un.org/en/development/desa/population/migration/publications/populationfacts/docs/MigrationStock2019_PopFacts_2019-04.pdf) (Retrieved November 15th, 2020).
- United Nations** (2020), COVID19o UN counters pandemic-related xenophobia <https://www.un.org/en/coronavirus/covid-19-un-counters-pandemic-related-hate-and-xenophobia>.
- Vainio-Mattila, A.** (2009), Internationalizing curriculum: A new kind of education? *New Directions for Teaching and Learning*, 2009(118), 95-103.
- Velazquez Niño, A.M.** (2020), *Trayectoria, prácticas y aportes de la Educación para la Ciudadanía Mundial en Colombia*, Manuscript in preparation.
- Vincent-Lancrin, S., et al.** (2019), *Fostering Students' Creativity and Critical Thinking: What it Means in School*, *Educational Research and Innovation*, OECD Publishing, Paris, <https://doi.org/10.1787/62212c37-en>.
- Wang, M. et al.** (2010), "A Tobit Regression Analysis of the Covariation Between Middle School Students' Perceived School Climate and Behavioral Problems", *Journal of Research on Adolescence*, Vol. 20/2, pp. 274-286, <http://dx.doi.org/10.1111/j.1532-7795.2010.00648.x>.
- Weissbourd, R., S. Bouffard and S. Jones** (2013), *School climate and moral and social development*, National School Climate Centre, New York, NY.
- Wertsch** (1985), *Vygotsky and the social formation of mind*, Cambridge, Mass: Harvard University Press.
- Whitmee, S., et. al** (2015), Safeguarding human health in the Anthropocene epoch: Report of The Rockefeller Foundation–Lancet Commission on planetary health, *The Lancet* (British Edition), 386(10007), 1973-2028.
- Wineburg, S. et al** (2018), *Evaluating Information: The cornerstone of civic online reasoning* *Stanford Digital Repository*, Retrieved January 8, 2018.
- Wiske, M. S.** (1999), *Teaching for Understanding: Linking Research with Practice*, San Francisco Jossey Bass.
- Zhao, Y.** (2010), Preparing Globally Competent Teachers: A New Imperative for Teacher Education, *Journal of Teacher Education*, 61(5), 422-431.
- Zuckerman, E.** (2013), *Rewire: Digital Cosmopolitans in the Age of Connection*, W. W. Norton & Company.

Programme for International  
Student Assessment



# Big picture thinking

How to educate the whole person  
for an interconnected world

**Principles and practices**

[edu.contact@oecd.org](mailto:edu.contact@oecd.org)

<https://oecdeditoday.com/>

<https://www.oecd-ilibrary.org/education>

[www.oecd.org/pisa/](http://www.oecd.org/pisa/)

 @OECEduSkills |  OECD Education and skills |  @oecd\_education\_skills