

# IBE SPECIAL ALERT FUTURE COMPETENCIES



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*In March 2017, the IBE-UNESCO Director convened a first consultation meeting on Future Competencies and the Future of Curriculum: A Global Reference for Curricula Reforms for the Fourth Industrial Revolution. This was the first meeting of a global consultative process, to pool expertise and to come up with a consolidated approach, in order to provide the Member States with technical advice on future competencies and on transitioning to a competency-based curriculum; and to outline a common process and mechanisms for ensuring the sustained relevance of that technical advice.*

(UNESCO-IBE)

The IBE has compiled this list of resources on Future Competencies to assist curriculum developers, researchers and practitioners.

Most of the publications and documents are freely accessible online. Direct access to the materials is indicated by the symbol: @

[View all IBE Alerts and Digests](#)

## Future competencies in curriculum

@ The Australian Curriculum: Work Studies, Years 9–10  
ACARA, 2015

@ Character education for the 21st century: What should students learn?  
Center for Curriculum Redesign; 2015

@ Curriculum Reform in Korea: Issues and Challenges for Twenty-first Century Learning  
So, K. & Kang, J. Asia-Pacific Edu Res 2014

@ Un currículum competencial para la educación primaria  
Generalidad de Cataluña, Departamento de Enseñanza, 2015  
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@ Educational Action Research to Achieve the Essential Competencies of the Future  
Kapenieks, Janis. Journal of Teacher Education for Sustainability, V.18(1), 2016 (ProQuest)

@ Framework for 21st Century Competencies and Student Outcomes  
Singapore Ministry of Education, 2015

@ Key competencies in the curriculum: England  
National Foundation for Educational Research (NFER), Eurydice at NFER, 2012

@ Key competencies in the curriculum: Northern Ireland  
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@ Principles for learning and competences in the 21st-century curriculum  
Clementina Acedo and Conrad Hughes, Prospects, Volume 44, Issue 4, UNESCO-IBE, 2014

@ Skills Defined by Curricula: Sub-Saharan Africa  
Results for Development Institute, 2012

@ Skills Defined by Curricula: South and Southeast Asia  
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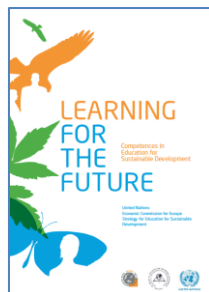
@ Challenges and opportunities for teacher professional development in interactive use of technology in African schools  
Hennessy, S. et al., University of Cambridge, 2015

@ Digital Strategy for Schools 2015-2020: Enhancing Teaching, Learning and Assessment  
Ireland Department of Education and Skills, 2015

@ enGauge 21st Century Skills: Literacy in the Digital Age  
North Central Regional Educational Laboratory & the Metiri Group, 2003

@ ICT-enabled innovation for learning in Europe and Asia: Exploring conditions for sustainability, scalability and impact at system level  
Joint Research Centre of the European Commission, 2013

## Future competencies for Sustainable Development



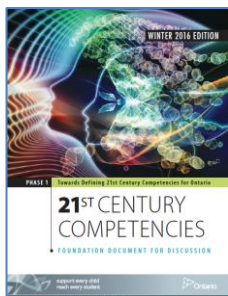
@ Competences in education for Sustainable Development  
United Nations Economic Commission for Europe, 2012

@ [Designing across the Curriculum for “Sustainable Well-Being”: A 21stCentury Approach](#) (p.57)

Susan M. Drake, Sustainable Well-Being: Concepts, Issues, and Educational Practices, Education for Sustainable Well-Being Press (ESWB Press), 2014

@ [Greener Skills and Jobs for a Low-Carbon Future](#)  
OECD, 2013

## Case Studies



@ [21st Century Competencies: Foundation Document for Discussion. Phase 1: Towards Defining 21st Century Competencies for Ontario](#)  
Ontario Public Service, 2016  
[Français](#)

@ [21st Century Skills and Digital Literacy: An India Case Study](#)  
SAIS-ASER Centre Practicum, 2014-2015

@ [Advancing 21st Century Competencies in Hong Kong](#)  
Kai-ming Cheng and Liz Jackson, University of Hong Kong; and Wing-on Lee, The Open University of Hong Kong, Asia Society, 2017

@ [Advancing 21st Century Competencies in Japan](#)  
Daisuke Kimura & Madoka Tatsuno, Global Incubation x Fostering Talents (GiFT), Asia Society, 2017

@ [Advancing 21st Century Competencies in Singapore](#)  
Jennifer Pei-Ling Tan, et al., National Institute of Education, Nanyang Technological University, Asia Society, 2017

@ [Advancing 21st Century Competencies in South Korea](#)  
Hyo-Jeong Kim and Jeongmin Eom, Asia-Pacific Centre of Education for International Understanding (APCEIU) under the auspices of UNESCO, Asia Society, 2017

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Hsiao-Lan Sharon Chen and Hsuan-Yi Huang, National Taiwan Normal University, Asia Society, 2017

@ [Assessing China's skills gap and inequalities in education](#)  
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@ [Les compétences du 21e siècle](#)  
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@ [A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies](#)  
Joke Voogt & Natalie Pareja Roblin,  
Journal of Curriculum Studies, V.44(3), 2012

@ [Estudiantes del Siglo XXI: Nueva Escuela Secundaria de Calidad de la Ciudad Autónoma de Buenos Aires](#)  
Ministerio de Educación de la Ciudad Autónoma de Buenos Aires, 2013

@ [La evaluación de competencias en educación](#)  
Tiburcio Moreno Olivos, Sinéctica  
no.39 Tlaquepaque jul./dic. 2012

@ [The Fourth Industrial Revolution: what it means, how to respond](#)  
Klaus Schwab, World Economic Forum, January 2016

@ [The Future of Employment: How Susceptible Are Jobs to Computerisation?](#)  
Carl Benedikt Frey and Michael A. Osborne, University of Oxford, 2013

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QualitasLearning, 2013

@ [Interdisciplinary Assessment in the 21st Century](#)  
Susan M. Drake and Joanne L. Reid,  
Academic Exchange Quarterly, V.21(1), 2017

@ [Life Skills in India An Overview of Evidence and Current Practices in our Education System](#)  
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@ [Skills for Employability: Southeast Asia](#)  
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@ [Skills for Employability: South Asia](#)  
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@ [Skills for jobs in the 21st century](#)  
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@ [Taking a “future focus” in education—what does it mean?](#)  
Rachel Bolstad, NZCER , 2011

@ [Teacher beliefs and education reform in Abu Dhabi: 21st Century Skills?](#)  
Monika Von Oppell, Jill Aldridge, MSKU  
Journal of Education, 2015

@ [Tradition to transformation – How conventional secondary schools are breaking ground in 21st century education](#)  
Rowan Taigel, Te Toi Tupu, 2016

## **Guidelines, Manuals, Tools, etc.**

@ [Améliorer les programmes canadiens de sciences et technologies au primaire par l'ajout de compétences du 21e siècle](#)

Diane Pruneau et al., Revue canadienne de l'éducation, V.38(3), 2015

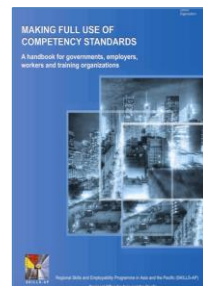
@ [Assessment and Teaching of 21st Century Skills. Methods and Approach](#)  
Griffin, Patrick, Care, Esther (Eds.)  
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ISBN 978-94-017-9395-7

@ [Delivering 21st Century Skills in the Indian Classroom](#)  
Terrie Rust, Creya Learning, 2013

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Didier Schmitt, Le Monde, 25 août 2014

@ [Four-Dimensional Education: The Competencies Learners Need to Succeed](#)  
Center for Curriculum Redesign, 2015  
ISBN-13: 978-1518642562

@ [Guía para Padres sobre el Aprendizaje en el Siglo XXI](#)  
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@ [Making full use of competency standards: A handbook for governments, employers, workers and training organizations](#)  
ILO Regional Skills and Employability Programme in Asia and the Pacific (SKILLS-AP), 2009

@ [Measuring 21st century competencies: Guidance for educators](#)  
RAND Corporation, 2013

@ [Measurement of 21st Century Skills Within the Common Core State Standards](#)  
Center for K–12 Assessment & Performance Management at ETS, 2012

@ [Nouveaux savoirs, nouveaux savoir-faire: les compétences du XXIe siècle](#)  
Paris Innovation Review, 10 février 2015

@ [A Passport to a Changing Landscape: Advancing Pedagogy and Innovative Practices for Knowledge Mobilization and Skill Development in the 21st Century](#)  
Curriculum Services Canada, 2014

@ Regional Model Competency Standards: Core competencies

ILO Regional Skills and Employability Programme in Asia and the Pacific (SKILLS-AP), 2015

@ Teaching and Learning 21st Century Skills Lessons from the Learning Sciences

RAND Corporation, 2012

@ Unlocking a world of potential: Core skills for learning, work and society

British Council, 2015

@ Updated guidelines for development of Regional Model Competency Standards

International Labour Organisation, 2016

## Policy Papers

@ Better Skills, Better Jobs, Better Lives: A Strategic Approach to Education and Skills Policies for the United Arab Emirates

OECD, 2015

@ Des compétences meilleures pour des emplois meilleurs et une vie meilleure: Une approche stratégique des politiques sur les compétences

OECD, 2012

@ Developing Key Competences at School in Europe: Challenges and Opportunities for Policy

European Commission/EACEA/Eurydice, 2012

@ Enterprise skills and careers education in schools: Why Australia needs a national strategy

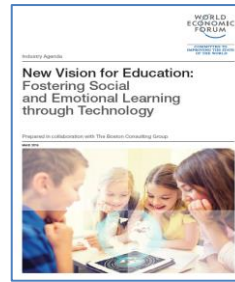
Foundation for Young Australians, 2016

@ Global competency for an inclusive world

OECD, 2016

@ Learning and competence 2025

Finnish National Board of Education, 2015



@ New Vision for Education: Fostering Social and Emotional Learning through Technology

World Economic Forum, 2016

@ New Vision for Education: Unlocking the Potential of Technology

World Economic Forum, 2015

@ Rethinking Education: Towards a Common Good

UNESCO, 2015

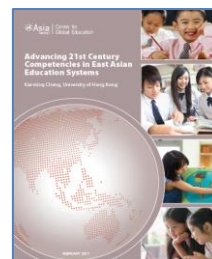
## Reports and studies

@ 21st Century Competencies for College and Career Readiness

Anthony P. Carnevale, Center on education and the workforce, Georgetown University, 2013

@ 21st Century Skills and Competences for New Millennium Learners in OECD Countries

Katerina Ananiadou, Magdalen Claro, OECD 2009



@ Advancing 21st Century Competencies in East Asian Education Systems

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Shi Man and oth., Journal of East China Normal University, Vol. 34, 2016

@ Les compétences au service du progrès social: Le pouvoir des compétences socio-affectives

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Hamilton-Wentworth District School Board,  
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@ Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century  
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@ Education to Employment: Designing a System that Works  
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@ El futuro del aprendizaje 2 ¿Qué tipo de aprendizaje se necesita en el siglo XXI?  
Documentos de Trabajo ERF, No. 14,  
Scott, C.L., Investigación y Prospectiva en Educación, UNESCO, 2015  
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@ Future-focused learning in connected communities  
21st Century Learning Reference Group, 2014

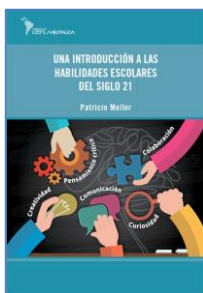
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@ The future of self-assessment in classroom practice: Reframing self-assessment as a core competency  
Gavin T. L. Brown, Lois R. Harris  
Frontline Learning Research, V.2(1), 2014

@ Future Work Skills 2020 - Institute for the Future  
Institute for the Future for University of Phoenix Research Institute, 2011

@ Getting Skills Right: Assessing and Anticipating Changing Skill Needs  
OECD, 2016

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@ Una introducción a las habilidades escolares para el siglo 21  
Patricio Meller, Cieplan,  
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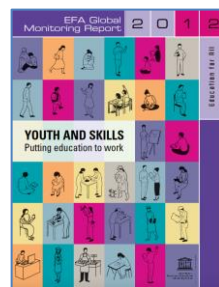
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Karsenti T., CRIFPE 2014

@ Skills for the 21st century in Latin America and the Caribbean  
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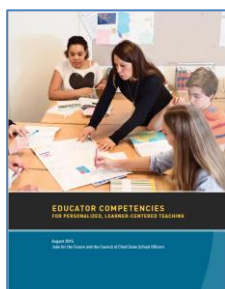


@ Youth and Skills: Putting Education to Work  
UNESCO, 2012

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@ La competencia digital de los futuros docentes: ¿cómo se ven los actuales estudiantes de educación?  
Francesc M. Esteve-Mon and oth., Perspectiva Educativa. Formación de Profesores, Vol. 55(2), pp. 38-54, 2016

@ Fostering Competencies in Future Teachers: A Competency-Based Approach to Teacher Education  
Susan Cydis, Creative Education, 2014



@ Educator Competencies for Personalized, Learner-Centered Teaching, Jobs for the Future & the Council of Chief State School Officers, 2015

@ Teacher Education Programmes and the Acquisition of 21st Century Skills: Issues and Challenges in Nigeria  
Oyenike Adeosun, University of Lagos, 2014

## Worldwide

### AFRICA

@ Skills Defined by Curricula: Sub-Saharan Africa  
Results for Development Institute, 2012

@ Skills for Employability in Africa and Asia  
ISESE Skills Synthesis Paper, Results for Development Institute, 2012

### Nigeria

@ Teacher Education Programmes and the Acquisition of 21st Century Skills: Issues and Challenges in Nigeria  
Oyenike Adeosun, University of Lagos, 2014

### Zambia

@ Challenges and opportunities for teacher professional development in interactive use of technology in African schools  
Hennessy, S. et al., University of Cambridge, 2015

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### ARAB STATES

#### United Arab Emirates

@ Better Skills, Better Jobs, Better Lives: A Strategic Approach to Education and Skills Policies for the United Arab Emirates  
OECD, 2015

@ Teacher beliefs and education reform in Abu Dhabi: 21st Century Skills?  
Monika Von Oppell, Jill Aldridge, MSKU Journal of Education, 2015

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@ Advancing 21st Century Competencies in East Asian Education Systems  
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@ The future of self-assessment in classroom practice: Reframing self-assessment as a core competency  
Gavin T. L. Brown, Lois R. Harris  
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@ Making full use of competency standards: A handbook for governments, employers, workers and training organizations  
ILO Regional Skills and Employability Programme in Asia and the Pacific (SKILLS-AP), 2009

@ Measuring 21st century competencies: Guidance for educators  
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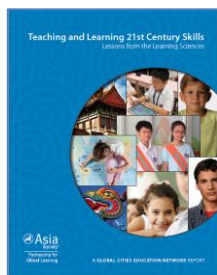
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@ Skills for Employability: Southeast Asia  
Results for Development Institute, 2012

@ Skills for Employability: South Asia  
Results for Development Institute, 2012

@ Transversal Competencies in Education  
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UNESCO Bangkok Office, 2015



@ Teaching and  
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RAND Corporation, 2012

@ Updated guidelines for development of  
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Normal University, V. 34, 2016

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University of Hong Kong, Asia Society, 2017

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### Japan

@ Advancing 21st Century Competencies in  
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Daisuke Kimura & Madoka Tatsuno, Global  
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### Korea, Republic of

@ Advancing 21st Century Competencies in  
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@ Curriculum Reform in Korea: Issues and  
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@ Framework for 21st Century Competencies and Student Outcomes  
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### Taiwan

@ Advancing 21st Century Competencies in Taiwan  
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## EUROPE AND NORTH AMERICA

@ Developing Key Competences at School in Europe: Challenges and Opportunities for Policy  
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Paris Innovation Review, 10 février 2015

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### Luxemburg

@ Skills, qualifications and jobs in the EU: the making of a perfect match? Evidence from Cedefop's European skills and jobs survey  
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### Spain (Catalonia)

@ Un currículum competencial para la educación primaria  
Generalidad de Cataluña, Departamento de Enseñanza, 2015  
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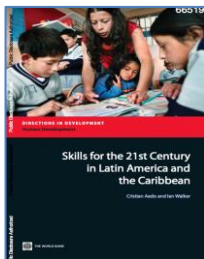
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Results for Development Institute, 2012

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## LATIN AMERICA AND THE CARIBBEAN



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The World Bank, 2012

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### Mexico

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Tiburcio Moreno Olivos, Sinéctica no.39 Tlaquepaque jul./dic. 2012

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## INTERNATIONAL

### OECD

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## Links

### ATC21S

*Assessment and Teaching of 21<sup>st</sup> Century Skills*

### Assessment and Teaching of 21st Century Skills

*Online course for teachers and professionals in education*

This MOOC is designed principally for practicing teachers who are wondering exactly how they can incorporate teaching and assessment of 21st century skills into their classrooms, labs or workshops. It will also be useful to trainee teachers, school leaders, teacher educators and curriculum and assessment specialists, providing them with an understanding of the challenges associated with teaching and assessment of 21st century skills.

(Université de Melbourne)

### International Task Force on Teachers for EFA

*A global alliance for EFA partners working together to address the "teacher gap"*

### Cedefop European skills and jobs survey

*First survey on skill mismatch*

### Partnership for 21st Century Learning

*A national nonprofit organization that advocates for 21st century readiness for every student*

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