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

@ Un currículum competencial para la educación primaria
Generalidad de Cataluña, Departamento de Enseñanza, 2015
English

@ 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
National Foundation for Educational Research (NFER), Eurydice at NFER, 2012

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

@ Principles for learning and competences in the 21st-century curriculum

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

@ Skills Defined by Curricula: South and Southeast Asia
Results for Development Institute, 2012

**Future competencies and ICT**

@ 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 21st Century Approach (p.57)

Greener Skills and Jobs for a Low-Carbon Future
OECD, 2013

Case Studies

Ontario Public Service, 2016

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

Advancing 21st Century Competencies in Taiwan
Hsiao-Lan Sharon Chen and Hsuan-Yi Huang, National Taiwan Normal University, Asia Society, 2017

Assessing China’s skills gap and inequalities in education
Margit Molnar et al., OECD, 2015

Les compétences du 21e siècle
Danielle Ouellet & Sylvie Ann Hart
Observatoire compétences-emplois (OCE), décembre 2013

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?

Habilidades Siglo XXI su impacto en la práctica áulica
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
Bikkrama Daulet Singh and Rashmi Menon, Central Square Foundation, 2015

Rethinking The Three Rs: Why We Need A New Model Of Education
Huffington Post, 19 February 2015

Skills for a Changing World: National Perspectives and the Global Movement
Centre for Universal Education at Brookings, 2017

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

Skills for Employability: The Need for 21st Century Skills
Results for Development Institute, 2012

Skills for Employability: Southeast Asia
Results for Development Institute, 2012

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

Skills for jobs in the 21st century
World Bank Group, 2015

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?

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.) Springer, 2015
ISBN 978-94-017-9395-7

Delivering 21st Century Skills in the Indian Classroom
Terrie Rust, Creya Learning, 2013

L’école doit s’adapter au XXIème siècle
Didier Schmitt, Le Monde, 25 août 2014

Four-Dimensional Education: The Competencies Learners Need to Succeed
Center for Curriculum Redesign, 2015

Guía para Padres sobre el Aprendizaje en el Siglo XXI
The George Lucas Educational Foundation, 2012

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

Curriculum Services Canada, 2014
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

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, Magdalean Claro, OECD 2009

@ Advancing 21st Century Competencies in East Asian Education Systems
Kai-ming Cheng, University of Hong Kong, Asia Society, 2017

Analysis of 21st Century Competencies and Frameworks
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
OECD, 2016
English Español
@ Education for the 21st Century: Here, Now and Into the Future
Hamilton-Wentworth District School Board, 2010

@ Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century
Report Brief, National Research Council, 2012

@ Education to Employment: Designing a System that Works
McKinsey Center for Government, 2012

@ El futuro del aprendizaje ¿Qué tipo de aprendizaje se necesita en el siglo XXI?

@ Future-focused learning in connected communities
21st Century Learning Reference Group, 2014

@ The Future of Jobs
World Economic Forum, 2016

@ 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

@ Getting Skills Right: Sweden
OECD, 2016

@ Learning for the 21st century Partnership for 21st century skills, 2013

@ Leveraging Knowledge for 21st Century Teaching and Learning: Insights and opportunities for knowledge mobilization and future research
Social Sciences and Humanities Research Council of Canada, 2016

@ OECD Skills Outlook 2017: Skills and Global Value Chains
OECD, 2017

@ PISA 2012 Results: Creative Problem Solving Students’ skills in tackling real-life problems (Volume V)
OECD, 2014

@ Le projet WIGUP : quels impacts sur les compétences du 21e siècle?
Karsenti T., CRIFPE 2014

@ Skills for the 21st century in Latin America and the Caribbean
Cristian Aedo, Ian Walker
The World Bank, 2012

@ Skills, qualifications and jobs in the EU: the making of a perfect match? Evidence from Cedefop’s European skills and jobs survey
Cedefop, 2015

@ Transversal Competencies in Education Policy & Practice (Phase I)
UNESCO Bangkok Office, 2015

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

@ Una introducción a las habilidades escolares para el siglo 21
Patricio Meller, Cieplan, 2016
**Teacher Education**

@ La competencia digital de los futuros docentes: ¿cómo se ven los actuales estudiantes de educación?

@ 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

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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

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**ASIA AND THE PACIFIC**

@ Advancing 21st Century Competencies in East Asian Education Systems
Kai-ming Cheng, University of Hong Kong, Asia Society, 2017

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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

@ Regional Model Competency Standards: Core competencies
ILO Regional Skills and Employability Programme in Asia and the Pacific (SKILLS-AP), 2015

@ Skills Defined by Curricula: South and Southeast Asia
Results for Development Institute, 2012
Skills for Employability in Africa and Asia
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Skills for Employability: South Asia
Results for Development Institute, 2012

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UNESCO Bangkok Office, 2015

Teaching and Learning 21st Century Skills
Lessons from the Learning Sciences
RAND Corporation, 2012

Updated guidelines for development of Regional Model Competency Standards
ILO, 2016

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

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Foundation for Young Australians, 2016

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Ministry of Education, 2015

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EUROPE AND NORTH AMERICA

@ Developing Key Competences at School in Europe: Challenges and Opportunities for Policy
European Commission/EACEA/Eurydice, 2012

@ 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

Canada
@ 21st Century Competencies: Foundation Document for Discussion. Phase 1: Towards Defining 21st Century Competencies for Ontario
Ontario Public Service, 2016

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@ L’école doit s’adapter au XXIème siècle
Didier Schmitt, Le Monde, 25 août 2014
@ Nouveaux savoirs, nouveaux savoir-faire: 
exclamative mark les compétences du XXIe siècle 
Paris Innovation Review, 10 février 2015

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

Luxemburg
@ Skills, qualifications and jobs in the EU: the 
making of a perfect match? Evidence from 
Cedefop’s European skills and jobs survey 
Cedefop, 2015

Spain (Catalonia)
@ Un curriculum competencial para la 
educación primaria 
Generalidad de Cataluña, Departamento de 
Enseñanza, 2015

English

Sweden
@ Getting Skills Right: Sweden 
OECD, 2016

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

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

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

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

@ Unlocking a world of potential: Core skills 
for learning, work and society 
British Council, 2015

USA
@ 21st Century Competencies for College 
and Career Readiness 
Anthony P. Carnevale, Center on education 
and the workforce, Georgetown University, 
2013

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the Common Core State Standards 
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Management at ETS, 2012
Rethinking The Three Rs: Why We Need A New Model Of Education
Huffington Post, 19 February 2015

Skills for a Changing World: National Perspectives and the Global Movement
Centre for Universal Education at Brookings, 2017

Skills for Employability: The Need for 21st Century Skills
Results for Development Institute, 2012

INTERNATIONAL

OECD

21st Century Skills and Competences for New Millennium Learners in OECD Countries
Katerina Ananiadou, Magdalean Claro, OECD 2009

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OECD Skills Outlook 2017: Skills and Global Value Chains
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PISA 2012 Results: Creative Problem Solving Students’ skills in tackling real-life problems (Volume V)
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UNECE

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

LATIN AMERICA AND THE CARIBBEAN

Skills for the 21st century in Latin America and the Caribbean
Cristian Aedo, Ian Walker
The World Bank, 2012

Argentina

Estudiantes del Siglo XXI: Nueva Escuela Secundaria de Calidad de la Ciudad Autónoma de Buenos Aires
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@ Rethinking Education: Towards a Common Good
UNESCO, 2015
@ Youth and Skills: Putting Education to Work
UNESCO, 2012

UNESCO-IBE
@ Principles for learning and competences in the 21st-century curriculum

World Bank Group
@ Skills for jobs in the 21st century
World Bank Group, 2015

World Economic Forum
@ The Fourth Industrial Revolution: what it means, how to respond
Klaus Schwab, World Economic Forum, 2016
@ The Future of Jobs
World Economic Forum, 2016
@ 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

Links
ATC21S
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