

Appendix A

21st Century Skills and Competencies Included in the OECD Survey

1. Creativity/innovation
2. Critical thinking
3. Problem solving
4. Decision making
5. Communication
6. Collaboration
7. Information literacy
8. Research and inquiry
9. Media literacy
10. Digital citizenship
11. Information and communications technology operations and concepts
12. Flexibility and adaptability
13. Initiative and self-direction
14. Productivity
15. Leadership and responsibility
16. Other (please specify)

SOURCE: Adapted from Ananiadou and Claro (2009).

Appendix B

Reports on 21st Century Skills Used in Aligning and Clustering Competencies

Report	Skills
<p>Association for Career and Technical Education. (2010). <i>What Is Career Ready?</i> Alexandria, VA: Author. Available: http://dpi.wi.gov/oea/pdf/crpaper.pdf [October 2011].</p>	<ul style="list-style-type: none"> • Critical thinking • Problem solving • Oral/written communication • Creativity • Adaptability • Diversity • Continuous learning • Collaboration • Teamwork • Responsibility • Professionalism/ethics
<p>Bedwell, W.L., Salas, E., and Fiore, S.M. (2011). <i>Developing the 21st Century (and Beyond) Workforce: A Review of Interpersonal Skills and Measurement Strategies</i>. Paper prepared for the NRC Workshop on Assessing 21st Century Skills. Available: http://www7.nationalacademies.org/bota/21st_Century_Workshop_Salas_Fiore_Paper.pdf [October 2011].</p>	<ul style="list-style-type: none"> • Active listening • Oral communication • Written communication • Cooperation • Coordination • Trust • Service orientation • Conflict resolution • Negotiation • Assertive communication • Self-presentation • Social influence

Report	Skills
Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., and Rumble, M. (2010). <i>Defining 21st Century Skills</i> . White Paper commissioned for the Assessment and Teaching of 21st Century Skills Project (ATC21S). Available on request from ATC21S: http://atc21s.org/index.php/resources/white-papers/#item1 .	<ul style="list-style-type: none"> • Critical thinking • Problem solving • Decision making • Information literacy (including research on sources, evidence, biases) • Information and communications technology literacy • Creativity/innovation • Personal and social responsibility (including cultural awareness and competence) • Communication • Collaboration
Conley, D.T. (2007). <i>Redefining College Readiness</i> . Eugene, OR: Educational Policy Improvement Center. Available: https://www.epiconline.org/files/pdf/RedefiningCollegeReadiness.pdf [October 2011].	<ul style="list-style-type: none"> • Problem solving • Analysis • Reasoning/argumentation • Interpretation
Finegold, D., and Notabartolo, A.S. (2010). <i>21st Century Competencies and Their Impact: An Interdisciplinary Literature Review</i> . Paper commissioned for the NRC Project on Research on 21st Century Competencies: A Planning Process on Behalf of the Hewlett Foundation. Available: http://www7.nationalacademies.org/bota/Finegold_Notabartolo_Impact_Paper.pdf [October 2011].	<ul style="list-style-type: none"> • Critical thinking • Problem solving • Decision making • Information literacy • Information and communication technology literacy • Creativity/innovation • Flexibility • Communication • Collaboration • Leadership • Responsibility • Initiative • Self-direction • Productivity
Hoyle, R.H., and Davisson, E.K. (2011). <i>Assessment of Self-Regulation and Related Constructs: Prospects and Challenges</i> . Paper prepared for the NRC Workshop on Assessment of 21st Century Skills. Available: http://www7.nationalacademies.org/bota/21st_Century_Workshop_Hoyle_Paper.pdf [October 2011].	<ul style="list-style-type: none"> • Executive function (inhibition, working memory, shifting) • Leadership • Type 1 processes (forethought, performance, self-reflection) • Type 2 processes (self-monitoring, self-evaluation, self-reinforcement)

Report	Skills
Voogt, J., and Pareja Roblin, N. (2010). <i>21st Century Skills Discussion Paper</i> . Report prepared for Kennisnet, University of Twente, The Netherlands. Available: http://www.internationalsymposiumoneducationalreform.com/storage/21st%20Century%20Skills.pdf [October 2011].	<ul style="list-style-type: none">• Problem solving• ICT literacy• Creativity• Communication• Collaboration