Why Must Learning Content and Methods Change in the 21st Century?
Shifts in labor market trends and skills shortages in the global workforce have highlighted widening inadequacies in students' preparedness to tackle 21st century challenges. It has been argued that formal education must be transformed to enable new forms of learning needed to undertake complex global demands. The past two decades have seen the emergence of a global movement that calls for a new model of learning for the 21st century. There is now a significant body of literature focusing on why a new model of learning is called for, the specific competencies and skills needed for learners to function effectively in the 21st century, and the pedagogy required to stimulate those capabilities.

Growing concern about potential economic, societal, environmental and global crises are leading many to question whether today's learners possess the combination of critical thinking, creativity, and collaborative and communication skills necessary to confront the unexpected developments they will face. Many factors are driving change in the ways that learners are educated. Pressures may vary from nation to nation, but the message is fundamentally the same: education is failing to prepare learners for the challenges ahead. Students are not learning under the current system of education and are being short-changed. Learners are missing out on experiences that will prepare them for more satisfying lives and productive work.

Nations are also losing opportunities to prepare youth for citizenship, and economies are suffering from a lack of innovation. The twenty-first century has immense potential to reaffirm the role of education with a view to equipping young and old learners to address complex societal, economic and environmental issues. This presentation will address the many possible futures and forms of learning in the digital age and the pedagogies that support learners in acquiring new competencies and skills to address twenty-first century problems.

What Kind of Learning for the 21st Century?
What critical skills does tomorrow's workforce need to develop and master today? What capabilities will young people need to face the volatile and unexpected threats they will face in the future? Debate regarding the competencies and skills learners need to cope with unforeseen developments ahead has given rise to a significant body of literature. There is a clear consensus that new approaches to learning must accommodate the characteristics of today's students, become more inclusive and address twenty-first century interdisciplinary themes. Furthermore, the development of twenty-first century skills should not be delayed or reserved solely for higher-level students. Instead, it is essential to support students to
cultivate meta-cognitive competencies and skills from the earliest stages of formal education.

The transformation from *teacher-led* learning to *self-directed* learning to *self-determined* learning will provide learners with a range of competencies and skills needed to succeed in the modern global economy. Education should prepare learners to engage in collaborative problem-solving scenarios that are persistent and lack clear solutions. Real-world problems are highly complex, often ill-defined and interdisciplinary in nature, spanning multiple domains (social, economic, political, environmental, legal and ethical). Learners must have opportunities to reflect on their ideas, hone their analytical skills, strengthen their critical and creative thinking capacities, and demonstrate initiative. Over the last two decades, no fewer than ten international organizations proposed frameworks and outlined competencies needed to meet twenty-first century expectations. While there is no single prescribed approach to educating young people for the twenty-first century, a variety of competencies and skills warrant consideration. The comparison of these also draws attention to the absence of certain competencies and skills from current learning processes.

Transforming twenty-first century education is about making sure that all learners are prepared to thrive and succeed in a competitive world – a world with many opportunities for highly skilled individuals, yet limited options for others. Problem solving, reflection, creativity, critical thinking, metacognition, risk-taking, communication, collaboration, innovation and entrepreneurship will become key competencies for 21st century life and work. Approaches that lead learners to question their own beliefs and those of their peers will enhance reflection, metacognition and the construction of new knowledge. Just as teachers cannot overhaul the education system alone, nations cannot counteract worldwide deficiencies in education systems in isolation. All countries will face consequences if today’s learners are not adequately prepared to collaborate and resolve the world’s economic, environmental, health, social and political crises.

Globally competent learners are careful to consider previous approaches and the perspectives of others; they act ethically and collaboratively – in creative ways – to contribute to local, regional or global development. Globally competent learners do not presume they are equipped to handle complex challenges alone. They reflect candidly on their capacity to complete an assigned task and seek out collaborative opportunities to join with others whose strengths complement their own.

**What Kind of Pedagogies for the 21st Century?**
Since the emergence of a global movement calling for a new model of learning for the 21st century, it has been argued that formal education must be transformed to enable new forms of learning that are needed to confront complex global developments. Literature on this topic offers compelling arguments for transforming
pedagogy to better support acquisition of twenty-first century skills. However, the question of how best to teach these skills is largely overlooked.

Experts recognize that the ‘transmission’ or lecture model is highly ineffective for teaching 21st century competencies and skills, yet widespread use of this model continues. In spite of worldwide agreement that learners need skills such as critical thinking and the ability to communicate effectively, innovate, and solve problems through negotiation and collaboration, pedagogy has seldom adapted to address these challenges. Rethinking pedagogy for the 21st century is as crucial as identifying the new competencies that today’s learners need to develop.

To develop the higher-order skills they now need, individuals must engage in meaningful enquiry-based learning that has genuine value and relevance for them personally and their communities. How can teachers and educators best support learners to develop essential skills? Research suggests that some forms of pedagogy are consistently more successful than others in helping students acquire a deeper understanding of 21st century skills. It is widely documented that pedagogies that support deeper learning include personalized learning strategies, collaborative learning and informal learning. The current research explores pedagogies and learning environments that may contribute to the development and mastery of twenty-first century competencies and skills, and advance the quality of learning.

Dr. Cynthia Luna Scott has conducted extensive research for UNESCO on the futures of learning and why learning content and methods must change in the 21st century. From her analysis of trends discovered through her extensive review of the literature, Dr. Scott has been able to formulate an overall vision for 21st century learning and pedagogy. Dr. Scott developed a series of working papers to inform UNESCO’s new initiative on redefining learning for a changing world.

At our conference, she will discuss her research findings highlighting the many factors calling for a new model of learning, what kind of learning will be needed for the 21st century, and what kind of pedagogies are called for to support such learning. Dr. Scott will also explore potential gateways for effectively introducing these innovations. A “question and answer” period will follow her presentation.

Dr. Scott’s research findings have been translated by UNESCO into English, Spanish, French and Arabic. Copies of her research papers will be available to participants in both Spanish and English.