

**Module 1**

# Developing 21st Century Skills

21st century, student-centered learning differs from traditional, teacher-centered learning in that the two have different approaches to content, instruction, classroom environment, assessment, and technology.

**Focus**

- 21st century skills and classroom environment

**Outcomes**

- Identify 21st century skills
- Understand the trend towards creating a 21st century classroom environment
- Discover the differences between teacher-centered and student-centered approaches
- Reflect on professional practices

**Additional Resources**

The following file is used in this module:

- Teacher-Centered and Student-Centered Approaches

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Exercise 1: Identifying Essential Skills

Step 1: Student success

The facilitator will assign groups with four or five participants. In each group, members should assume the roles of facilitator, recorder, participants, and presenter.

When students graduate from your school system, what is essential for them to know and to be able to do to be successful in the 21st century workplace? Working in a small group, discuss your answers, and record them in the space provided.

Step 2: Essentials skills

Share your list of essential skills with the large group as directed.

In 21st century workplaces, workers

- analyze, transform, and create information
- collaborate with coworkers to solve problems and make decisions
- perform a variety of complex tasks using sophisticated technology

In 21st century homes, families

- are entertained by watching, creating, and participating in a variety of media
- make consumer decisions by looking for information on the Internet
- stay in touch with friends and family members through various technologies

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Developing 21st Century Skills**In 21st century communities, citizens**

- use the Internet to stay informed about local, national, and global issues
- communicate and persuade others about their opinions using different technologies
- comply with government regulations without leaving their homes

As computers take over routine tasks in the workplace, a far greater proportion of employees are engaged in tasks that require them to be flexible and creative problem solvers. Home life is also more complex in the 21st century as emerging technologies provide almost infinite possibilities for entertainment, leisure-time activities, and participation in community activities.

21st century schools must prepare students to work in today's workplaces, and teachers must stay current with the ways students and families use technology in their daily lives.

**In 21st century schools, students**

- work on complex, challenging tasks that require them to think deeply about subject matter and manage their own learning
- collaborate with peers, teachers, and experts on meaningful tasks using higher-order thinking
- use technology to make decisions, solve problems, and create new ideas

To help students achieve levels of full participation in their communities, teachers must focus on the 21st century skills<sup>1</sup> that will help students adapt to changing society and technology:

**Accountability and Adaptability**—Exercising personal responsibility and flexibility in personal, workplace, and community contexts; setting and meeting high standards and goals for one's self and others; tolerating ambiguity

**Communication Skills**—Understanding, managing, and creating effective oral, written, and multimedia communication in a variety of forms and contexts

**Creativity and Intellectual Curiosity**—Developing, implementing, and communicating new ideas to others; staying open and responsive to new and diverse perspectives

In summary, as 21st century workplaces, homes, and citizens change, schools too must change. Teachers must help students develop the skills needed for success in the 21st century.

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### Developing 21st Century Skills

**Critical Thinking and Systems Thinking**—Exercising sound reasoning in understanding and making complex choices; understanding the inter-connections among systems

**Information and Media Literacy Skills**—Analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media

**Interpersonal and Collaborative Skills**—Demonstrating teamwork and leadership; adapting to varied roles and responsibilities; working productively with others; exercising empathy; respecting diverse perspectives

**Problem Identification, Formulation, and Solution**—Ability to frame, analyze, and solve problems

**Self-Direction**—Monitoring one's own understanding and learning needs; locating appropriate resources; transferring learning from one domain to another

**Social Responsibility**—Acting responsibly with the interests of the larger community in mind; demonstrating ethical behavior in personal, workplace, and community contexts

<sup>1</sup>Source: Partnership for 21st Century Skills ([www.21stcenturyskills.org](http://www.21stcenturyskills.org)). Used with permission.

## Exercise 2: Comparing Classrooms of Today with Classrooms of Tomorrow

### Step 1: How were you taught?

How were you taught when you attended school? What did you like about how you were taught? What were your frustrations about how you were taught? Enter your responses to the following prompts:

#### How You Were Taught

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#### What You Liked

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#### What Your Frustrations Were

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Participants will share the reflections with their partners. The facilitator will ask two or three pairs to share their experiences with the large group. The facilitator will end the discussion by summarizing reoccurring themes.

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Step 2: Peer sharing

Share your reflections with a peer and others as directed.

Traditional, Teacher-Centered Instruction

Traditional, teacher-centered instruction and lecture is the most common teaching behavior found in schools worldwide. Teacher-centered instruction can be very effective, particularly for:

- Sharing information that is not easily found elsewhere
- Presenting information in a quick manner
- Generating interest in the information
- Teaching students who learn best by listening

However, teacher-centered instruction also presents several challenges, including:

- Not all students learn best by listening
- Keeping students’ interest is often difficult
- The approach tends to require little or no critical thinking
- The approach assumes that all students learn in the same impersonal way

21st Century, Student-Centered Instruction

How is 21st century, student-centered learning different from traditional, teacher-centered learning? The two methods have different approaches to content, instruction, classroom environment, assessment, and technology, as summarized in the following table. Each approach is appropriate in different situations. The Teacher-Centered and Student-Centered Approaches table illustrates many of these differences.

This table is not intended to show a comparison of two opposing approaches where one is more appropriate than the other. On the contrary, this table shows that both approaches can be appropriate depending on a particular situation.

The facilitator will briefly explain the organization of the information in the table. Then, participants will read silently and identify approaches that they have used in their classrooms. Participants will share their experiences when they are called on. You may notice that after most have shared, many of the approaches are discussed.

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**Developing 21st Century Skills**

Good teachers recognize that there is more than one way to teach, and that different situations often require different teaching practices. Accordingly, the Intel® Teach Getting Started Course incorporates elements of traditional, teacher-centered instruction, along with elements of 21st century, student-centered instruction. Although differences exist between the two approaches, research indicates that 21st century, student-centered approaches can enhance traditional, teacher-centered instruction by providing a purposeful and meaningful context for which students can master their emerging skills.

Rather than using a traditional, teacher-centered approach to introduce the information, notice how the facilitator uses a 21st century, student-centered approach.

**Step 3: 21st century students**

Why might students like 21st century, student-centered approaches? List your ideas and those of others as directed.

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The facilitator will model what is expected before asking participants to do the same.

Exercise 3: Introducing Yourself

Now it is time for you to meet the others participating in the course. Hopefully, the colleagues you meet here will become valuable resources for you both during the course and beyond as you return to your classroom and begin applying your 21st century teaching and learning skills and approaches.

Step 1: About yourself

- 1. What would you like to share about yourself? Would you like to tell the grade level or subject area that you teach? Would you like to tell where you teach? List the key points that you want to share.

Step 2: Key points

Share your key points as directed. Listen while others share as well.

## Take-Home Exercise: Reflecting on Module 1

Reflect on the exercises, activities, skills, and approaches addressed in this module. Record your answers to the following questions and be prepared to share your answers at the beginning of the next module.

1. Consider the list of 21st century, student-centered approaches. Which approaches are you most interested in using with your students? How might the approaches support student learning?

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2. Recall the names of the colleagues that you were introduced to during this module and the information that they shared about themselves. Which colleagues might share interests with you? What are those shared interests? How might you collaborate or work together with your colleagues both during and after the course?

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Module 1 Summary

Step 1: Accomplishments

What did you accomplish in this module? List your ideas and other participants' ideas as directed.

Step 2: Your ideas

What key points are addressed in this module? List your ideas and other participants' ideas as directed.

Step 3: Questions

Ask any questions and share any comments. Learn about and prepare for Module 2: Learning Computer Basics and the Internet.