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Education

Intel® Teach Program

Essentials Online Course

Module 7

August 2008

Module 7: Facilitating with Technology
Overview

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Facilitation Corner

Welcome to Module 7: Facilitating with Technology! Now that the goals for your unit are well defined and assessment strategies are in place, you can focus on student-centered teaching strategies. In this module you discuss how to facilitate a classroom in a project-based learning environment as well as how to use technology to increase your own productivity or support your instructional practice. You then create a document, presentation, or web-based resource. You also plan how to implement your unit in your classroom and create management resources to support students while they work with technology on their projects.

Take a moment to review the **Module Objectives** and **Module Questions**.

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Module Objectives

Participants will:

- Discuss how to use various questioning techniques
- Create presentations, documents, spreadsheets, or web-based resources to support a student-centered classroom
- Plan for and discuss unit implementation ideas
- Create management resources
- Modify unit plans
- Reflect on their learning
- Assess their Unit Portfolios
- Locate professional development and technology resources for educators

Module Questions

- How can I facilitate a student-centered classroom?
- How can I use technology to support my instructional practice?

When you are finished reviewing, proceed to **Pedagogical Practices.**

Module 7: Facilitating with Technology
Activity 1: Pedagogical Practices
Using Questioning to Promote Higher-Order Thinking and Engage Students

Facilitation Corner

As teachers talk less and students talk more in the classroom, the role of questions in the classroom changes. In teacher-centered classrooms, students often answer questions the teacher knows the answer to, and students rarely ask important questions themselves. In student-centered classrooms, learning is guided, first by Curriculum-Framing Questions, and then by authentic questions that rise out of meaningful work with the content.

Facilitating student interaction through questioning is at the heart of good teaching. In this Pedagogical Practices discussion, you consider ways to meet this challenge using the key ideas and learnings from your previous work in the course.

Please add your comments in a timely manner. The discussions are summarized at the end of the module.

Good questions are key to sparking thought-provoking answers whether in whole-class or small-group discussions, or in one-to-one conferences with students. Effective questioning engages students in productive discussions that result in products and performances that reflect complex thinking processes and deep understanding of content.

"Good questions elicit interesting and alternative views and suggest the need to focus on the reasoning we use in arriving at and defending an answer, not just whether our answer is 'right' or 'wrong.' Good questions spark meaningful connections with what we bring to the classroom from prior classes and our own life experience" (Wiggins & McTighe, 2005, p. 107).

In previous modules, you created Curriculum-Framing Questions for your unit. Think about ways to use questioning techniques and Curriculum-Framing Questions to involve your students and help them to think at a deeper level.

1. Go to the **Course Wiki** tab and click the Module 7 Pedagogical Practices link.

2. Add at least one suggestion for each of the prompts:

> **Offline Tip:** Compose your thoughts in a word processing document before adding them to the wiki.

    a. What are some ways that you can integrate the use of Curriculum-Framing Questions into your classroom and student projects?
Optional: You may want to view the Intel® Education *Designing Effective Projects* resource for information on using **Curriculum-Framing Questions** in the classroom.

    b. What are some ways that you can integrate the use of questioning into your classroom and student projects?
Optional: You may want to view *Designing Effective Projects* for information and strategies for building a classroom environment in which students ask and answer **good questions**.

    c. How can you teach students the skills they need to perform higher-order thinking when they create projects? What types of questions, prompts, and scaffolds can you use to encourage students to think deeply and not simply copy and paste answers?
Optional: You may want to view *Designing Effective Projects* for information on **elaborating, hypothetical, and clarification questions** as well as the **Socratic Questioning Technique**.

3. Review other suggestions and respond to any of interest.

Congratulations! You completed this activity. Please check the **Activity** box and click the **Submit** button before moving on to the next activity.

When you are ready, proceed to **Design Resources.**

References
Wiggins, G., & McTighe, J. (2005). *Understanding by design* (Expanded 2nd edition.). Alexandria, VA: Association for Supervision and Curriculum Development.

Module 7: Facilitating with Technology
Activity 2: Designing Facilitation Resources

Facilitation Corner

Teacher and student roles are different in a student-centered, project-based classroom. Since teachers spend less time dispensing information, they have to be organized and creative to ensure that students understand the content they need. Teachers in student-centered classrooms listen to students and observe them as they work, while keeping instructional goals in mind. Creating tools to help you collect, interpret, and use information about students can help you stay focused on student learning. In this activity, you consider how technology can support you and your students as you transition to these new roles.

You complete three steps in this activity:
- In Step 1, you read some International Society for Technology in Education (ISTE) standards for ideas on how to use technology to support your facilitation.
- In Step 2, you review sample facilitation materials.
- In Step 3, you create a document, presentation, spreadsheet, or web-based resource that supports the needs of your unit.

When you are ready, proceed to **Step 1.**

Module 7: Facilitating with Technology
Activity 2: Designing Facilitation Resources
Step 1: Considering NETS-T Standards

The International Society for Technology in Education (ISTE) identifies six areas in their technology standards for teachers (NETS-T) that "define the fundamental concepts, knowledge, skills, and attitudes [that teachers should use] for applying technology in educational settings" (2000). One of the main strands relates to teachers using "technology to enhance their productivity and professional practice" (standard V).

Just as students should use technology to enhance their learning, increase productivity, and promote creativity, teachers should also use technology to support their instructional practices and improve their productivity.

In previous modules, you practiced using various technology tools. Use the following table to review areas you are most interested in pursuing further to help improve your instructional practices and productivity.

Note: At the time of this writing (Spring 2008), revised NETS-T standards are in review and will be available in second half of 2008.

Category/NETS-T Performance Indicator
• Apply technology-enhanced instructional strategies to more efficiently support the diverse needs of learners (NETS-T IIA)
• Identify and locate technology resources and evaluate them for accuracy and suitability (NETS-T IIC)
• Facilitate technology-enhanced experiences that address content standards and student technology standards (NETS-T IIIA)
• Use technology resources to collect and analyze data and interpret results (NETS-T IVB)
• Apply multiple methods of assessment to determine students' appropriate use of technology resources for learning, communication, and productivity (NETS-T IVC)
• Use technology resources to communicate findings to improve instructional practice and maximize student learning (NETS-T IVB)
• Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning (NETS-T VD)
• Apply technology resources to more appropriately and efficiently enable and empower learners with diverse backgrounds, characteristics, and abilities (NETS-T VIB)
• Grow in my technology knowledge and skills and stay abreast of current and emerging technologies (NETS-T IB)
• Use technology resources to engage in ongoing professional development and lifelong learning (NETS-T VA)
• Evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning (NETS-T VB)

If desired, use your Facilitation Planning **Notebook** from Module 6 Planning Ahead to note areas you would like to consider as you plan your facilitation resource.

When you are ready, proceed to **Step 2.**

Reference
International Society for Technology in Education. (2007). Educational technology standards and performance indicators for all teachers. *ISTE NETS Project.* Retrieved from http://cnets.iste.org/teachers/t_stands.html*.

Module 7: Facilitating with Technology
Activity 2: Designing Facilitation Resources
Step 2: Planning My Facilitation Resource

Facilitation Corner

A facilitator in a student-centered classroom organizes resources in a way that guides students and helps them learn how to learn (Nanjappa & Grant, 2003). The following instructional strategies are used in student-centered classrooms:

- Small group activities—such as creating graphic organizers, role-playing, and engaging in dramatizations — ensure that students understand core concepts.
- Instruction in and modeling of skills critical for a project provides students with opportunities to practice new skills in meaningful contexts.
- Additional activities and skills instruction based on formative assessment during the unit, address content and skills challenges.

As you view examples of facilitation resources, think about your own style as a facilitator. Look for ways in which you can move to a facilitator role and provide appropriate scaffolding so students can take a more self-directed, active role in their learning.

Browse sample **facilitation support examples** located in the **Resources** tab > **Facilitation** > **Facilitation Examples** link. If you want to take notes, you may find it helpful to open another window to review the samples and enter your notes in your **Notebook.**

When you are ready, proceed to **Step 3**.

References
Nanjappa, A., & Grant, M. M. (2003). Constructing on constructivism: The role of technology. *Electronic Journal for the Integration of Technology in Education,* 2(1). Retrieved from http://ejite.isu.edu/Volume2No1/nanjappa.htm*.

Module 7: Facilitating with Technology
Activity 2: Designing Facilitation Resources
Step 3: Creating Facilitation Materials

1. Keeping your planning ideas in mind, create a new document, presentation, or web-based resource to support the facilitation of your unit. If desired, modify an existing support material.

2. Depending on which technology tool you choose to use for the creation of your facilitation material, refer to the following resources, as needed:

    -   Intel® Education *Help Guide* to assist you in the creation of a document, spreadsheet, or presentation
    -   Online resources (FAQs, forums, and getting started instructions) that may be available at the site you choose for creating a wiki or blog

3. Save your facilitation resource in the **unit_support** folder in your Portfolio folder.

Congratulations! You completed this activity. Please check the **Activity** box and click the **Submit** button before moving on to the next activity.

When you are ready, proceed to **Implement Project.**

Module 7: Facilitating with Technology
Activity 3: Implementing a Successful Project

> ## Facilitation Corner
>
> In this activity, you complete your Unit Plan and think about implementing your unit:
>
> - In Step 1, you complete the Instructional Procedures section of your Unit Plan and make revisions to other sections as necessary.
> - In Step 2, you consider what you need to prepare and accomplish before, during, and after your unit to ensure its success.
> - In Step 3, you create a management resource to support your ideas from the previous step.
>
> When you are ready, proceed to **Step 1.**

Module 7: Facilitating with Technology
Activity 3: Implementing a Successful Project
Step 1: Completing My Instructional Procedures

You have now drafted all the sections of your Unit Plan! After some final revisions and polishing, it will be ready to share with your colleagues and then to use in your classroom. In this step, you refine your Instructional Procedures section and complete your Unit Plan Summary.

1. Review the **Unit Plan Checklist** in the **My Work** tab > **Course Progress** link.

2. Complete your **Instructional Procedures** section. Describe what happens during the unit using concrete terms. Specify how you will incorporate the following into your instruction:

    - Formal and informal assessment throughout the instructional cycle

    - 21st century skills instruction

    - Differentiation

    - Student self-direction

    - Essential, Unit, and Content Questions

3. Review your Instructional Procedures for timing and flow.

4. Complete your Unit Plan Summary making sure it presents a concise overview of your unit and includes:
    - Subject topics that will be covered
    - Description of the main concepts learned
    - Brief explanation of how the activities help students answer the Curriculum-Framing Questions

5. Review the rest of your Unit Plan and complete all other areas.

When you are ready, proceed to **Step 2.**

Module 7: Facilitating with Technology
Activity 3: Implementing a Successful Project
Step 2: Planning for a Successful Project

When you completed your Unit Plan's Instructional Procedures section in the last step, you provided details on what will happen in your classroom during the unit. You also may have considered what you would need to prepare to make sure all activities run smoothly. For example, you might have thought about what kinds of equipment your students would need to complete the project, what mentors or experts you might need to invite, or how you would group students during different activities. During this step, you consider what you need to prepare and accomplish before, during, and after your unit to ensure its success.

First, share your ideas on the course blog. Then review your colleagues' responses and think about how you could incorporate any ideas into your own unit.

1. Review the Implementing a Successful Project table in your **Notebook**. Think about how you could address the outlined topics in your classroom and take notes, if desired.

2. Go to the course blog. Find the blog site address in the **My Links** section on the **Home Page** or in your tagged or bookmarked site.

3. Add your ideas on at least three of the topics identified in the Notebook to the course blog entry titled **Implementing a Successful Project.**

4. Review your colleagues' ideas and then write an entry in your personal blog that describes how you plan to successfully implement your unit.

5. Review your colleagues' entries and start a conversation on any of interest.

When you are ready, proceed to **Step 3.**

Module 7: Facilitating with Technology
Activity 3: Implementing a Successful Project
Step 3: Creating a Management Resource

During this step, you create a management document to support implementation of your unit.

1. View **sample management** resources in the **Resources** tab > **Management** link.

    Note: You can choose to save and modify any of the management documents you find useful when you create your document.

    1:1 Tip: If you are attending a training with a one-to-one focus, review **Managing Student Use of Computers** (DOC; 1 page) in the **Resources** tab > **One-to-One Computing** link.

2. Create a management document for your Unit Portfolio.

3. Save the document in the **unit_support** folder in your Portfolio folder.

Congratulations! You completed this activity. Please check the **Activity** box and click the **Submit** button before moving on to the next activity.

When you are ready, proceed to **Reflect on Unit.**

Module 7: Facilitating with Technology
Activity 4: Reflecting on My Unit as a Whole

> ## Facilitation Corner
>
> Now you have an opportunity to look back on the materials you have created in this course for your Unit Portfolio. You have a variety of support materials and a completed student-centered unit that helps students develop 21st century skills and encourages self-direction. You are probably excited to try the unit in your classroom and see how your students respond, but you still have two more opportunities to think about your unit and how you can improve it.
>
> In this activity, you self-assess your Unit Portfolio. You have an opportunity to revise your unit based on your notes in this module's Planning Ahead activity and during the beginning of Module 8.

Use this time to review your Unit Plan and the elements of your Unit Portfolio.

1. Review the **Unit Plan Checklist** in the **My Work** tab > **Course Progress** link. Identify any missing or incomplete elements of your Unit Plan and make notes in the checklist of any areas you need to complete or modify.

2. Review the **Portfolio Checklist** to ensure you have completed all pieces for your Unit Portfolio.

3. Review the **Portfolio Rubric**. Note the descriptors that describe your portfolio.

4. Based on your self-assessment, note any changes you would like to make to your Unit Portfolio in the **Unit Plan Checklist** in the **My Work** tab > **Course Progress** link.

Congratulations! You completed this activity. Please check the **Activity** box and click the **Submit** button before moving on to the next activity.

When you are ready, proceed to **Wrap-Up.**

Module 7: Facilitating with Technology
Wrap-Up

> ## Facilitation Corner
>
> **Congratulations!** You completed **Module 7: Facilitating with Technology**. Before you move on to the next module:
>
> 1. Complete the **End of Module Survey.** Click the **Submit** button when finished.
>
> 2. Go to the **Course Progress** checklist. Review the appropriate boxes in the checklist to ensure they are checked for the Module 7 activities you completed. If you make any changes, click the **Submit** button at the bottom of the page.
>
> Remember to post your thoughts, queries, and comments in the Teachers' Lounge discussion forum or in your personal blog at any time.

When you are ready, proceed to **Plan Ahead.**

Module 7: Facilitating with Technology
Planning Ahead

Facilitation Corner

Congratulations! You completed your Unit Portfolio and several supporting documents. During this activity, you complete two steps:

- In Step 1, you look at your Unit Portfolio and make any necessary revisions based on your self-assessment in the Reflecting on My Unit activity. You have additional time to revise your Unit Portfolio and prepare for the Portfolio Showcase in Module 8.

- In Step 2, you think ahead to your own professional development and investigate Internet resources for educators.

In the Portfolio Showcase, you will have an opportunity to share your portfolio, receive feedback from colleagues, and provide feedback on the units created by your colleagues.

When you are ready, proceed to **Step 1.**

Module 7: Facilitating with Technology
Planning Ahead
Step 1: Revising My Unit Portfolio

Revise your Unit Portfolio by reviewing the notes you took after self-assessing your Unit Portfolio on the Unit Plan Checklist along with any other ideas you have.

1. In preparation for your Portfolio Showcase in Module 8, check the **Portfolio Checklist** (DOC; 1page) in the **Resources** tab > **Assessment** link to make sure you have completed all components for your portfolio. You may also want to check the components of your portfolio for consistency.

2. Revise any of the components of your Unit Portfolio.

3. Review your notes in the **Unit Plan Checklist** in the **My Work** tab > **Course Progress** link.

4. Make any necessary changes to your Unit Plan.

When you are ready, proceed to **Step 2.**

Module 7: Facilitating with Technology
Planning Ahead
Step 2: Thinking About My Future Development

Reflecting on Professional Development
The Internet provides a wide variety of resources to help teachers improve their practices and further their professional development, as well as to locate resources for technology grants and educational software. During this activity, locate professional development opportunities that you may want to pursue and visit Web sites that offer grants and software for educators.

The International Society for Technology in Education (ISTE) standards state that teachers should use technology resources to engage in ongoing professional development and lifelong learning. Research on effective professional development indicates that it must be ongoing and systematic for any significant benefit (Kinnaman, 1990).

> In a study examining what hinders or promotes successful integration of technology into the middle-school curriculum, Persky (1990) noted that using technology is not easy and that learning how to effectively use technology in the context of the classroom does not happen overnight. The need to allot time for continual learning is echoed in studies outside of education, which suggest that providing workers with high technology on the job ultimately fails if employees don't receive adequate training and continuing, on-the-job support. (Moursund, 1992)

> Further, this need for continuing support means teacher training must be ongoing and not limited to "one-shot" sessions (Hawkins & MacMillan, 1993; Kinnaman, 1990; Shelton & Jones, 1996). Harvey and Purnell (1995) stated that teachers want sustained staff development rather than short-term training and development programs in technology. (cited in Brand, 1997)

The Intel® Teach Essentials Online Course is one such opportunity for you to enhance your technology-integration skills.

Many teachers are unable to integrate technology as effectively as they would like because they work in environments with inadequate access to computers and other technology resources. Fortunately, opportunities are available on the Web for schools to acquire technology through grants, academic pricing, and freeware.

Review **Thinking About My Future Development** (DOC; 1 page) in the **Resources** tab > **About This Course** link and tag or bookmark any resources you want to explore in more detail in the future.

1:1 Tip: To learn about professional development in a one-to-one computing environment, review the **Professional Development** section of the **Resources** tab > **One to One Computing** link. To learn how educators have funded one-to-one computing programs, explore the **Funding** section.

Congratulations! You completed this activity. Please check the **Activity** box and click the **Submit** button before moving on to the next activity.

When you are ready, proceed to **M8: Showcasing Portfolios.**

References
Brand, G. A. (1997). What research says: Training teachers for using technology. *Journal of Staff Development,* 19(1). Retrieved from www.nsdc.org/library/publications/jsd/brand191.cfm*.

Kinnaman, D. E. (1990). Staff development: How to build your winning team. *Technology and Learning,* 11(2), 24.