



Technology Standards

Overview: The National Education Technology Standards (NETS) project

The International Society for Technology in Education (ISTE) has initiated a project to develop standards for educational uses of technology. The standards have three different areas that focus on students, teachers and administrators. The NETS for teachers are designed to improve the quality of pre-service teacher education and provide support for in-service teachers.

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Objectives

- Given a set of technology integration experiences (which are to be retrieved from the KITE case library), the learner will be able to compare and contrast the experiences in terms of their relationship to the National Education Technology Standards.
- Given an instructional activity to design, the learner will be able to integrate technology into the learning activities that reflect standards.

Introduction to the NETS

Read the following information. Use this information throughout this section to participate in discussions and complete activities.

- http://cnets.iste.org/docs/NETS_T-Profiles.doc
This document provides the standards and an evaluative checklist for technology use in education.

- The article <http://www.iste.org/news/2002/10/23-nasbe/nasbe-tech-supported-2002.pdf> is a look into all the NETS (students, teachers and administrators)
- A list of the Educational Technology Standards and Performance Indicators for All Teachers -- http://cnets.iste.org/teachers/t_stands.html

Activity 1: Reviewing How KITE Cases Relate to the Standards

National Education Technology Standard III for TEACHING, LEARNING, AND THE CURRICULUM states "teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning." In objective C it further delineates that teachers "apply technology to develop students' higher order skills and creativity."

To illustrate this in action read through the following scenarios. Pay special attention to how the scenarios relate to this standard. **This format should be used to complete the assignment in Activity 2.**



Scenario 1 - KITE case [4022-1](#)

"Bob" is an English/Language Arts teacher working with 12th grade students. The unit they are studying is Asian literature and the students are learning that the books were focused on teaching people how to live their lives. Bob is tired of requiring research papers from seniors who are bored and ready to do something more exciting and challenging. Bob decided to assign the students the task of creating a public service announcement that would persuade other people to change some aspect of their lives.



Students worked in groups to research the information for their topic, to write a detailed script for the announcement, and to create a storyboard. The students presented their work to the rest of the class for evaluations. The students then revised their work based on the feedback they received from their peers. Following the re-write, the students were given digital cameras and they filmed their announcements. The film was edited on the library's computer using special software. After some minor problems, such as sound issues, the final announcements were assessed for quality, persuasiveness and whether the announcement would be realistic to the audience.

Bob's most important objective was to help the students realize that language is a powerful tool and that the students have the ability to persuade other people when they have knowledge of their language.



Scenario 2 - KITE case [2103-1](#)

"Ann" is a teacher of 9th and 10th grade students. The course is a Humanities course that combines English, World and US Geography, and Social Studies. The unit that they are studying is about the United States and the concept of "neighborhoods". In the past, she had used a lot of PowerPoint in her classroom and she decided to give her students a chance to use other types of technologies to present information.



Ann divided the students into groups of 3 to 4 and they were given the task of researching ethnic groups from the United States. They could choose from Italian-Americans, African-Americans, Puerto Rican-Americans, German-Americans, Irish-Americans and others. The students were to do more than just research the groups. They were also in charge of setting up a section of a walk-through mock neighborhood in their school. They could create movies, set up food displays, play music, demonstrate dances and traditional clothing. Some students also created presentations about famous people from these ethnic groups.

The students are successful in completing the activity, which was assessed by a rubric. The audience was engaged in the presentations and the mock neighborhood was a success.

Analysis

	KITE case 4022-1	KITE case 2103-1
Target audience	Grade 12	Grade 9-10
Teacher Goals	Looking for an alternative to a traditional research paper	Looking for an alternative to PowerPoint presentations
Planned Activity	Creating a public service announcement	Creating a mock neighborhood
Student Task	Research topic, create persuasive argument, write script, capture video, utilize	Research topic, define product, create product, present final product

	editing software, present final product	
Assessment	Rubric - assessed whether PSA was a quality product and would persuade audience	Rubric - assessed whether audience was engaged
Standard met?	Yes - Students are creative and problem solvers	Partial - Students are creative

Scenario 1 meets the NETS in that the teacher requires the students to use higher order skills such as persuasion and problem-solving. The teacher also supports the students' creativity by providing them with a structure for their project, while allowing them to choose their topic and how they would address it.

Scenario 2 meets the NETS in that the teacher was able to let the students be creative in what they did. The teacher did not require the students to all create the same type of product and was rewarded by students who created wonderful and interesting displays, movies, games and other artifacts for display. However, the teacher did not do enough to address the first part of the standard's objective, which stated that the teacher would use technology "to develop students' higher order skills".

These two cases have several similarities. They each feature a teacher wanting to do things differently, students who are given a task that involves research and presentation of findings, and creative products from the students as a result of their learning.

There are also some differences between the cases. In the first case, Bob encourages the students to do more with the research findings than make a presentation. He does require a presentation in the form of a public service announcement as the final product, but he requires students to think more about how people could be persuaded and to problem-solve when issues arose in completing the task.

Solution

So, how can we learn from the two cases presented above to better meet the standard? One possible solution is that Ann could still have her students create the interesting mock neighborhood, but she could add more to the neighborhood by asking the students to solve neighborhood "problems". The students would then need to discover how that ethnic group has historically solved similar problems, how people from that ethnic group would realistically

react to the problems by finding people to interview, and then create a solution based on their findings. They would need to use problem-solving skills to find the resources and then creatively solve the problem, displaying that solution in the mock neighborhood.

Activity 2: Evaluating KITE Cases

National Education Technology Standard IV for ASSESSMENT AND EVALUATION states that "teachers apply technology to facilitate a variety of effective assessment and evaluation strategies". In objective A it further delineates that teachers "apply technology in assessing student learning of subject matter using a variety of assessment techniques."

Assignment

Search the [KITE case library](#) and retrieve cases in your subject and grade level interest area. Make sure that the cases you review relate to the NETS IV for ASSESSMENT AND EVALUATION. Review at least 10 cases. Choose your two favorite cases for your report. Write a report, following the **format given in Activity 1**. Include the case



numbers, links to the cases, a scenario for each case that summarizes the case and create a table that compares the two cases. Finally, discuss how each case meets or does not meet the standards, give similarities and differences between the cases and provide a solution that combines the two cases to create a new and better solution. Send this report to the instructor.

Participate in your assigned small discussion groups. Within your group, present your reports and defend your position. It is important that you participate in the small group conversation. Share at least one good thing and one critique of each of your peer's reports.

If your report changes following your small group discussion, revise your report and resubmit it to the instructor, clearly indicating why you are making changes.

Discussion Topics

Keep the following questions in mind as you participate in your small group discussions. When you have completed those discussions, use this discussion activity to respond to these questions in the large group discussion. Relate your answers to the KITE cases

you reviewed, your small group discussions and your own personal experiences.

- How do the NETS for teachers relate to you and your education experiences?
- What are the benefits of having standards for technology use in education?
- In your opinion, which is the most important of the standards and why?
- How does applying standards in the planning stage of learning experiences improve student outcomes? How was this reflected in the KITE cases you reviewed?

Rubric for Activity 2 Assignment

"A" range	The report of KITE cases is complete and follows the format given in Activity 1. The report includes the case numbers, links to the cases, a scenario for each case that summarizes the case and contains a table that compares the two cases. Each case has a discussion about how the case meets or does not meet the standards, gives similarities and differences between the cases and provides a solution that combines the two cases to create a new and better learning activity.
"B" range	The report of KITE cases is mostly complete and follows a format similar to the format given in Activity 1. The report includes the case numbers, links to the cases, a brief scenario for each case and contains a table that compares the two cases. Each case has a discussion about how the case meets or does not meet the standards, gives similarities and differences between the cases and provides a solution that combines the two cases.
"C" range	The report of KITE cases is incomplete. The report includes the case numbers, links to the cases, a scenario for each case and contains a table that compares the two cases. Each case has a discussion about how the case meets or does not meet the standards, gives similarities and differences between the cases and provides a new solution.
"D" range	Failure to complete assignment.