

Question & Review: Higher Order Questions Games



Procedural Knowledge Level



Instructional Strategies

Higher order thinking skills are activated in students when they encounter unfamiliar problems, situations, or questions. Higher order skills have their foundation in lower order skills, and are linked to prior knowledge. By employing these thinking skills, students are prompted to apply what they have learned to various situations.

Higher Order Questions



Higher Order Questions

Mission

To challenge students to think critically and creatively through higher order questions.

First Impressions

- How can teachers utilize higher order questions to elicit answers that reflect a critical view of concepts & materials?
- When should questioning be implemented in the classroom?
- How should teachers determine which question levels to use?
- How can a teacher create a classroom environment in which students feel confident to ask & answer questions?



Section 1

Objectives:

Students will be able
to...

1. Determine when it is appropriate to ask questions during a lesson.
2. Create questions at each of the thinking levels of Bloom's Revised Taxonomy.
3. Create a classroom environment where students feel comfortable & confident asking/answering questions.

Exploration

In an increasingly complex world, it's imperative that students be taught to use higher order thinking. One method to develop these skills is through the use of HOT, or Higher Order Thinking, questions. HOT questioning requires students to construct and support responses to open-ended, interpretive, evaluative, inquiry, inferential and synthesis questions (Cotton, 2001), all of which are derived from Bloom's Revised Taxonomy.



Section 2

What's This?



Bloom's Revised Taxonomy, which originated in 1956, was later updated in the 1990s to reflect thinking required for 21st Century work. The taxonomy is a framework that provides a pedagogical way to categorize thinking into six distinct levels: remembering, understanding, applying, analyzing, evaluating, and creating.

Take a Look

How do you use higher order questioning effectively?

Use often and for a variety of purposes. Remember that though assessment is critical, it is just one function of questioning. Questioning is a useful teaching strategy throughout a lesson, whether to activate background knowledge or to encourage deeper contemplation of a concept.

Encourage higher order thinking at every grade and achievement level. It is a common misconception that lower level questions should be used with younger students and that higher order questions should be reserved for classrooms containing high achieving students. However, all students benefit from learning via higher order questioning, and students at every grade and achievement level can be taught to think for themselves on more critical levels.

Scaffold questions. Lines of questioning should build upon one another, increasing in rigor as students' understanding increases. Questioning should be scaffolded to ensure that students understand basic materials before being asked to delve deeper into a concept.

Vary question levels. Since lower levels questions are used most commonly in classrooms, students may not be used to analyzing and synthesizing concepts. To achieve success, teachers must acclimate students to thinking more critically by asking questions at a variety of levels.

Use sentence starters. Sentence starters can be used to help students think on higher levels. They can also be used to assist teachers in the creation of questions that encompass each level of Bloom's Taxonomy.

Ensure rigor. Questions that are the most appropriate for prompting students to think critically are ones that require complex application, analysis, evaluation, problem-solving, and creation skills. They encourage discussion and stimulate students to discover conclusions on their own.

During the course of one school day, teachers can ask up to four hundred questions. Typically, three-fourths of those questions require only basic levels of thinking in order to produce a correct response, thus requiring no higher level thinking (Fredericks, 2005).

Three Forms of Question Sequencing

Same Path is a questioning pattern that involves asking questions at the same cognitive level (Brown & Edmondson, 1989). For example, a history teacher might ask, “What was the Revolutionary War?” and “What is a revolution?” Since this pattern primarily utilizes lower level questions, it would be best used in introductions to concepts or lessons.

Extending & Lifting is a questioning pattern that involves asking a number of questions at the same cognitive level (extending) before lifting the questions to the next higher level (Taba, Durkin, Fraenkel, & McNaughton, 1971). For example, the first three questions in a sequence would all be on the same cognitive level; the fourth would require a student to think at a higher level.

Circular Path is a questioning pattern that involves asking a series of questions that eventually bring the discussion back to the beginning position, statement, or question (Brown & Edmondson, 1989).

Why does it work?

Consistent exposure to lesson planning that incorporates high order thinking questions...

- promotes self-assessment.
- provides students with the tools to think, analyze, and evaluate for themselves.
- makes classroom concepts meaningful.
- improves retention of concepts.
- leads to higher rates of student proficiency and growth.
- enhances student understanding of basic and more advanced materials.
- boosts student self-esteem and confidence as they begin to reap the benefits of their skills.
- increases opportunities for future academic or work place success.

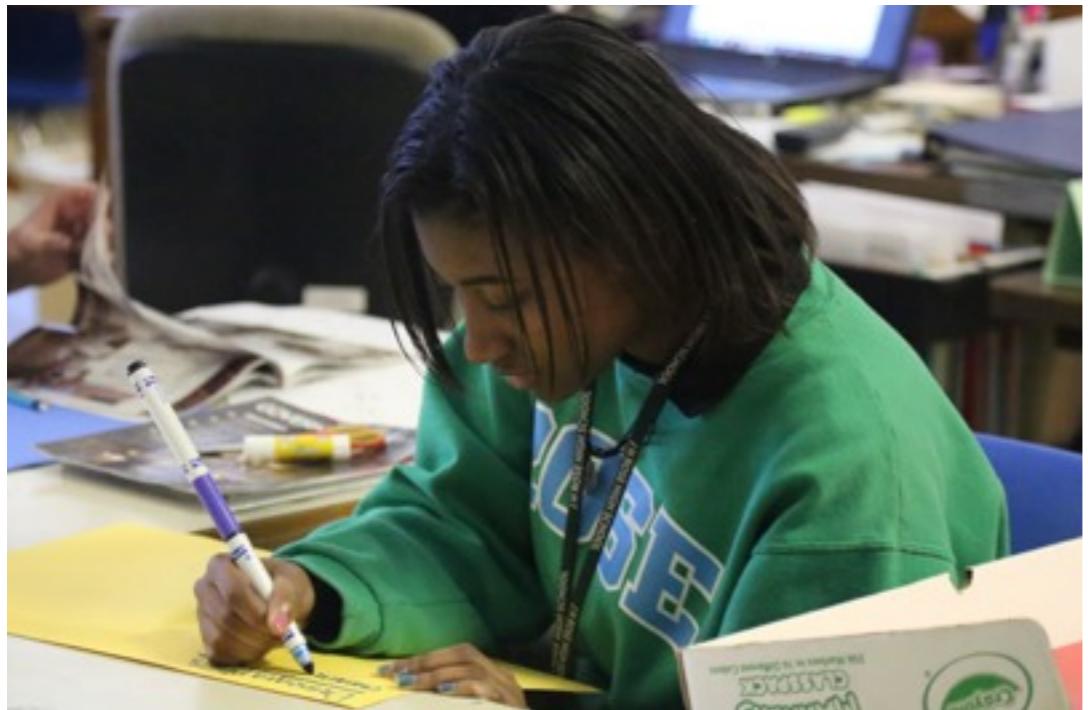
Hot Links

[How to encourage higher order thinking](#)

[Activities that promote higher order thinking](#)

[How to increase higher level thinking](#)





Watch the video [Writing Higher Order Questions](#) on the TeachingChannel.org. As you watch the video, notice the various strategies this teacher uses with her students to guide them through the questioning process. Think about the way she directly incorporates Bloom's Taxonomy within her lesson.

- How would her approach work for differentiating this lesson?
- Could this technique apply to other instructional strategies?
- How many of these questioning strategies do you think she introduced initially?
- How could you scale this approach back to introduce the topic of questioning within a lesson?

Section 3

Think About

Review

Higher order questioning...

- encourage depth of understanding.
- foster engagement with content.
- champion students' investment in their own learning.
- can be used at any point during the lesson.
- connect prior knowledge to new content.
- allow teachers and students to check for understanding during the lesson.

Section 4

Resources

Brown, G. A., & Edmondson, R. (1984). Asking questions. In E. C. Wragg (Ed.), *Classroom Teaching Skills: The Research Findings of the Teacher Education Project*. New York, NY: Nichols Publishing. Retrieved from ERIC database. (ED241530)

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42. Retrieved from http://www.sociallifeofinformation.com/Situated_Learning.htm

Burden, P. R., & Byrd, D. M. (2013). *Methods for effective teaching* (6th ed.). Boston, MA: Pearson.

Ericsson, K. A., Krampe, R. T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363-406.

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Gersten, R., Taylor, R., & Graves, A. (1999). Direct instruction and diversity. In R. Stevens (Ed.), *Teaching in American schools*. (pp. 81- 106). Upper Saddle River, NJ: Merrill/Prentice Hall.

Grant, L., Hindman, J., & Stronge, J. (2010). *Planning, instruction, and assessment*. Larchmont, NY: Eye on Education.

Hill, J., & Flynn, K. (2008). Asking the right questions: Teachers' questions can build students' English language skills. *Journal of Staff Development*, 29(1), 46-52. Retrieved from <https://myportal.bsd405.org/personal/bondorm/Lists/Book%20Study%20Teaching%20Content%20to%20English%20Language%20Le/Attachments/206/Asking%20to%20the%20Right%20Questions.pdf>

Orlich, D., Harder, R., Callahan, R., & Gibson, M. (1998). *Teaching strategies: A guide to better instruction*. Boston: Houghton Mifflin.

Resources

Thomas, A. & Thorne, G. (n.d) *Higher Order Thinking*.
Retrieved from <http://www.adlit.org/article/34651/>

Vogler, K. E. (2008). Asking good questions. *Educational Leadership*. Retrieved from <http://www.ascd.org/publications/educational-leadership/summer08/vol65/num09/Asking-Good-Questions.aspx>

Instructional Strategies

First Impressions

- How can teachers pique students' interest in new concepts?
- How can teachers use games and simulations in class while keeping students on task?

Games

Mission

To engage students in concept acquisition using principles of games in lesson planning.



Section 1

Objectives:

Students will be able to...

1. Identify how to use games and simulations as a teaching strategy.
2. Determine when it is appropriate to use the strategy.
3. Plan a lesson using principles from gaming and simulations.

Exploration



Educational games are designed to teach, develop skills, provide review, and engage students in role-play. These experiences may occur face-to-face, in interaction with artificial intelligence on a computer, or with others online.

Section 2

What's This?

10,000 Hours



By age 21, kids have spent 10,000 hours playing computer games (3 or 4 times as much time as they have spent reading books)-- the same amount of time students spend in the classroom between 5th and 12th grade. Jane McGonigal's *Reality is Broken*

Educational games are designed to teach, develop skills, provide review, and engage students in role-play. These experiences may occur face-to-face, in interaction with artificial intelligence on a computer, or with others online.

Many interactive and immersive classroom experiences have the DNA of games, so when constructing engaging curriculum, educators can look to the principles that make games successful for guidance.

Simulations and problem-based learning (PBL) both employ game-like elements to make learning more enticing and memorable for students. In a simulation, learners move through events that emulate the real world to better understand issues, roles, contexts, rules, enactments, and outcomes. Similarly, problem-based learning (PBL) involves students in considering alternatives and making decisions in order to solve a relevant problem.

Take a Look

Three Types of Games

- Cooperative/Collaborative
- Independent
- Competitive

(Moursund, 2009, p. 30).

- Provide rules, structure, and method for determining winner in competitive activities.
- Customize the activity to your students' age and skills by selecting games with varying levels of difficulty.
- If students are completing the game independently, be sure to have a way that they can self-check their answers.

When preparing, remember that simulations and games...

- take up a lot of time.
- require a lot of planning.
- necessitate observation, assessment, and adjustment.

How do you use games effectively?

- Relate activity to content.
- Precede with careful instructions and ensure directions are easily accessible during gameplay.
- Monitor and provide additional instructions as needed.
- Include clear objectives.

“One of the most difficult tasks men can perform, however much others may despise it, is the invention of good games.”

— [C.G. Jung](#)

The use of gaming and simulations in the classroom...

- allows students to change parameter values and paths to see how changes will affect the outcome.
- teaches through trial and error, which makes information more memorable.
- creates more realistic and interesting scenarios for learning in context.
- provides a safe environment for experimenting with decision-making.
- helps students understand the interplay of personalities and situations in decision-making.
- enables students to formulate strategies more effectively by providing a concrete format for skill practice.
- appeals to visual learners.
- encourages differentiation on instruction.

Hot Links

[Game-Based Learning](#) (How-To Information)

[Avalanche! Classroom Activity](#) (Activity)

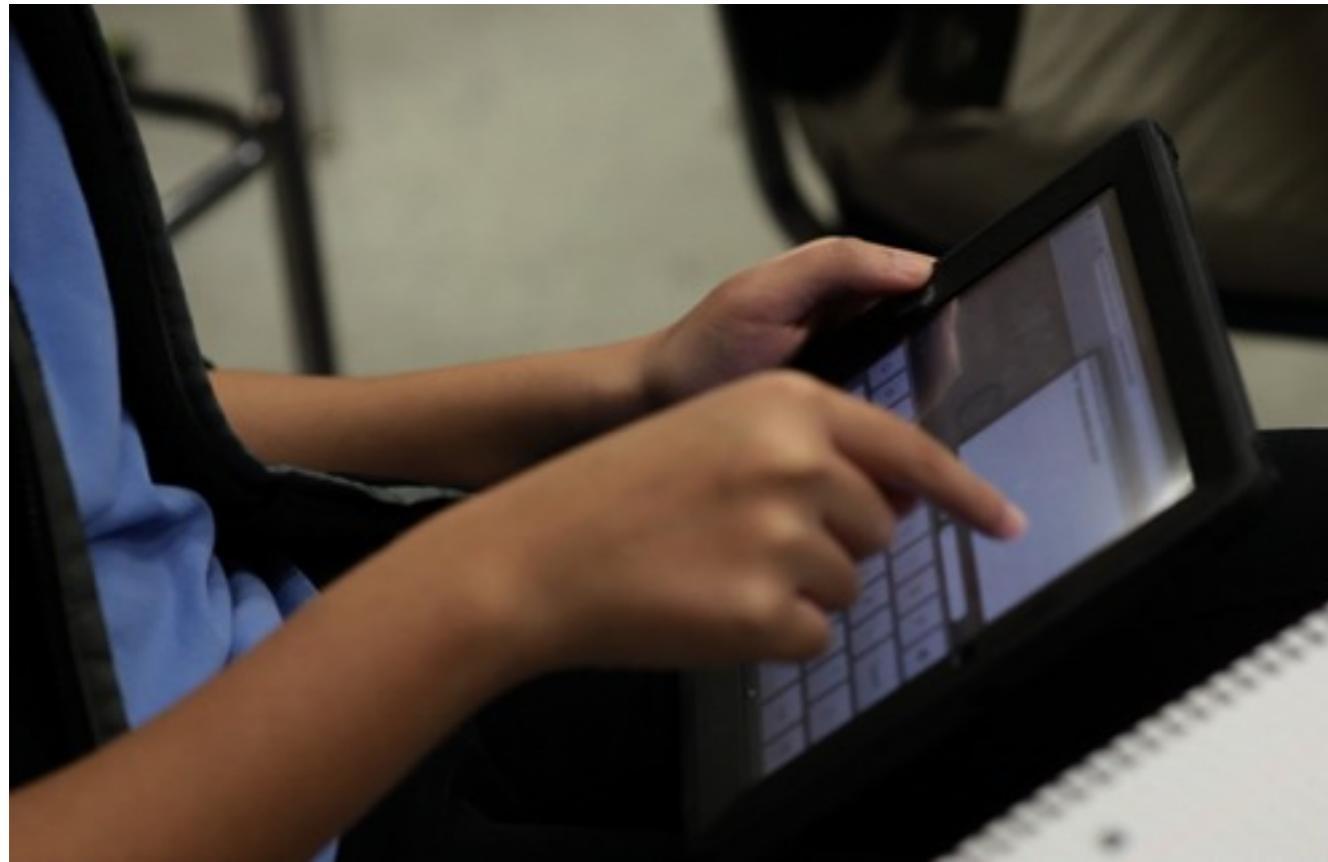
[Simulations Engage Students in Active Learning](#) (Article)

[Game-Based Learning in Practice](#) (Article)

[Game-Based Learning](#) (Links & News)

Section 3

Think About



“Games give you a chance to excel, and if you're playing in good company you don't even mind if you lose because you had the enjoyment of the company during the course of the game.”

— [Gary Gygax](#)

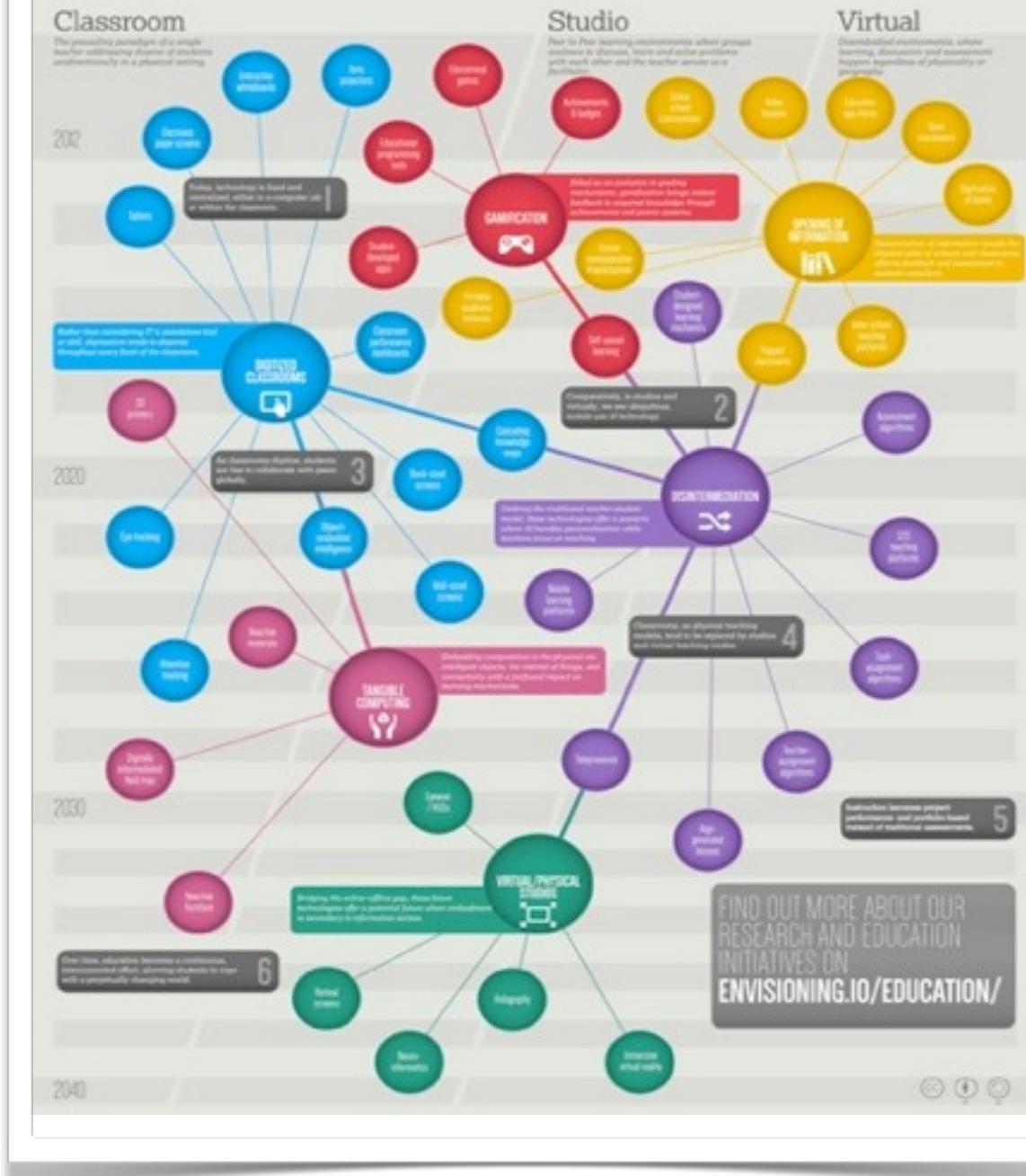
Watch [this video](#) on the youtube.com. As you watch the video, notice the way students are engaged by the game.

- How did the teacher use questioning in this game?
- How do you think the game contributed to the day's lesson?
- Are there any ways the teacher could have improved this game to improve questioning?

Envisioning the future of education technology

Education lies at a periphery concerned with society. On one hand it has the responsibility of anticipating real-life skills by preparing for an increasingly complex world - but education-mediocre can only be tolerated after practical bases defined. This difference is prominently expressed when it comes to technology, where fast-paced innovation and perpetual change is the only constant.

This compilation attempts to organize a series of emerging technologies that are likely to influence outcomes in the operating discipline. Despite its inherently speculative nature, the driving trends behind the technologies can already be observed, ensuring that it is never too late to take some proactive measures, pending not in learning and the markets around the world.



Review

Games..

- improve students' attitudes towards learning.
- aid in long term retention.
- provide immediate feedback.
- provide opportunities for remediation and practice.

This infographic illustrates the possible future of education technology. It was created by Envisioning in Brazil and made available through Creative Commons. To view this infographic online, follow this [LINK](#).

Section 4

Resources

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42. Retrieved from http://www.sociallifeofinformation.com/Situated_Learning.htm

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Games-to-Teach Project. (2006). Retrieved from <http://icampus.mit.edu/projects/GamesToTeach.shtml>

Gee, J. P. (2004). *Learning by design: Game as learning machines*. Retrieved from http://www.gdconf.com/conference/archives/2004/gee_james.pdf

Gersten, R., Taylor, R., & Graves, A. (1999). Direct instruction and diversity. In R. Stevens (Ed.), *Teaching in American schools*. (pp. 81- 106). Upper Saddle River, NJ: Merrill/ Prentice Hall.

Grant, L., Hindman, J., & Stronge, J. (2010). *Planning, instruction, and assessment*. Larchmont, NY: Eye on Education.

Kirriemuir, J., & McFarlane, A. (2002). *Literature review in games and learning: A report for NESTA Futurelab*. Retrieved from <http://hal.inria.fr/docs/00/19/04/53/PDF/kirriemuir-j-2004-r8.pdf>

Resources

Moursund, D. (2007). *Introduction to using games in education: A guide for teachers and parents*. Eugene, OR: University of Oregon. Retrieved from <http://darkwing.uoregon.edu/~moursund/Books/Games/Games.pdf>

Orlich, D., Harder, R., Callahan, R., & Gibson, M. (1998). *Teaching strategies: A guide to better instruction*. Boston: Houghton Mifflin.

Pivec, P. (2009). *Game-based learning or game-based teaching?* London: Becta.

Warren, S., Dondlinger, M. J., Stein, R., & Barab, S. (2009). Educational game as supplemental learning tool: Benefits, challenges, and tensions arising from use in an elementary school classroom. *Journal of Interactive Learning Research*, 20(4), 487-505.

Subject Specific

Instructional Strategies

Career & Technical Education



Career & Technical Education

Mission

The mission for this chapter is to explore, read, review, watch video, and reflect on how the teacher integrates the instructional strategy, question and review. Additionally students should be able to transfer skills and content knowledge gained from the chapter content and assignments to their internship.

Question & Review

CTE
Instructional
Strategies

First Impressions

Within the declarative module you were introduced to two types of question and review: higher order questions and the use of games for review. The focus of this chapter is on the use of higher order questions within instruction. Research suggests that most teachers incorporate recall and comprehension which would be classified as lower order questions that do not require students to actively process information. Whereas the use of higher order level questions (analyzing, synthesizing, and evaluating) is critical to engaging learners in the “meaning making process” to foster cognitive development (Moodley, 2013). According to the Prince George’s County Schools, higher order questions tend to be open-ended and lead to divergent thinking (Prince George's County Schools, 2013). Students need “think time” to respond to all levels of questions. Teachers utilizing the

strategy should plan for instruction and include higher-order question prompts within their lesson plan. Commonly used higher order question prompts include:

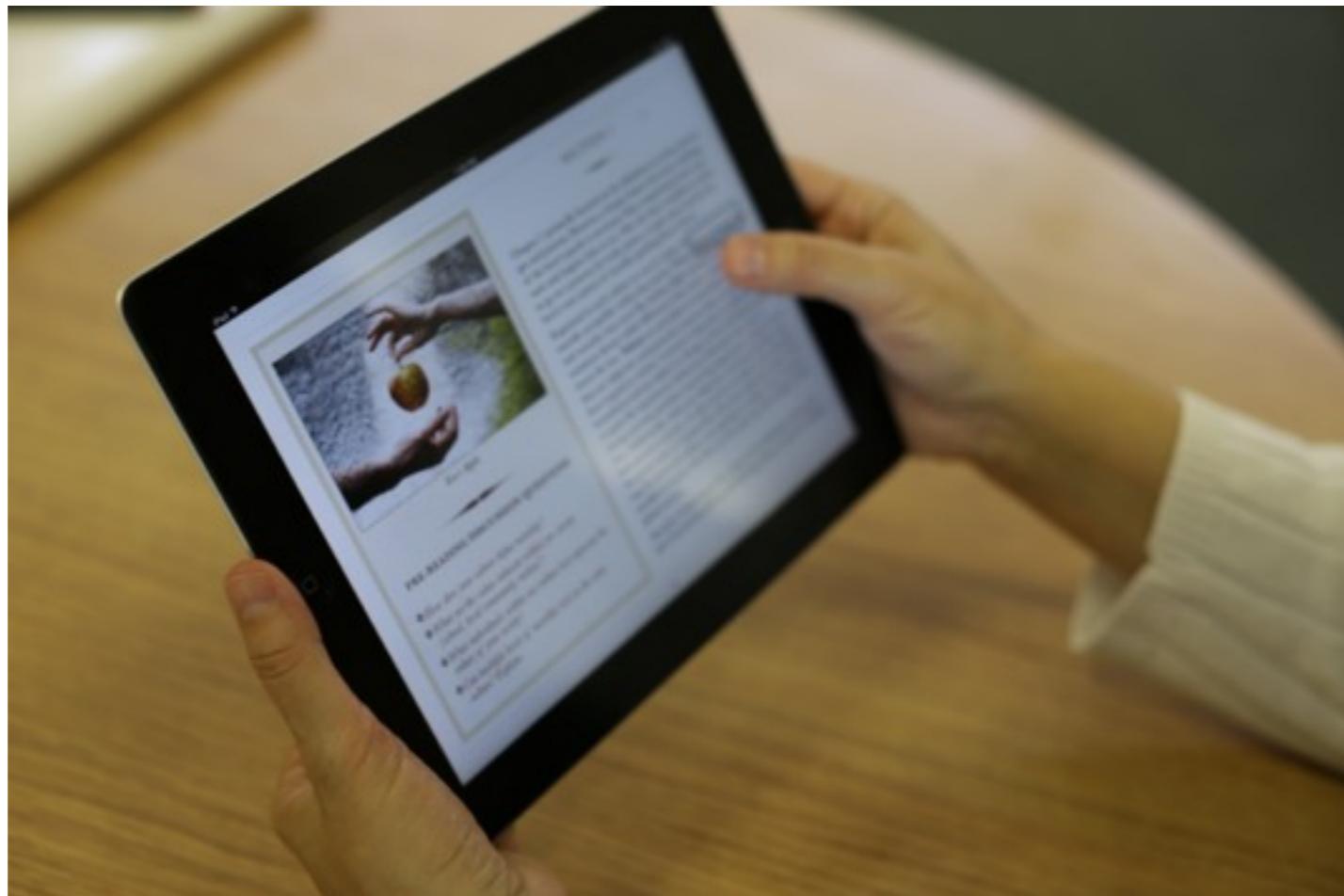
- Amplify: “Tell me more about that.”
- Clarify: “What do you mean when you say such and such? Explain that a bit more.”
- Paraphrase/Summarize: “Tell me what happened in your own words.”
- Cause/Effect: “Which happened first? Did that lead to something? Why? What were the causes?”
- Compare Contrast: “What do these two have in common? How are they different? Have you learned anything like this before? What does this information remind you of?”
- Example: “Can you give an example of this?”
- Definition: “How would you define this?”
- Characteristic: “What’s a characteristic of this?”
- Qualification: “When is this not true? Are there any exceptions to this?”(Skipper, n.d.)

Moodley, V. (2013). In-service teacher education: asking questions for higher order thinking in visual literacy. *South African Journal of Education* 33(2).

Skipper, S. (n.d.) Higher Order Questioning Techniques. UCF Literacy Symposium. Retrieved from: <http://education.ucf.edu/litsymposium/Resources2013/QuestioningStrategies.pdf>

Exploration

Watch the following YouTube video: [Bloom's Taxonomy according to Andy Griffith](#). Viewing this video will prepare you for the instructional strategy that deals with higher order questions by exploring Bloom's Taxonomy.



CTE Applications

Now that you have completed the exploration portion of the module we will examine how Higher Order Questioning might be used in CTE classrooms. The CTE Applications section will provide the context for the lesson, lesson agenda, the individual video segments you will watch, the expanded lesson plan, and a student work sample. Following the CTE Applications section, you will be required to complete reflection activities.

Context for Learning

Teacher: Mr. Kurt Garner

Course: Microsoft IT Academy – Excel and Access (Honors)

This class is an honors level course. Students typically have completed Microsoft IT academy Word and PowerPoint before this class but it is not necessary.

Modifications: This class has no students with special needs.

2010 - 11 School Year		SCHOOL PROFILE	HIGH STUDENT PERFORMANCE	SAFE, ORDERLY & CARING SCHOOLS	QUALITY TEACHERS	STATE												
2006 Worthington Rd Greenville, NC 27858 (252) 756-3440		D H Conley High		Pitt County Schools Grades 9-12 Regular School Traditional Calendar														
Specialized Course Enrollments The percentage of high school Advanced Placement (AP) and International Baccalaureate (IB) course enrollments, community college and university regular academic course enrollments, and high school and community college career and technical course enrollments.																		
Percentage of Total Course Enrollments in:																		
<table><thead><tr><th></th><th>Advanced College Prep Courses (AP*, IB**, Community College, University)</th><th>Career and Technical Courses (School, Community College)</th></tr></thead><tbody><tr><td>Our School</td><td>3%</td><td>16%</td></tr><tr><td>District</td><td>3%</td><td>17%</td></tr><tr><td>State</td><td>5%</td><td>15%</td></tr></tbody></table>								Advanced College Prep Courses (AP*, IB**, Community College, University)	Career and Technical Courses (School, Community College)	Our School	3%	16%	District	3%	17%	State	5%	15%
	Advanced College Prep Courses (AP*, IB**, Community College, University)	Career and Technical Courses (School, Community College)																
Our School	3%	16%																
District	3%	17%																
State	5%	15%																
<small>* AP = Advanced Placement ** IB = International Baccalaureate</small>																		

D H Conley High School Information

School location:

2006 WORTHINGTON RD
GREENVILLE, NC 27858
(252) 756-3440

School district:

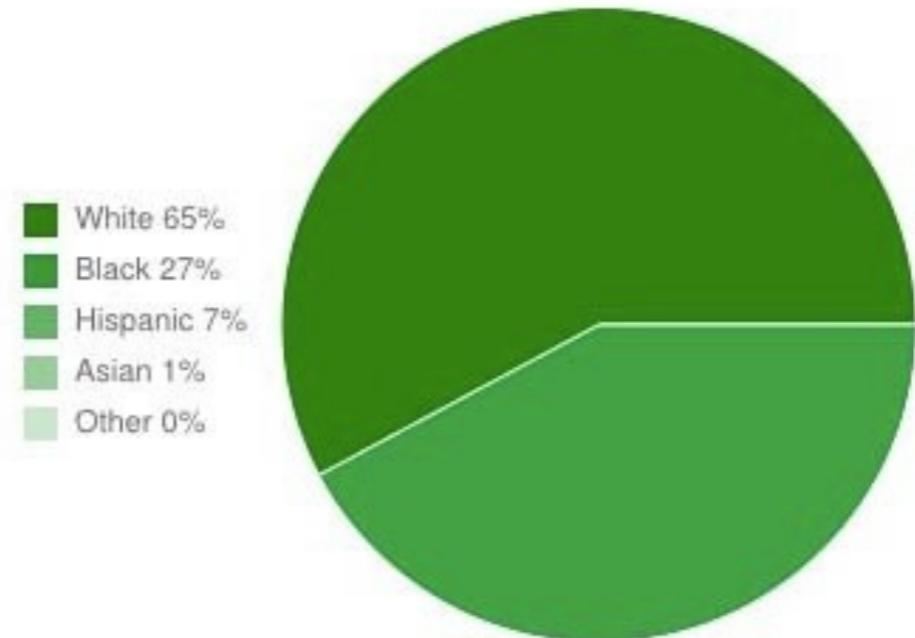
PITT COUNTY SCHOOLS

This high school has a total enrollment of **1413 students** with approximately **84 full-time teachers**. It has a student to teacher ratio of about **17 students per teacher**. The average student-teacher ratio for Pitt County is 15 to 1.

Enrollment by Grade Level

» 9th Grade Students	448
» 10th Grade Students	361
» 11th Grade Students	328
» 12th Grade Students	276
Total students	1,413
Total Full-time teachers	83.9
Student / Teacher Ratio	17:1
Students eligible for free lunch	317 (22%)
Students eligible for reduced lunch	48 (3%)

Demographics



Lesson Agenda

A lesson agenda is a brief synopsis of a lesson plan that may be submitted to administration.

DATE: 02/18	MICROSOFT IT ACADEMY - EXCEL AND ACCESS
Objectives	1.00 Apply basic spreadsheet software skills using Microsoft Excel.
Materials	Microsoft Excel, MSITA resources from Moodle
Activities/Agenda	Teacher will review Formulas and introduce Functions through the use of a PowerPoint. Students will then complete worksheets to assess their understanding.
Evaluation	Oral review of functions and formulas

Video Segment One

As you prepare to watch video segment one on question and review think about how the teacher is providing instruction and direction for students to set the stage for the lesson.

Think about how the teacher prepares the lesson taking into account student's prior academic learning and personal/cultural/community background to support learning.

Now watch the video.

CTE Question & Review Part 1

To view full screen, touch video for controls to enlarge.

Video Segment Two

After viewing the first video if you are unsure of the question and review strategy please click on the [link](#).

Prior to watching the second video segment on question and review please think about what your response would be to the following questions.

- What do you think will happen in the second video segment based on the instruction provided within the first video segment?
- What type of instructional strategy will the teacher employ?
- Do you think instruction will be teacher centered or student centered?
- Do you think students will be engaged with the lesson?

Now watch the second video.

CTE Question & Review Part 2

To view full screen, touch video for controls to enlarge.

Expanded Lesson Plan

This is an example of an expanded lesson plan that accompanies the video that you just reviewed. Teacher candidates at ECU are expected to create a similarly constructed expanded lesson plan for the [edTPA](#).

Lesson By: Kurt Garner

Lesson based on the research: Revised Bloom's Taxonomy present in A Taxonomy for Learning, Teaching and Assessing; A Revision of Bloom's Taxonomy of Education Objectives

Lesson Title: Utilizing Functions and Formulas effectively in Excel

Grade level for the lesson: 9th-12th grade

Essential Standards Curriculum (Subject) Area(s): Microsoft IT Academy – Excel and Access

Essential Standard Statement and Number: BM20 1.00 Understand basic, intermediate and advanced spreadsheet software skills using Microsoft Excel.

Essential Standard Clarifying Objective Statement and Number: BM20 1.05 Understand formulas and functions in Excel

Baseline Data: This class is an honors level course. Students typically have completed Microsoft IT academy Word and PowerPoint before this class but it is not necessary. This class has no students with special needs.

Materials: Moodle PLC Worksheet, Computer LCD projector, PowerPoint, LAN school Classroom management software, and Microsoft Excel 2010.

Lesson Objective: After the lesson, students will be able to:

1. Utilize various formulas and functions

Assessment Strategy: Students will be given an assignment to assess their ability to utilize formulas and function correctly. The students must score 80% to become proficient and must be completed indecently.

Focus/Review: Students will review the use of formulas in Excel but continue with the use of functions to simplify formulas in some cases. Review use of cell references and addresses instead of a value.

Statement of Objective: Today, we are going to discuss and compare the uses of formulas and functions in Excel. When applicable we will discuss how they can be used in a business setting.

Academic Language:

Formula: Uses mathematical operators and cell references to compute data

Function: Uses a pre-determined word to compute data

Order of Operations: Parenthesis, Exponents, Multiplication, Division, Addition, Subtraction

Relative Cell Reference: By default, all cell references are relative references. When copied across multiple cells, they change based on the relative position of rows and columns

Absolute Cell Reference: reference to a particular cell or group of cells that does not change, even if you change the shape or size of the spreadsheet, or copy the reference to another cell.

Mixed Cell Reference: either an absolute column and relative row or absolute row and relative column. When you add the \$ before the column letter you create an absolute column or before the row number you create an absolute row.

Teacher Input:

Students will take notes on formulas and functions and their use in Excel

1. Differences between Formulas and Functions
2. Order of Operations
3. Formula Bar
4. Shortcut/Hot Keys
5. Cell references/Cell addresses (Show Examples)
 1. Relative
 2. Mixed
 3. Absolute
6. Auto Fill (Show Examples)
7. Hot Key F4 (Absolute Cell Reference)
8. How to edit a function or formula
9. Functions(Show Examples, ask for student volunteers)
 1. Sum
 2. Average
 3. Max
 4. Min
 5. Count

Teacher Input Continued:

10. Auto Sum (Show Examples, ask for student volunteers)
11. Date Functions (Show Examples)
 1. Now
 2. Today
12. Fill Series (Show Examples)
13. Manual/Automatic Calculations

Guided Practice:

1. Students will be called upon to complete various formulas in front of the class to check for understanding.

Independent Practice: Monitor students as they complete worksheet XL 16 from the DDC textbook and 4-2, 4-3, 4-4, 4-5 from the Pasewark textbook.

Closure: Review types of formulas and functions with students.

Modifications if any: None

Works Cited

A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Addison Wesley Longman, Inc., 2001

Pasewark, W.R. & White, B.R. (2013). The Office: Procedures and Technology, 6th edition. Cengage Learning.

Student Sample

<u>Notes</u>	
	MSLN Excel
	Relative Cell Reference - A relative cell reference means that the cell value changes "relative" to the cell in which it is copied.
	Absolute Cell Reference - an absolute cell reference means that the cell value remains constant when copied to another cell or used in a formula.
	addition = SUM()
	Average = AVERAGE()
	maximum = MAX()
	minimum = MIN()
	Count = COUNT()
	Autosum - ALT → = " Greek letter sigma
	Date Functions
	= NOW() returns the current date and time format as date and time
	= TODAY() current date

Reflection

Reflection 1 of 2

Click the icon to open an email and respond to the following question regarding higher order thinking. How would the instructional strategy used to teach the lesson be useful if applied to another CTE course? Please explain a topic or subject where you might employ this strategy.



Reflection 2 of 2

Now that you have completed the CTE Procedural Question and Review Module click the link to open TaskStream in your browser. Login to respond to the reflection questions.



Career & Technology Education

Homework & Practice

Mission

The mission for this chapter is to explore, read, review, watch video, and reflect on how the teacher integrates the instructional strategy, homework and practice. Additionally students should be able to transfer skills and content knowledge gained from the chapter content and assignments to their internship.

CTE
Instructional
Strategies

First Impressions

According to Marzano (2001) homework and practice extends learning outside the classroom. For the Business & Marketing classroom, homework and practice should be tied to the curriculum and learning goals as opportunities for students to extend their current understanding or to reinforce the skills learned in class. Homework allows students to apply concepts taught during class as they increase their skills to work independently without teacher input. The submission of homework provides teachers the ability to individualize instruction through feedback to improve students' work and promote growth in understanding the content being taught.

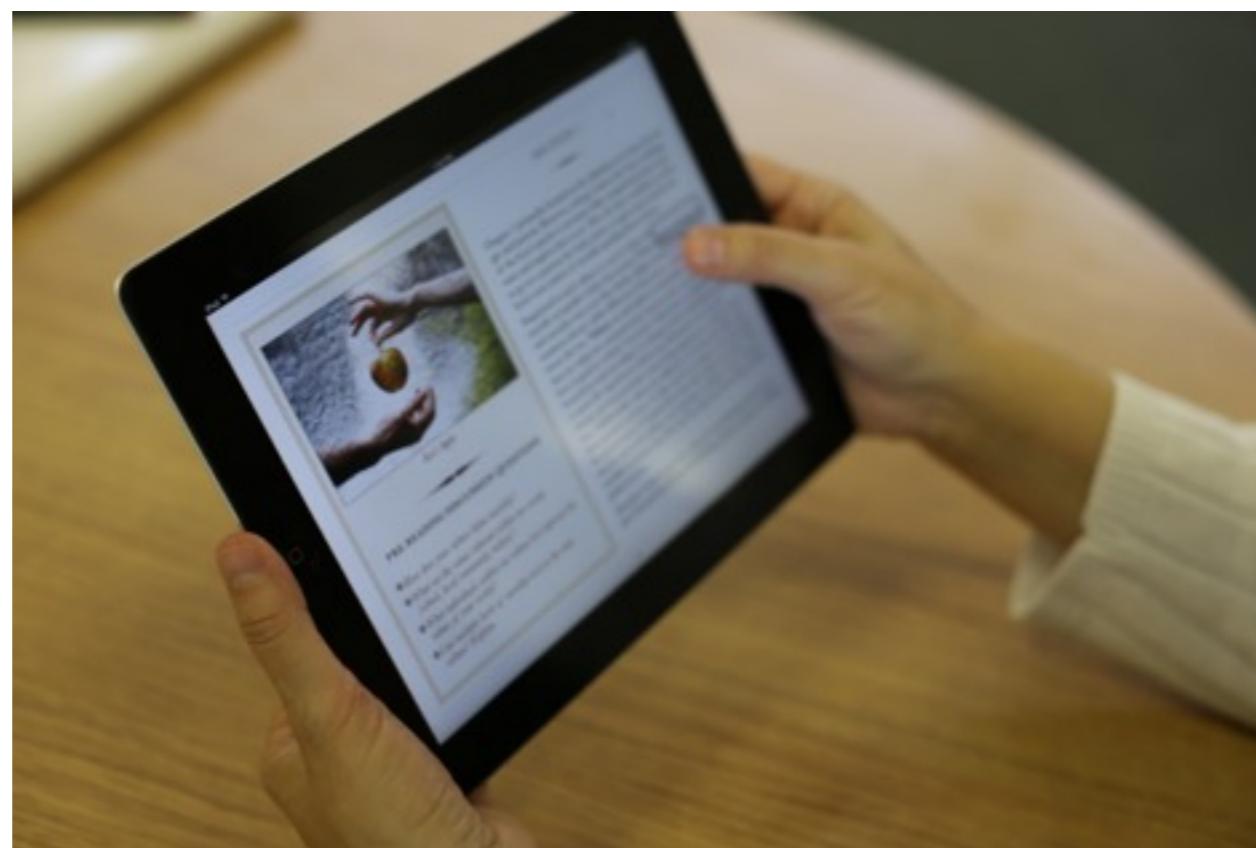
Exploration

Using [Browzine](#) or [ECU OneSearch](#) please find and read an article dealing with one of the following topics:

- Homework and Practice
- Independent Learning
- Marzano (Homework and Practice)



Reading this article will prepare you for viewing the instructional strategy that deals with homework and practice.



CTE Applications

Now that you have completed the exploration portion of the module we will examine how homework and practice might be used in CTE classrooms. The CTE Application section will provide the context for the lesson, lesson agenda, the individual video segments you will watch, the expanded lesson plan, and a student work sample. Following the CTE Applications section, you will be required to complete reflection activities.

Context for Learning

Teacher: Mrs. Ashleigh Phillips-Wagoner

Course: Entrepreneurship

Entrepreneurship is an upper level course that is shared among the business and marketing departments. All students must have previously taken at least one introduction to business or marketing course. Ideally, students who complete Entrepreneurship I will go on to take Entrepreneurship II.

There are 15 students in this class, 9 seniors and 6 juniors.

Modifications: Only 1 student has a 504 plan and is considered to be high-functioning autistic.

2012 - 13 School Year

SCHOOL PROFILE **HIGH STUDENT PERFORMANCE** **SAFE, ORDERLY & CARING SCHOOLS** **QUALITY TEACHERS**

Junius H Rose High
Welcome Letter

Pitt County Schools
Grades 9-12
Regular School
Traditional Calendar

Specialized Course Enrollments
The percentage of high school Advanced Placement (AP) and International Baccalaureate (IB) course enrollments, community college and university regular academic course enrollments, and high school and community college career and technical course enrollments.

Percentage of Total Course Enrollments in:		
	Advanced College Prep Courses (AP*, IB**, Community College, University)	Career and Technical Courses (School, Community College)
Our School	6%	16%
District	4%	18%
State	6%	15%

* AP = Advanced Placement
** IB = International Baccalaureate

Junius H Rose High School Information

School location:

600 WEST ARLINGTON BLVD
GREENVILLE, NC 27834
(252) 321-3640

School district:

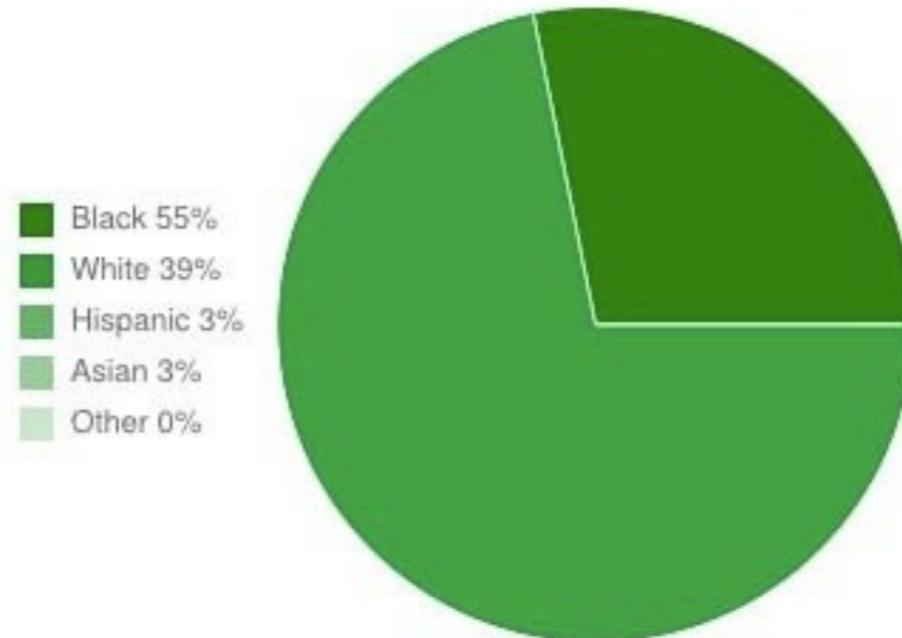
PITT COUNTY SCHOOLS

This high school has a total enrollment of **1670 students** with approximately **103 full-time teachers**. It has a student to teacher ratio of about **16 students per teacher**. The average student-teacher ratio for Pitt County is 15 to 1.

Enrollment by Grade Level

» 9th Grade Students	491
» 10th Grade Students	424
» 11th Grade Students	405
» 12th Grade Students	350
Total students	1,670
Total Full-time teachers	103
Student / Teacher Ratio	16:1
Students eligible for free lunch	601 (36%)
Students eligible for reduced lunch	55 (3%)

Demographics



Lesson Agenda

A lesson agenda is a brief synopsis of a lesson plan that may be submitted to administration.

DATE: 03/20	ENTREPRENEURSHIP
Performance Indicator	Select a target market appropriate for product/business to obtain the best return on marketing Explain the concept of market and market identification (3.02)
Learning Objectives	Students will be able to: Explain the importance of target markets to businesses Describe • demographic characteristics • the value of geographic segmentation and psychographic segmentation and • the types of behavioral segmentation Justify how a business selects their target markets.
Activities	Previous day's homework assignment: Students were to watch 30 minutes of any TV program of their choice. While watching the program, they were instructed to write down every commercial shown during the 30 minutes. TV Commercial Line Up: Each student writes down the list of commercials on a large sheet of paper. These sheets are posted around the room and other students will make guesses as to which TV show the list of commercials came from, thinking about the target market meant for each show. As a class, we will discuss why certain products are advertised during certain time slots and certain programs. Target Market Notes (segmentation organizer) students will complete the notes organizer together as a class and keep in their notebooks. Select the Target and Classification worksheets. Students will turn into the tray.

Video Segment One

As you prepare to watch video segment one on homework and practice think about how the teacher is providing instruction and direction for students to set the stage for the lesson.

Think about how the teacher prepares the lesson taking into account student's prior academic learning and personal/cultural/community background to support learning.

Did the teacher use learning objectives and examples to lead students to make clear and consistent connections to the subject matter?

Now watch the video.

CTE Homework & Practice Part 1

To view full screen, touch video for controls to enlarge.

Video Segment Two

After viewing the first video if you are unsure of the homework and practice strategy please click on the [link](#).

Prior to watching the second video segment on homework and practice please think about what your response would be to the following questions.

- What do you think will happen in the second video segment based on the instruction provided within the first video segment?
- What type of instructional strategy will the teacher employ?
- Do you think instruction will be teacher centered or student centered?
- Do you think students will be engaged with the lesson?
- Do we want to add a question about how teachers have to press forward even if students don't complete the required homework assignment?

Now watch the second video.

CTE Homework & Practice Part 2

To view full screen, touch video for controls to enlarge.

Expanded Lesson Plan

This is an example of an expanded lesson plan that accompanies the video that you just reviewed. Teacher candidates at ECU are expected to create a similarly constructed expanded lesson plan for the [edTPA](#).

Lesson By: Ashleigh P. Wagoner

Date: Thursday March 20, Entrepreneurship 4th period.

Lesson Title: Target Market & Market Segmentation

Grade level for the lesson: 11th-12th grade

Essential Standards Curriculum (Subject) Area(s): Entrepreneurship I

Essential Standard Statement and Number: 3.02 Select a Target Market appropriate for venture/product to obtain the best return on marketing investment.

Essential Standard Clarifying Objective Statement and Number:

3.02a: Explain the concept of market and market identification

Baseline Data: This is an upper level Business and Marketing course. Students take this course after completing at least 1 introductory course in either the Business or Marketing pathways. Ideally, students will move on to Entrepreneurship II after completing this course. Students in this class are all upperclassmen and only 1 student receives any sort of accommodations.

Materials: Teacher laptop, student workstations, LCD Projector, notes handouts.

Lesson Objective: After the lesson, students will be able to:

- Explain the importance of target markets to businesses
- Describe the various types of market segmentation
- Justify how a business selects a target market

Assessment Strategy: Students will develop a target market profile for their chosen business as a part of their culminating business plan.

Focus/Review: Students will have their homework assignment out and ready to turn in.

*Students were assigned to watch at least 30 minutes of television programming prior to coming to class. This half hour could have taken place during any time frame on any channel (other than streaming internet TV). While watching the program, they will record all of the commercials that air during each commercial break, even recording repeated commercials if there are any.

Teacher Input: Teacher will begin by asking all students to type up their list of commercials onto a Word document (students should use Times New Roman and the largest font available while keep the document to only 1 page)

Students will print their documents. The teacher will post each print out along the perimeter of the room without any identifying information on it other than the list of commercials. Each print out should have a number handwritten at the bottom.

Students will walk around the room with a clipboard and a sheet of paper. For each numbered print out, students should make their guess as to what channel, time slot and TV program belongs to that list of commercials.

When each student has made their guess for each numbered print out, they will return to their seats. The class will discuss each print out individually and see if any student was able to accurately label the list of commercials with the appropriate channel, time slot and/or program name. As a class, we will discuss why certain commercials appear during certain time slots or during certain programs. Tie-ins should be made to previous knowledge of target markets and market segmentation.

Guided Practice: Teacher will guide students through completing the Target Market organizer, students should keep this in their notes with 3.02.

Independent Practice: Students will complete the Select a Target and Classification worksheets. These assignments will require students to put to use their knowledge of target markets and market segmentation. Depending on time, we will review these together as a class.

Closure: Review the 4 areas of market segmentation and what it means for a business to select a target market.

Modifications if any: None.

Works Cited:

ME11 Entrepreneurship I, North Carolina Department of Public Instruction, Adapted CTE Course Blueprint of Essential Standards, Summer 2012 version 2 (2013).

Reflection

Reflection 1 of 2

Reflect on how the teacher handled the situation that students didn't complete required homework. Follow the Twitter feed at <https://twitter.com/ECUBITE> and compose a tweet to the following question. How would you handle the situation? Include the hashtag #islesHW in your response.



Reflection 2 of 2

Now that you have completed the CTE Procedural Homework and Practice Module click the link to open TaskStream in your browser. Login to respond to the reflection questions.



Career & Technology Education

Explicit Instruction

Mission

The mission for this chapter is to explore, read, review, watch video, and reflect on how the teacher integrates the instructional strategy, question and review. Additionally students should be able to transfer skills and content knowledge gained from the chapter content and assignments to their internship.

CTE
Instructional
Strategies

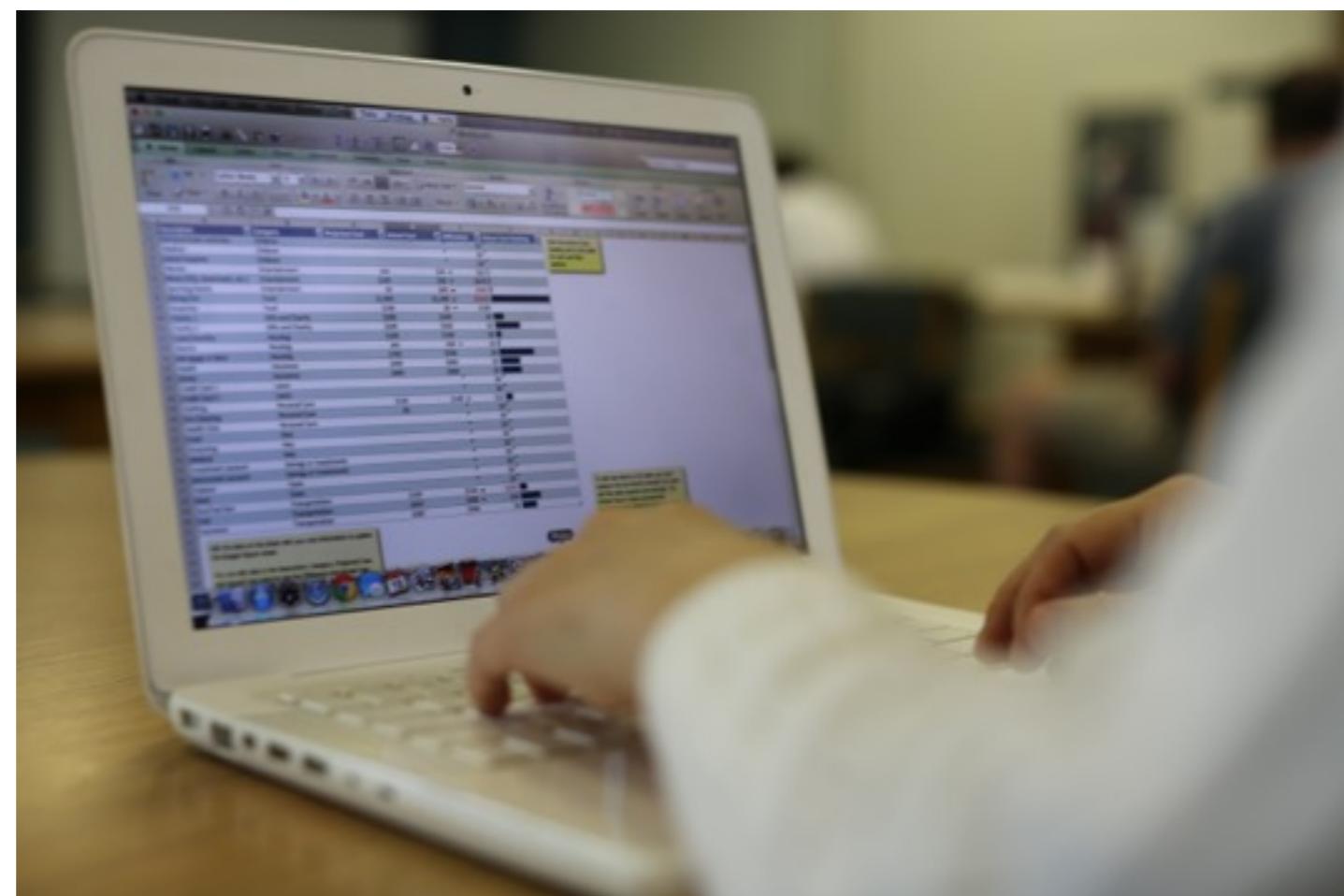
First Impressions

Explicit instruction is a direct approach to teaching that scaffolds in support structures to guide students through the learning process. According to Rosenshine “it is a systematic method of teaching with emphasis on proceeding in small steps, checking for student understanding, and achieving, active and successful participation by students” (Rosenshine, 1987). Researchers have identified 16 instructional elements that characterize the explicit approach; 1) focus instruction on critical content, 2) sequence skills logically, 3) break down complex skills and strategies into smaller instructional units, 4) design organized and focused lessons, 5) begin lessons with a clear statement of the lesson’s goals and your expectations, 6) review prior skills and knowledge before beginning instruction, 7) provide step-by-step demonstrations, 8) use clear and concise language, 9) provide an adequate range of examples and non-examples, 10) provide guided and supported practice, 11) require frequent responses, 12) monitor

student performance closely, 13) provide immediate affirmative and corrective feedback, 14) deliver the lesson at a brisk pace, 15) help students organize knowledge, and 16) provide distributed and cumulative practice. The purpose of explicit instruction is that it scaffolds in instruction to allows students to develop knowledge and skills that they build on through collaborative activities, independent practice, hands-on activities, and homework assignments. Teachers can employ the instructional strategy by utilizing the guiding prompts within the lesson plan. Begin by outlining the goal and objective for the lesson. Include review, lecture, presentation, guided practice, feedback, independent practice and both formative and summative assessment.

Archer, A.L. & Hughes, C.A. (2011). *Explicit Instruction: Effective and Efficient Teaching*. Guilford Press.

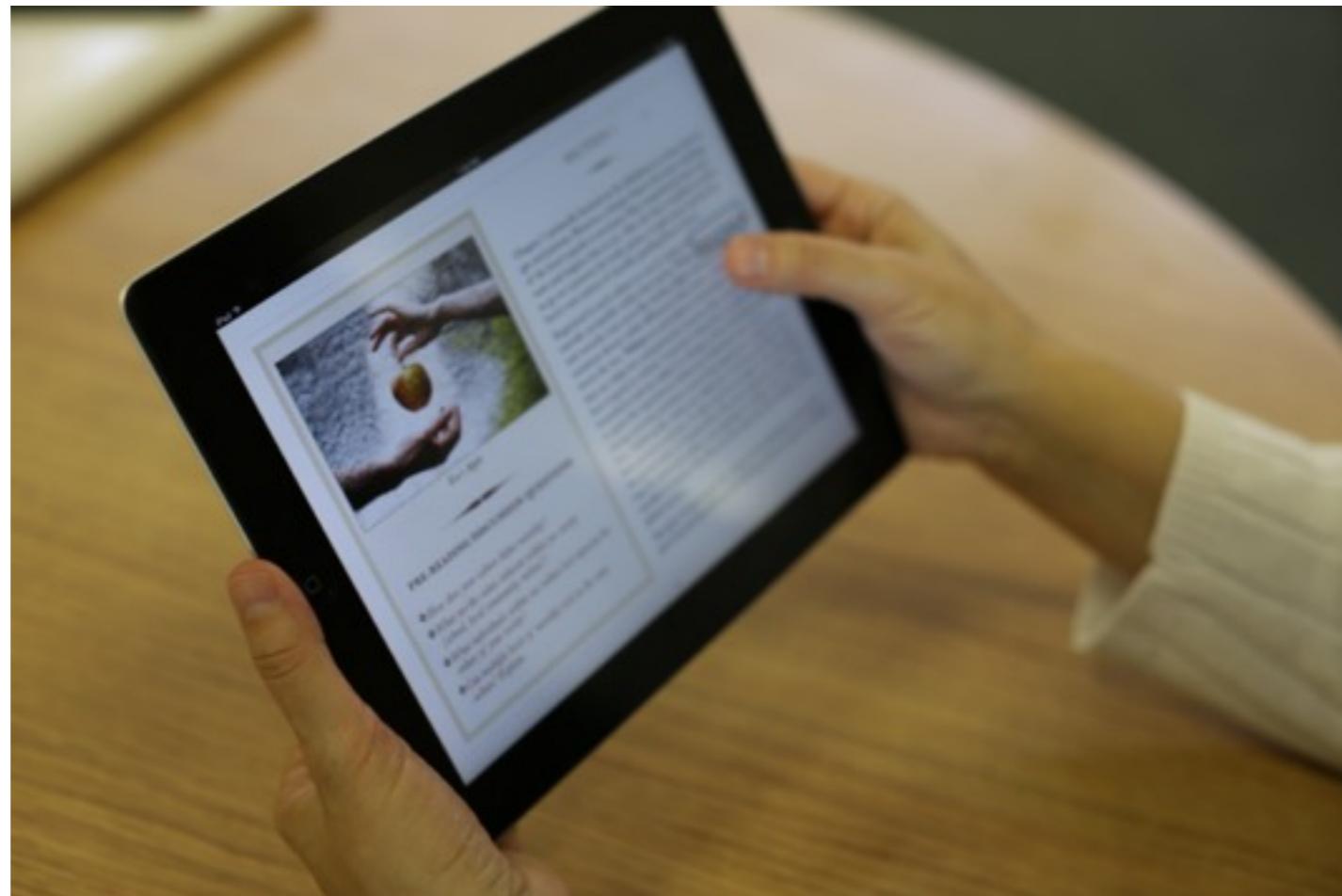
Rosenshine, B.V. (1987). *Explicit Teaching*. In D.C. Berliner & B.V. Rosenshine (Eds), *Talks to teachers*. New York: Random House.



Exploration

Read the following article by Archer and Hughes (2013). Exploring the foundations of explicit instruction. <http://explicitinstruction.org/download/sample-chapter.pdf>

Reading this article will prepare you for viewing the instructional strategy that deals with explicit instruction.



CTE Applications

Now that you have completed the exploration portion of the module we will examine how explicit instruction might be used in CTE classrooms. The CTE Applications section will provide the context for the lesson, lesson agenda, the individual video segments you will watch, the expanded lesson plan, and a student work sample. Following the CTE Applications section, you will be required to complete reflection activities.

Context for Learning

Teacher: Mr. Kurt Garner

Course: Microsoft IT Academy - Word and PowerPoint

This class is typically an introductory class in our business class and a very popular elective among students.

Modifications: This class has one student on the occupational track of study, one student with a 504, one student with an IEP and two Students who are ELL.

2010 - 11 School Year		SCHOOL PROFILE	HIGH STUDENT PERFORMANCE	SAFE, ORDERLY & CARING SCHOOLS	QUALITY TEACHERS	DISTRICT	STATE
2006 Worthington Rd Greenville, NC 27858 (252) 756-3440	D H Conley High					Pitt County Schools Grades 9-12 Regular School Traditional Calendar	
Specialized Course Enrollments							
The percentage of high school Advanced Placement (AP) and International Baccalaureate (IB) course enrollments, community college and university regular academic course enrollments, and high school and community college career and technical course enrollments.							
Percentage of Total Course Enrollments in:							
	Advanced College Prep Courses (AP*, IB**, Community College, University)				Career and Technical Courses (School, Community College)		
Our School	3%				16%		
District	3%				17%		
State	5%				15%		
* AP = Advanced Placement ** IB = International Baccalaureate							

D H Conley High School Information

School location:

2006 WORTHINGTON RD
GREENVILLE, NC 27858
(252) 756-3440

School district:

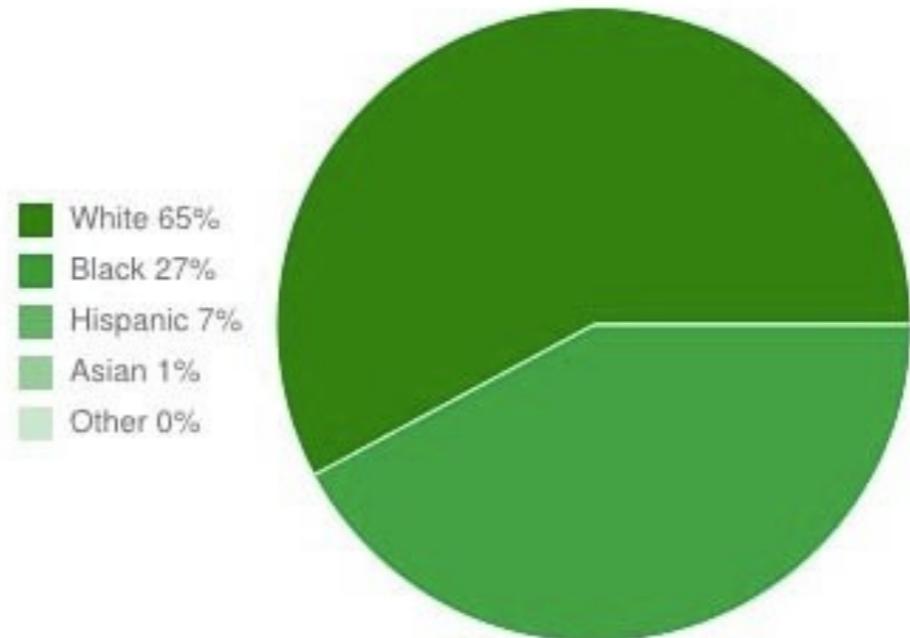
PITT COUNTY SCHOOLS

This high school has a total enrollment of **1413 students** with approximately **84 full-time teachers**. It has a student to teacher ratio of about **17 students per teacher**. The average student-teacher ratio for Pitt County is 15 to 1.

Enrollment by Grade Level

» 9th Grade Students	448
» 10th Grade Students	361
» 11th Grade Students	328
» 12th Grade Students	276
Total students	1,413
Total Full-time teachers	83.9
Student / Teacher Ratio	17:1
Students eligible for free lunch	317 (22%)
Students eligible for reduced lunch	48 (3%)

Demographics



Lesson Agenda

A lesson agenda is a brief synopsis of a lesson plan that may be submitted to administration.

DATE: 02/18	MICROSOFT IT ACADEMY - WORD AND POWERPOINT
Objectives	2.01 Apply beginning skills by creating, enhancing, printing, and sharing word documents.
Materials	Microsoft Word, MSITA resources from Moodle PLC
Activities/Agenda	Teacher will demonstrate how to complete a mail merge. Students will then follow along with a sample mail merge and once they have complete that they will move into an independent practice mail merge.
Evaluation	Completion of assignment

Video Segment

Prior to watching the video segment if you are unsure of the explicit instruction methodology please click on the [link](#).

As you prepare to watch the video on explicit instruction think about how the teacher is providing instruction and direction for students to set the stage for the lesson.

Think about how the teacher prepares the lesson taking into account students prior academic learning and personal/cultural/community background to support learning.

Additionally, think about what your response would be to the following questions.

- What do you think will happen in the video segment?
- Do you think instruction will be teacher centered or student centered?
- Do you think students will be engaged with the lesson?

Now watch the video.

CTE Explicit Teaching

To view full screen, touch video for controls to enlarge.

Expanded Lesson Plan

This is an example of an expanded lesson plan that accompanies the video that you just reviewed. Teacher candidates at ECU are expected to create a similarly constructed expanded lesson plan for the [edTPA](#).

Lesson By: Kurt Garner

Lesson based on the research: Revised Bloom's Taxonomy present in A Taxonomy for Learning, Teaching and Assessing; A Revision of Bloom's Taxonomy of Education Objectives

Lesson Title: Completing a Mail Merge Utilizing Microsoft Word

Grade level for the lesson: 9th-12th grade

Essential Standards Curriculum (Subject) Area(s): Microsoft IT Academy - Word and PowerPoint

Essential Standard Statement and Number: BM10 1.00 Understand word processing software application skills using Microsoft Word.

Essential Standard Clarifying Objective Statement and Number:

BM10 1.07 Perform Mail Merge Operations

Baseline Data: This class is typically an introductory class in our business department and a very popular elective among students. This class has one student on the occupational track of study, 1 student with a 504, 1 students with an IEP and two Students who are ELL. The student on the occupational track will not complete this activity, they will work on their typing skills. The other students with modifications will receive extended time to complete this assignment and will also receive individual attention if necessary to keep them on track. Prompting will be used during note taking to ensure students are focused and on the task with taking notes.

Materials: Moodle PLC Worksheet, Computer LCD projector, LAN school Classroom management software, and Microsoft Word 2010.

Lesson Objective: After the lesson, students will be able to:

1. Define a Data Source
2. Define a Form Letter
3. Define a Merged Letter
4. Explain how a wizard works.

Assessment Strategy: Students will be given an assignment to create a mail merge document. The students must score 80% to become proficient and must be completed indecently.

Focus/Review: Students will review the use of Word to type a letter but take it a step further by completing a mail merged letter. During the typing of the letter we will review the parts of a letter.

Statement of Objective: Today, we are going to discuss what a mail merge is and how it can be used in a business setting. We will discuss the positive effects using a mail merge may have on a business.

Academic Language:

Wizard: utility within Microsoft Office products to guide a user through a process.

Mail Merge: the automatic addition of names and addresses from a database to letters and envelopes in order to facilitate sending mail, especially advertising, to many addresses.

Data Source: The people, documents, products, activities, events and records from which data are obtained.

Form Letter: a standardized letter to deal with frequently occurring matters.

Merge Fields: a placeholder used to link a data source field into a mail merge form letter.

Teacher Input:

1. Students will take notes on the Parts of a Mail Merge Program

1. Data Source

2. Form Letter

3. Merged Letter

2. Guidelines for creating a mail merge document:

Teacher will explain how mail merges are used in a business setting with the use of junk mail as a reference for students. Students will discuss how a mail merge can save time for a business. I will check for understanding by observing the students during the guided practice to assess their grasp on this concept. I will guide them through the creation of a Mail Merge using LAN school to broadcast my screen to the students.

Data Source

Mr & Mrs.	William	Weiser	2 Main Street	Scituate	MA	2038	2 tickets
Mr.	Eric	Santucci	9 Carpenter Rd	Franklin	MA	2045	1 ticket
Mrs.	Edith	Nobile	4 Brackett Point Lane	Durham	NH	3586	1 ticket

Guided Practice:

1. Complete worksheet “Guided Practice Mail Merge” with students.
2. Walk students through the use of the Word Mail Merge wizard.
 - A. Open program
 - B. Navigate to the Mailings tab and open up the Mail Merge Wizard
 - C. Navigate through the 6 steps of a Mail Merge
3. Make sure to emphasize the three parts of a mail merge and the saving protocols.

Independent Practice: Monitor students as they complete worksheet Mail Merge Activity 1 and 2 from the curriculum guide.

Closure: Review parts of a mail merge and terminology with students.

Modifications if any:

Student #1 has an IEP for a learning disability. Monitor student during note taking, guided practice, and independent practice and prompt if needed to stay on task. Extended time on independent practice if necessary.

Guided Practice Mail Merge Sample

Insert Current Date

<First Name> <Last Name>

<Address>

<City> <State> <Zip Code>

Dear <Title> <Last Name>

Congratulations you have been selected to win <Quantity> ticket(s) to the concert showing this weekend at the Durham Performing Arts Center. Please contact us at 555-555-555 if you have any questions.

Sincerely,

Juan Carlos Ford

Student #2 has a 504 for ADD. Monitor student during note taking, guided practice, and independent practice and prompt if needed to stay on task. Extended time on independent practice if necessary.

Student #3 and #4 are Limited English Proficient. Monitor student during note taking, guided practice, and independent practice and explain or clarify vocabulary they may not understand. Extended time on independent practice if necessary.

Works Cited

A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Addison Wesley Longman, Inc., 2001.

Student Sample

Mail Merge

Feb. 19, 2014
P4

Mailings → Start Mail Merge → Step by Step mail merge wizard

Mail Merge wizard pane

- 1 letter
- 2 select current doc
- 3 Type a new list → Create
Customize columns → Select numbered b' add quantity
(DATA SOURCE) save as guidedpracticedatasource guidedprac
- 4 Type letter: add in merge field (ex: first name) ^{first name} letter
Mailings → insert merge field → Preview (FORM LETTER)
- 5 Automatic Preview
- 6 edit individual letters; save as guidedpracticemergcollett

Reflection

Reflection 1 of 2

Acting as the teacher, please provide five steps to instruct students on how to create a business letter. Click on the image to the right to share your answer.

The screenshot shows a mobile application interface. At the top, a purple header bar contains the text 'Higher Order Questions'. Below this, a white section is titled 'Instructional Strategies' in a light blue font. To the right, a yellow box is titled 'Mission' in blue, with the subtext 'To challenge students to think critically and creatively through higher order questions.' In the center, a purple box is titled 'First Impressions' in white. It contains a bulleted list of four items: 'How can teachers utilize higher order questions to elicit answers that reflect a critical view of concepts & materials?', 'When should questioning be implemented in the classroom?', 'How should teachers determine which question levels to use?', and 'How can a teacher create a classroom environment in which students feel confident to ask & answer questions?'. To the right of the purple box, there is a small photograph of a man in a blue shirt and khaki pants standing in a classroom, pointing towards a whiteboard.

Reflection 2 of 2

Now that you have completed the CTE Procedural Explicit Teaching Module click the link to open TaskStream in your browser. Login to respond to the reflection questions.



Resources

Archer, A.L. & Hughes, C.A. (2011). *Explicit Instruction: Effective and Efficient Teaching*. Guilford Press.

Bloom's Taxonomy according to Andy Griffith. <https://www.youtube.com/watch?v=TrLWxa-cKKc&list=PLqELW-AxvmPAHzMagsUz-EVGoljBMIrOP>

Education First: NC School Report Card <http://www.ncreportcards.org/src/schDetails.jsp?pSchCode=333&pLEACode=740&pYear=2010-2011>

Education First: NC School Report Card <http://www.ncreportcards.org/src/schDetails.jsp?pYear=2012-2013&pLEACode=740&pSchCode=366>

Marzano, R.J., Pickering, D.J. & Pollock, J.E. (2001). *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement*.

ME11 Entrepreneurship I, North Carolina Department of Public Instruction, Adapted CTE Course Blueprint of Essential Standards, Summer 2012 version 2 (2013).

Moodley, V. (2013). In-service teacher education: asking questions for higher order thinking in visual literacy. *South African Journal of Education* 33(2).

Pasewark, W.R. & White, B.R. (2013). *The Office: Procedures and Technology*, 6th edition. Cengage Learning. Public Schools K12: <http://publicschools.k12.com/high-schools/nc/pitt-county/370001202142.html>

Public Schools K12: <http://publicschools.k12.com/high-schools/nc/pitt-county/370001201495.html>

Rosenshine, B.V. (1987). *Explicit Teaching*. In D.C. Berliner & B.V. Rosenshine (Eds), *Talks to teachers*. New York: Random House.

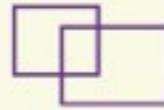
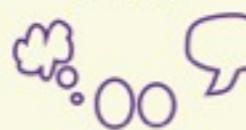
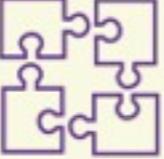
Skipper, S. (n.d.) *Higher Order Questioning Techniques*. UCF Literacy Symposium. Retrieved from: <http://education.ucf.edu/litsymposium/Resources2013/QuestioningStrategies.pdf>

Resources

A Taxonomy for Learning, Teaching and Assessing: A
Revision of Bloom's Taxonomy of Educational Objectives,
Addison Wesley Longman, Inc., 2001.

<https://www.youtube.com/watch?v=TrLWxa-cKKc&list=PLqELW-AxvmPAHzMagsUz-EVGoljBMIrOP>

Credits

TQP ISLES-S Instructional Strategies				
Organizers	Concept Learning	Question & Review	Grouping	Assessment
Graphic Organizers 	Examples & Non-Examples 	Higher Order Questions ?	Think-Pair-Share 	Formative 
Advance Organizers 	Compare & Contrast 	Games 	Jigsaw 	Summative 89.5

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