Reaching All the Students in Your Classroom

Kathleen VanTol

*Dordt College*, kathleen.vantol@dordt.edu

Follow this and additional works at: https://digitalcollections.dordt.edu/faculty_work

Part of the Christianity Commons, and the Educational Methods Commons

**Recommended Citation**


This Conference Presentation is brought to you for free and open access by Digital Collections @ Dordt. It has been accepted for inclusion in Faculty Work Comprehensive List by an authorized administrator of Digital Collections @ Dordt. For more information, please contact ingrid.mulder@dordt.edu.
Reaching All the Students in Your Classroom

Abstract
This presentation discusses scaffolding: distinct instructional techniques which provide the supports that struggling learners may need to learn challenging lesson content. Planning for inclusion of appropriate scaffolding requires that teachers know both their students and their content well.

Keywords
students, classroom, academic achievement, vocabulary, group work in education, curriculum planning

Disciplines
Christianity | Educational Methods

Comments
Presented as part of a professional development conference for teachers and administrators from Christian schools in Belize in January 2017. The conference was approved by the Belizean Ministry of Education and met the national requirements for professional development. The conference was designed by Dordt College Education Department faculty.

This conference presentation is available at Digital Collections @ Dordt: https://digitalcollections.dordt.edu/faculty_work/636
Reaching all the students in your classroom

Belize

January 2017
What are some factors that can contribute to academic struggles for your students?
Equal vs. Equitable
Scaffolding

• Distinct instructional techniques which provide the supports that struggling learners may need to learn challenging lesson content.

• Planning for inclusion of appropriate scaffolding requires that teachers know both their students and their content well.
Vygotsky’s Zone of Proximal Development

- The goal is to teach at a level that is just beyond a student’s current level of competence, while also providing the scaffolding needed for the student to successfully take the next step in learning.
Examples of Instructional Supports

<table>
<thead>
<tr>
<th>Sensory Supports</th>
<th>Graphic Supports</th>
<th>Interactive Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Manipulatives</td>
<td>• Charts, tables</td>
<td>• Pairs, partners</td>
</tr>
<tr>
<td>• Pictures, illustrations</td>
<td>• Graphs</td>
<td>• Triads, small groups</td>
</tr>
<tr>
<td>• Diagrams</td>
<td>• Graphic organizers</td>
<td>• Cooperative learning groups</td>
</tr>
<tr>
<td>• Realia (real objects)</td>
<td>• Timelines</td>
<td>• Websites, software programs</td>
</tr>
<tr>
<td>• Physical activities</td>
<td>• Number lines</td>
<td>• Mentors</td>
</tr>
<tr>
<td>• Videos, broadcasts</td>
<td>• Sentence frames</td>
<td></td>
</tr>
<tr>
<td>• Models</td>
<td>• Word/phrase banks</td>
<td></td>
</tr>
</tbody>
</table>
Context or frame of reference can provide support for cognitively demanding tasks

- Typically, as students progress through the grades, the context in which academic tasks are presented is reduced while the cognitive demands increase.
- Textbooks for older students have fewer visual supports.
- Expectations for learning through lecture and note taking increase at higher grade levels.
Active Prior Knowledge

• Connect new concepts to prior experiences and previous learning
• Use graphic organizers and visuals to show connections
• KWL Charts: Know, Want to Know, Learned
• Anticipation Guides
• Vocabulary instruction
Vocabulary Instruction

- Encourage students to think about how new words connect with other words they know. Identify false cognates.
- Students may understand one meaning of a word, but not know a second or third meaning.
- Ensure students understand words commonly used during instruction such as: participate, summarize, analyze, demonstrate.
- Vocabulary instruction should include not only direct instruction but also guided practice and frequent opportunities to use the new word in a variety of contexts.
Small Words – Multiple Meanings

Small

Large
Small Words – Multiple Meanings

• How many meanings can you identify for each of the following words:
  • Run
  • Take
  • Break
  • Turn
  • Set
  • Go
  • Play
  • Cut
  • Up
  • Hand
Small Words – Multiple Meanings

• Run - 179
• Take - 127
• Break - 123
• Turn - 122
• Set - 119
• Go - 98
• Play - 95
• Cut - 93
• Up - 93
• Hand - 92
Scaffolding Vocabulary

• Highlight key words in instructions
• Graphic organizers can help with learning new terms, showing the relationships among different words, making connections to previous knowledge and experiences, connections to home language
• Pictures, diagrams, illustrations, real objects
• Drama, act out words
• Examples to help differentiate between meanings
• Word walls, Multilingual word walls
• Organize related words in different ways (category, degree, grammar)
## Teach Word Parts

<table>
<thead>
<tr>
<th>Root</th>
<th>Meaning</th>
<th>Origin</th>
<th>English examples</th>
<th>Spanish examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>aud</td>
<td>hear</td>
<td>Latin</td>
<td>auditorium, audition</td>
<td>auditorio, audición</td>
</tr>
<tr>
<td>astir</td>
<td>star</td>
<td>Greek</td>
<td>astrology, astronaut</td>
<td>astrología, astronauta</td>
</tr>
<tr>
<td>bio</td>
<td>life</td>
<td>Greek</td>
<td>biography, biology</td>
<td>biografía, biología</td>
</tr>
<tr>
<td>dict</td>
<td>speak, tell</td>
<td>Latin</td>
<td>dictate, dictator</td>
<td>dictar, dictador</td>
</tr>
<tr>
<td>mit, mis</td>
<td>send</td>
<td>Latin</td>
<td>mission, transmit</td>
<td>misión, transmitir</td>
</tr>
<tr>
<td>ped</td>
<td>foot</td>
<td>Latin</td>
<td>pedal, pedestal</td>
<td>pedal, pedestal</td>
</tr>
<tr>
<td>phon</td>
<td>sound</td>
<td>Greek</td>
<td>phoneme, microphone</td>
<td>fonema, micrófono</td>
</tr>
<tr>
<td>port</td>
<td>carry</td>
<td>Latin</td>
<td>transport, portable</td>
<td>transportar, portátil</td>
</tr>
</tbody>
</table>
Graphic Organizers

Fun with Math Vocabulary!

What does it mean? Facts/Characteristics:

WORD:

Examples: Non-Examples:

New Vocabulary Word Four Square

Definition:

Use it in a sentence:

Vocabulary Word:

Write a synonym for the word:

Draw a picture:

LUMINOUSLEARNING
Flexible Grouping

• Research has found that across ethnic, gender, and ability groups, students show academic gains when working in collaborative small groups.

• Students can be placed in small groups or pairs based on ability, interest, learning preference, or language needs. These groups can be homogeneous or heterogeneous.
Cooperative Learning Groups

• Typical Roles:
  • Facilitator (leader, guide)
  • Summarizer / Elaborator
  • Recorder
  • Reporter (presenter)

• What about the student who cannot do one of these roles? What other possible roles are there?
Additional Roles:

• Checker - make sure that each group member understands and agrees with the answer
• Encourager - encourages all group members to participate, reinforces them for doing so
• Noise controller - monitors the noise level in the group and reminds others when they are too loud
• Reader - reads the problems, directions, or other written materials aloud for the group
• Timekeeper - periodically alerts the group to how much time remains
Additional Roles:

• Runner / courier / scout - goes to the teacher or other groups for answers to the questions, carries messages to other groups, and takes the group product to its destination
• Progress manager - keeps track of the group’s progress toward its goals.
• The Data Collector - collects and records data for the activity
• Materials manager – brings materials to the group and returns them to their place afterward
Strategies – Reading Comprehension

• Before Reading:
  • Preview vocabulary, provide visuals, activate background knowledge
  • Predict – what will happen or what they will learn

• During Reading:
  • Teach strategies such as using context clues and word parts to determine meaning of unknown words
  • Use graphic organizers to help students monitor their understanding

• After Reading:
  • Have students create charts, diagrams, timelines, semantic webs to show understanding
Semantic Mapping as Informal Assessment

How to create a semantic map:
• Brainstorm words associated with a key concept
• Determine categories or sub-headings and group words accordingly
• Develop a graphic to show the relationships between words/concepts

How to teach students to do semantic mapping:
• The first couple times, the teacher works interactively with students to model the process
• After students understand the process, they can work individually or with partners
• Students can compare their maps to see different ways in which concepts can be analyzed.
Example Semantic Map

THREE TYPES of ROCKS

Igneous
- can be dark colored and shiny
- formed by molten rock or magma cools and hardens
- characteristics
- example

Sedimentary
- formed by particles of sand, shells, pebbles, and other materials called sediment
- example
- LIMESTONE
  - characteristics
  - can see the sand, pebbles, stones in the rock
  - can contain fossils
  - can break apart, crumbles

Metamorphic
- formed by rocks that have morphed into another rock
- example
- MARBLE
  - extreme heat and pressure that build up under the surface of the earth
Strategies

• Modeling
  • Model for students what they are expected to do or produce, especially for new skills or activities
  • Explain and demonstrate learning actions, sharing your thinking processes aloud.
  • Show good teacher and/or student work samples
  • Modeling promotes learning and motivation as well increasing student self-confidence.
Strategies

• Non-Linguistic Cues
  • Use visuals, sketches, gestures, intonation, and other non-verbal cues to make instruction more accessible to students.
  • Providing visual representations of concepts supports students who have academic struggles for a variety of reasons.
  • Go beyond the visuals provided in the textbook.
Strategies

• Instructions
  • Provide verbal and written instructions
  • Written instructions could be simply written on the board
  • This helps learners, but also helps the teacher. Instead of answering repeated “What are we supposed to do?” type questions, you can be working directly with students in more productive ways.
Examples from a lesson on The Solar System

- Introduce vocabulary such as rotation and revolution using visuals, hands-on materials, and kinesthetic activities
- Set up learning centers with activities so students can learn names and key features of the planets. Utilize cooperative learning groups for center activities.
- Incorporate choice on how students demonstrate learning such as creating a model, making a detailed poster, or writing a report
Curriculum Adaptations

• Are there some students who might need more support?
• Are there some students who might need curricular adaptations in the form of individualized scaffolding?
Hierarchy of Differentiated Supports

• All students: safe environment, instructional strategies that positively support all students, reinforcement, opportunities for participation, opportunities to demonstrate learning

• Some students: specific accommodations for input and output, time, quantity, level of support, participation

• A few students: modifications in difficulty, modified goals, alternative goals
Areas for Possible Curriculum Adaptations / Individualized Scaffolding:

- Quantity
- Time
- Level of Support
- Input
- Output

- Participation
- Difficulty
- Modified Goals
- Alternate Goals
Example

Curriculum Standard: Describe the connection between a series of historical events.

Learning Objective: Students will research historical times and people using informational texts in preparation for creating a timeline poster.

Scaffolding:
  • Sort information using a graphic organizer
  • Sequence information using a timeline
  • Match pictures to related information*
Example

Curriculum Standard: Identify evidence from patterns in rock formations for changes in a landscape over time.

Learning Objective: Students will make observations and measurements in order to provide evidence of the effects of weathering by water, ice, wind, or vegetation.

Scaffolds:

• Identify and sort the effect of processes or events on earth materials using photos, illustrations
• Categorize the effects using a graphic organizer
• Match processes or events with their effects on earth materials using photos or illustrations*
Example

Curriculum Standard: Interpret, use, and distinguish various representations of the earth such as maps and globes.

Learning Objective: Students will identify the characteristics of specific locations using a variety of maps and produce a historical travelogue from the point of view of an explorer.

Scaffolds:
- Visual supports (maps, photos, illustrations)
- Models
- Illustrated word banks, Manipulatives*
Example

Curriculum Standard: Demonstrate command of the conventions of standard English grammar, punctuation, and spelling when writing.

Learning Objective: Students will provide written feedback to each other about their use of conventions and mechanics in original written texts as part of the writing process (peer evaluation).

Scaffolds:
• Models
• Rubrics
• Highlight target elements with support of examples*
Curriculum Standard – 6th grade

• **Essential Concept and/or Skill:** Understand how geographic and human characteristics create culture and define regions. *(SS.6-8.G.2)*
  - Understand human and physical characteristics of place.
  - Understand the concept of region.
  - Understand the physical environment affects life in different regions.
  - Understand communities reflect the cultural backgrounds of their inhabitants.
  - Understand patterns of cultural diffusion.

• Identify a possible learning objective for this unit.

• What strategies and scaffolds could you incorporate into your teaching plan?
Essential Concept and/or Skill: Understand how geographic and human characteristics create culture and define regions.

Learning Objective:

Scaffolding:
Individualized Scaffolding

• Given the following students are in your class, will you need to include any curricular adaptations / individualized scaffolding in order for these students to achieve the learning objective?

• Maria – reading at a 3rd grade level
• Hector – ADHD with hyperactivity
• Pamela – Down syndrome, mild cognitive delay, poor fine motor skills
• Josue – Spina Bifida, uses a wheelchair, struggles in math
Essential Concept and/or Skill: Understand how geographic and human characteristics create culture and define regions.

Learning Objective:

Scaffolding:

Curricular Adaptations:
Final Thoughts

• Will you be able to implement 2-3 ideas from this presentation in your teaching?

• Questions?

• email me at kathleen.vantol@dordt.edu if you would like me to email you a copy of this presentation.