

Pedagogical Practices—Scaffolding

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Scaffolding is the student-centered approach where instructors provide a clearly defined structure for learning that defines clear expectations. Basically, scaffolding is breaking up the learning into manageable sections or chunks, each anchored by a learning activity that uses a specific tool to successfully accomplish the learning goal before applying that learning to the next chunk. Through the use of scaffolding, students build knowledge and develop skills more efficiently by focusing first on smaller learning goals that support the major assignment or learning goal for the course.

The following are some of the ways this teaching approach is used to engage students:

- breaking the task into smaller, more manageable parts
- using “think alouds,” or verbalizing thinking processes, when completing a task
- coaching
- modeling
- activation of background knowledge through giving tips, strategies, or cues
- graphic organizers such as charts, diagrams, or graphs
- study guides or guides for how to accomplish a task or solve a problem
- writing templates or storyboards
- web links, online tutorials, or help pages

Technology Use

Blogs: Using web authoring tools such as Sites at Penn State, students can create online journals that support major writing assignments in a course. For example, students may be assigned a series of reaction journals that are then used as building blocks for an overall related assignment. In this way, smaller writing activities that include opportunity for revision allow the students to solidify their topic and to improve their writing before submitting a major assignment that might be worth the majority of the overall course grade.

File exchanges: The course learning management system can be used for learning activities where students exchange first drafts of writing assignments and follow a formal process for peer review as a part of the revision process.

Yammer: This social networking tool can be used for students to conduct online “think alouds,” where they can post comments that model their thought process

as they work through reading assignments, solve assigned problems, or design a final project.

Concept mapping: Using tools like Bubbl.us allows students and instructors to visualize the interrelated connections between major course content and supporting information. For more online concept mapping tools see <http://www.educatorstechnology.com/2012/06/18-free-mind-mapping-tools-for-teachers.html>.

Assessment

Essentially, scaffolding is quite similar in nature to formative assessment, allowing instructors to assess how successful a student is at a given point in his or her learning pathway towards accomplishing the stated goals for the course. Through the use of scaffolded assignments, instructors can determine whether a particular concept or process needs to be covered more in-depth before students move on in their learning.

Impact

Using scaffolding in instruction can impact learning through (McKenzie, 1999):

- Providing clear direction by providing step-by-step directions for students and anticipating any problems or uncertainties in required learning activities.
- Clarifying purpose by focusing instructional activities on essential questions and eliminating the feeling of assignments being nothing more than busy work.
- Keeping students on task by providing a map or pathway with extensive steps being outlined for each milestone in the learning activity.
- Offering assessment examples to clarify expectations by providing samples of successfully completed projects or tasks at the beginning of the learning activity.
- Pointing students to useful resources by identifying the best types of sources to choose from in the library, through a web search, or use of other media.
- Reducing uncertainty, surprise, and disappointment by pretesting each step of the learning activity for any difficulty that might be experienced by the student in completing the learning tasks.
- Generating efficiency in the instructional process by providing focus and clarity in the learning activity and reducing time on task.
- Creating momentum through channeling students' energy and concentrating efforts towards the essential question and increasing students' drive and motivation in completing learning activities.

Things to Consider

For successful implementation of using the scaffolding method, you should consider the following recommendations (Larkin, 2002):

- Learning goals should be clearly defined and appropriate learning activities should be assigned that align with learners' needs, enabling all students to achieve through engagement in specific tasks.
- Student needs and prior knowledge or misconceptions should be identified and monitored for learning progress.
- Individualized assistance should be provided that is modified or adapted based on students' learning needs.
- Stay on course to keep students focused on the learning goals.
- Give students frequent feedback, allowing them to know where they stand in accomplishing assigned learning tasks.
- Provide a low risk environment to reduce student frustration in trying to achieve perfection.

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