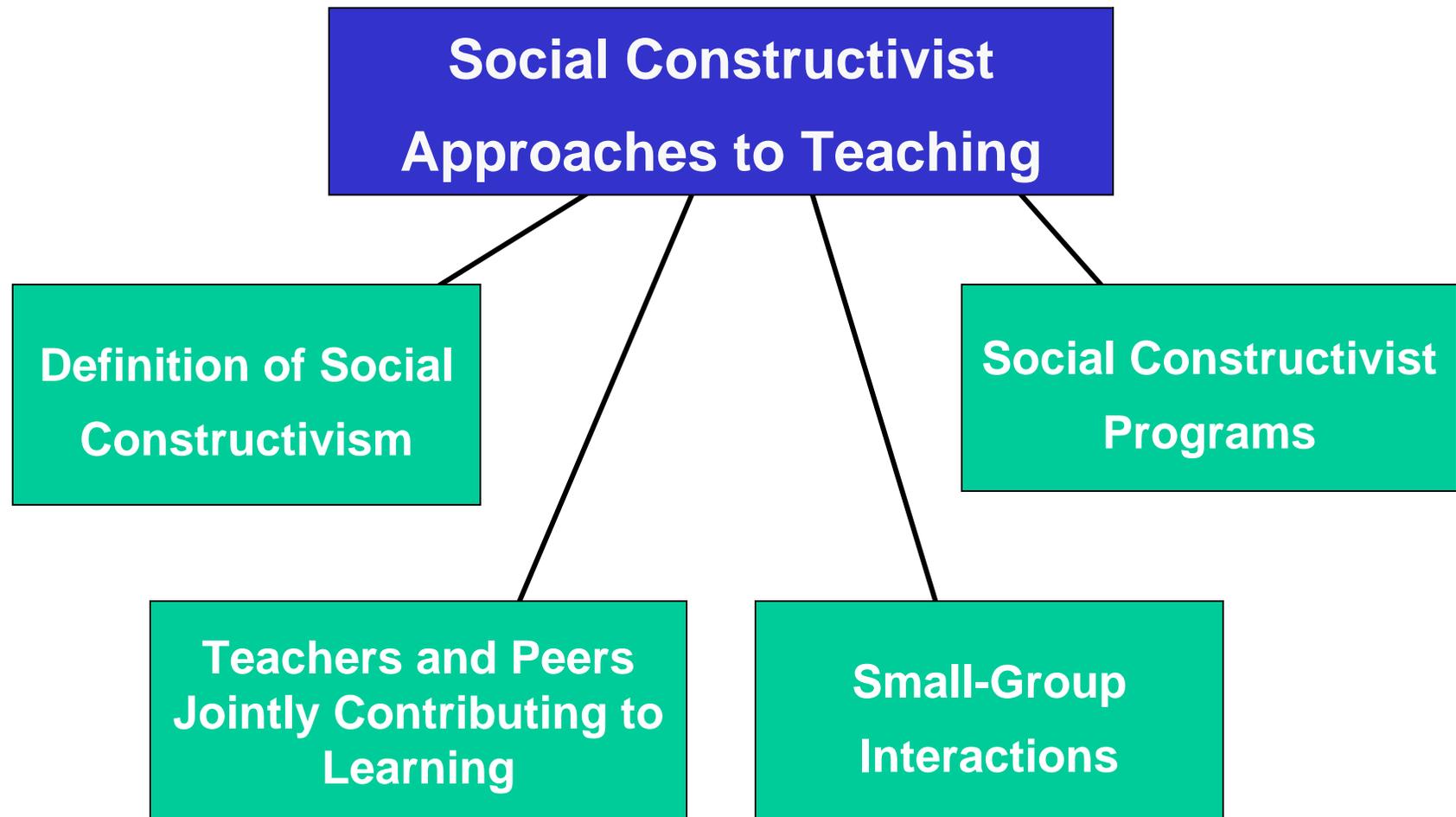


Social Constructivist Approaches



Constructivist vs. Social Constructivist Approaches to Teaching

Constructivism emphasizes how individuals actively construct knowledge and understanding.

Social constructivist approaches emphasize the social contexts of learning, and that knowledge is mutually built and constructed.

Situated Cognition

...refers to the idea that thinking is “situated” in social and physical contexts, not within an individual’s mind.

Implication: create learning situations that are close to real-world circumstances as possible

e.g., to learn more about volcanoes, have some students take the role of scientists, others that of an emergency evacuation team.

Teachers and Peers as Joint Contributors to Students' Learning

Cognitive Apprenticeship:

An expert stretches and supports the novice's understanding and use of cultural skills.

Cooperative Learning:

Students work in small groups to help each other.

Tutoring:

Includes peers, classroom aides, volunteers, and mentors.

COGNITIVE APPRENTICESHIP

The goal of cognitive apprenticeship is to help students learn the cognitive “*processes that experts use to handle complex tasks*” through guided experience on intellectual tasks.

- relies on guided practice as an effective instructional method
- emphasizes learning cognitive skills
- takes place within a formal instructional setting - a school, a training program, a computer simulation

METHODS OF COGNITIVE APPRENTICESHIP

Scaffolding

**teacher helps student
complete task by
performing parts student
cannot do unaided**

Coaching

**teacher offers hints,
comments & critiques
to student who is
carrying out a task**

Modeling

**teacher describes her
cognitive processes
while carrying out a
task**

See slide set 10b

Benefits of Peer Collaboration

- helps to motivate child to try difficult tasks
- provides opportunities to imitate and learn each other's skills
- opportunities to explain, put their knowledge into words, enhances understanding
(reflective knowledge-building versus knowledge telling bias)

Does peer tutoring work?

Ans: Sometimes it Does, Sometimes Not

Strategies for Making Peer Tutoring a Success

- Use cross-age rather than same-age tutoring when possible
- Let students participate as tutor and tutee roles
- Don't let tutors give tutees tests
- Spend time training tutors
- Don't overuse peer tutoring

Ms. Competition's Classroom

- Ms. C writes a math problem, $3\frac{1}{4} - 1\frac{3}{4} = ?$ on the board and asks Sam to give an answer
- Sam writes $2\frac{1}{4}$ on the board, Ms. C says, "*That's not right, Who can help him?*"
- The teacher calls on Liz, who erases Sam's answer and writes $1\frac{2}{4}$, Ms. C responds "*That's almost right, Who can help her finish it?*"
- Mia reduces Liz's answer to $1\frac{1}{2}$

(Sam feels humiliated by Liz, Liz feels betrayed by Mia)

Ms. C concludes the episode by announcing a quiz on mixed fractions, so study hard!

Ms. Cooperation's Classroom

- Ms. Coop seats Sam, Liz, and Mia face-to-face around the same table
- Ms. Coop gives them sheets that explain addition and subtraction of mixed fractions, worked-out examples and practice problems to work on
- The students form a group, the “Mathbusters.” They will have a quiz on mixed fractions – their individual scores will be added up for a total score for the group

Sam, Liz and Mia take responsibility for each other's learning and help each other to master the material.

COOPERATIVE LEARNING

In cooperative learning small groups of students who differ in ability work together as a group on an academic task. Rather than competing, members of the group work together and are evaluated as a team (*group rewards*).

- vary ability, gender, ethnic & SES differences
- after students work together during the learning phase, they are evaluated separately (*individuals are held accountable*)
- individual improvement scores are added together for a group improvement score

COOPERATIVE LEARNING

Possible Drawbacks

- some students prefer working alone
- low-achieving students may slow down the progress of high-achieving students
- a few students may do all the work, with others do little (*social loafing*)
- some students become distracted from the group's task because they enjoy socializing
- some students may lack the skills to collaborate effectively (e.g., the ability to explain their ideas)

Newsletter from Cooperative Learning Classroom – *see class handout*

Cooperative task structure – when a heterogeneous group works together on a common task

e.g., students work together to learn some material in preparation for a test

Cooperative incentive structure – when students are individually assessed and group members' scores are summed to form groups scores.

Group performance is rewarded, e.g., recognized in class newsletters, or quality the groups for certificates, grades or other rewards

Newsletter from Cooperative Learning Classroom – *see class handout*

- Varied groups (gender, ethnicity)
- Teacher first introduces material to class
- Break into groups to study until all members can solve problems
- When team is ready, individuals take quiz
- Improvement score = current quiz score minus base,
Base score = quiz average minus 5
- Improvement score, nothing worse than 0, nothing better than 10
- Perfect quiz gives you a “10” regardless of quiz average