

Applications of Social Psychology to Learning and Instruction



Students' benefit from education
is influenced by both...

- Structural organization of the classroom
- Interaction patterns between the student and teacher

Slavin (1980, 1983)
Elements of an instructional
system

- The instructional task structure, i.e. the teaching format, strategies, pace
- Reward or incentive structure: extrinsic rewards (grades, praise), and the relation between performance and rewards.

Slavin (1980, 1983)
Elements of an instructional system

- Reward structure can be:
- Cooperative (positive reward interdependent)—one student's success helps others be successful,
- Competitive (negative reward interdependent)—one student's success means another student is less successful,

Slavin (1980, 1983)
Elements of an instructional system

- Reward structure can be:
- Individualistic (reward independent)—students' rewards are unrelated to each other

Johnson & Johnson (1974):
Instructional goal structure

- "How an individual student's consequences relate to classmates' performance."
- 5 Goal Structures
- 1. individual noncompetitive,
- 2. individual competitive where rewards are achieved independently,

Johnson & Johnson (1974): Instructional goal structure

- 5 Goal Structures
- 3. cooperative where goals are interdependent,
- 4. cooperative within group but competitive between groups,
- 5. and competitive within and between groups.

Other aspects of the instructional system: Grouping

- Different grouping methods impact social comparison differently.
- Comparison to high-achieving peers causes low-achieving students to feel inferior and have poor motivation.
- Comparison is very easy if groups are homogeneously organized based on ability and remain stable over time.

Other aspects of the instructional system: Grouping

- A broader range of social comparison is accomplished when groups are flexible depending on the activity and cooperative.
- Students learn to evaluate their own and others strengths in a variety of areas.

Other aspects of the instructional system: Task structure

- Unidimensional= all students work on the same tasks; a limited range of instructional materials and methods are used.
- Multidimensional= students work on several different tasks depending on ability and interest.

Other aspects of the instructional system: Authority structure

- Unidimensional= low student autonomy and high teacher directiveness.
- Multidimensional= students make independent choices about what work to do and when and how to do it.
- Negative self-evaluations occur more often in unidimensional classes.

Cooperative Learning

- Most widespread application of social psychology to learning and instruction.
- Students work together in small groups toward a group goal.
- An individual student's success in some way contributes to the success of the group.



Cooperative Learning

- Different cooperative learning methods exist, but all have some unifying characteristics:
- Face-to-face peer interaction,
- Positive interdependence,
- Individual accountability for mastering your part,
- Fosters peer tutoring,

Cooperative Learning

- Students learn how to convey to each other the importance of staying on task and oriented toward the goal,
- Students spend more time giving and receiving explanations from each other,
- Students take an interest in each others' achievement.

Cooperative Learning

- Different cooperative learning methods differ in the following factors:
- The degree of interdependence and individual accountability,
- The extent to which the teacher imposes structure,
- And the amount of competition.

Cooperative Learning: Student Team Learning

- Team will accomplish goal and be successful only if all members learn the objectives being taught.
- Groups are heterogeneous.
- Teacher imposes structure and presents the material to be learned.
- Students work on the same material within their teams to ensure they master it.



Cooperative Learning: Student Team Learning

- Student Teams-Achievement Divisions (STAD):
- Students are quizzed.
- Quiz scores contribute to team scores using achievement divisions, ensuring high individual accountability.
- Achievement divisions are based on previous quiz scores.

Cooperative Learning: Student Team Learning

- Student Teams-Achievement Divisions (STAD):
- Scores of the highest 6 students on the previous quiz are compared, the scores of the next highest 6, etc.
- The tops scores in each achievement division earn the greatest number of points for the team.

Cooperative Learning: Student Team Learning

- Student Teams-Achievement Divisions (STAD):
- By competing with students of comparable ability, all students are challenged to do their best.

Cooperative Learning: Student Team Learning

- Student Teams-Achievement Divisions (STAD):
- Quizzes are replaced with tournaments in Teams-Game Tournament.
- Student Team Learning approaches have been specialized for reading and math.

Cooperative Learning: Jigsaw



- Students cooperate to learn a task.
- Performance is based on an individual basis.
- Small heterogeneous groups that work on academic material broken into sections, one section per team member.
- No team goal, no competition.

Cooperative Learning: Learning Together

- Low individual accountability.
- Work in small groups collectively to complete a single assignment.
- Minimal teacher imposed structure.
- No group competition and no group reward.
- Students are taught group process skills and encouraged to monitor their own functioning as a group.



Cooperative Learning: Group Investigation a.k.a Small Group Teaching

- Autonomy given to student groups to choose their topics and organize their own work.
- Encourages group to solve problems by gathering different information from individual members and synthesizing that information.
- Students are assigned specific data-gathering tasks and then share with the group to produce a group report.



Effectiveness of Cooperative Learning:

- Effective for improving student achievement,
- Motivation,
- Self-Esteem,
- And student relationships.



Effectiveness of Cooperative Learning:

- Promotes cognitive and emotional perspective-taking ability.
- Perceive a greater likelihood of success.
- Greater liking for peers.

Effectiveness of Cooperative Learning:

- Degree of social interdependence is a key variable.
- When each student's participation is essential to reaching the group goal, there is more contact among group members and improvement in students' self-esteem.

Effectiveness of Cooperative Learning:

- High interdependence has a greater impact on achievement.
- Interdependence activates peer pressure and group norms that increase a student's learning as well as cohesion.

Effectiveness of Cooperative Learning:

- Working with peers contributes to more advanced cognitive processing and higher order reasoning.
- Increases opportunities for oral rehearsal of information.
- Facilitates constructive controversy that fosters academic and social problem-solving.

Effectiveness of Cooperative Learning:

- Provides a supportive climate.
- Promotes accurate and complete communication among group members.
- Improves overall attitudes toward school.

Effectiveness of Cooperative Learning:

- Basic skills and higher order skills affected by the type of cooperative learning.
- If a student is achieving poorly because of lack of basic skills, Student Team Learning is likely to improve academic functioning.

Effectiveness of Cooperative Learning:

- If a student is achieving poorly because of poor higher order skills, Group Investigation is likely to improve academic functioning.

Adaptive Education

- Flexible ways to design and implement instruction that adapt to accommodate individual differences among students.
- Learning = the student's response to the environment.
- Instruction = manipulation of the learning environment to adapt to diversity and facilitate appropriate responding.

Adaptive Education

- Snow (1986), Conceptualization of Learning Aptitude: 3 variables
- 1. intellectual abilities
- 2. learning styles
- 3. academic motivation and other interpersonal characteristics.

Adaptive Education

- Intellectual ability influences the quality of student performance.
- Interpersonal factors influence the quantity of performance, e.g. persistence & effort.

Adaptive Education

- Perception of control over their own learning impacts performance.
- Effective adaptive education programs have students assume responsibility for diagnosing their own needs, planning learning activities, and evaluating mastery.

Adaptive Education

- By determining goals, outcomes, and activities, students develop that sense of personal control.
- Instruction is controlled by the learner.
- The student's individual needs and abilities are considered when planning and carrying out learning activities.

Adaptive Education

- Learning environments are designed so that children can make decisions and plan their time and activities themselves.
- Degree of instructional mediation will depend on the individual needs of the student.

Adaptive Education

- Low instructional mediation = high learner control, opportunity for self-direction.
- As instruction matches the student's needs for direction, they will gain their personal control.

Adaptive Education

- 2 design characteristics in adaptive teaching methods:
 1. instruction and practice in self-management.
 2. mastery of basic academic skills.
- The more students can have academic success with minimal mediation or dependence on the teacher, the greater the student's self-efficacy and sense of control.

Adaptive Learning Environments Model (ALEM)

- Utilizes a Self-Schedule System.
- Obtain assignments of structured learning tasks and decide with the teacher how much time to allocate.
- Students can choose to work on any tasks in any order.
- The system is built on a hierarchy of levels of student competence.

Adaptive Learning Environments Model (ALEM)

- As students progress through the hierarchy and master more skills, the choices become more complex and the degree of teacher mediation decreases.
- Glaser (1977) says even kindergarten and early elementary students can develop educational responsibility.

Adaptive Learning Environments Model (ALEM)

- Instructional materials can be coded based on difficulty level and stored on open shelves.
- When children are assigned tasks, they exercise responsibility by choosing their own coded materials, determining what needs to be done, and whether they need help from the teacher.

Adaptive Learning Environments Model (ALEM)

- Afterward, students check their own work and return materials when completed.

Effectiveness of ALEM classes:

- Students initiate more interactions with the teacher that are instruction-related.
- Peer interactions are more constructive.
- Higher engagement rates.



Impact of Expectations

- When teachers have low expectations of student, it has self-fulfilling effects.
- When teachers have low expectations, teachers:
 - Criticize more,
 - Give less praise,
 - Pay less attention to them,
 - Call on them less,



Impact of Expectations

- When teachers have low expectations, teachers:
- Give them less time to respond,
- Seat them farther away,
- And demand less effort.

Impact of Expectations

- When teachers have high expectations, teachers:
- Create a warmer socioemotional climate,
- Have more and better quality interaction,
- Give them more opportunities to respond and demonstrate knowledge,
- And receive more praise and constructive feedback.

Teacher Control Needs

- Teacher's differential treatment of high- and low-expectation students may be mediated by the teacher's need for control.
- Teachers have fewer interactions with and give more criticism to low-expectancy students in an attempt to gain control over the class.

Teacher Control Needs

- Teachers with greater control needs are likely to discourage low-achieving students from interacting with them during whole group instruction because those interactions tend to be longer, more disruptive to the teacher's sense of control, and less rewarding (with the student's correct responding being the source of reinforcement).

Teacher Control Needs

- Teachers who exhibit effective management and teaching skills tend to be less discriminating in their treatment of high- and low-expectancy students.

Student Expectations

- Teachers expectations are communicated to students through the teacher's differential treatment.
- For example, even teacher behavior such as providing the student with the right answer without taking the time to help them derive the answer themselves can be interpreted by the student that they don't have the ability to do the work.



Student Expectations

- When teacher feedback does not realistically match student performance (e.g. praise for success on an easy task or criticism for failure on a difficult task) students infer this to mean that they are low in ability.
- Students then develop their own low expectations that adversely affect their self-concept, motivation and levels of aspiration.

Designing Good Instruction with Social Psychology

- Recommendations for teachers to become proactive and more effective:
- Structure the environment so that there are opportunities for skill mastery and self-regulated learning,
- Increase students' personal control and self-efficacy by providing opportunities so students can achieve success without depending on the teacher for excessive rewards and incentives.

Designing Good Instruction with Social Psychology

- Recommendations for teachers to become proactive and more effective:
- Transfer responsibility for learning from the teacher to the student.
- Organize classrooms so that teachers can establish appropriate goals for all students and interact appropriate and consistently with all students.

Designing Good Instruction with Social Psychology

- Recommendations for teachers to become proactive and more effective:
- Teachers should be clear about the purpose of the academic tasks and the grading criteria,
- Feedback should be instructive and address both weak and strong aspects of student performance.

Designing Good Instruction with Social Psychology

- Recommendations for teachers to become proactive and more effective:
- Classrooms should not be competitive,
- Grouping should be flexible and heterogenous,
- Opportunities should be provided for success with both academic and nonacademic tasks,
- Students should not be compared to each other but to their own prior achievement,

Designing Good Instruction with Social Psychology

- Recommendations for teachers to become proactive and more effective:
- Teachers need to be aware of their own behavior and potential biases,
- Emphasize to teachers the importance of having positive, but realistic, expectations,
- Encourage teachers to get to know students as individuals.
