



Mentor's Guide: Deliberate Skills Development

Step 1: Define goals and group structure.

Specify Workshop/Meeting and Collaborative Objectives. What are the goals/objectives of the workshop or meeting? What research skills do you want your research team to learn or practice? Start with something simple.

Decide on Group Size. Start with groups of two or three students; advance to larger groups as basic collaborative skills are learned.

Assign Students in Groups. Heterogenous groups are the most powerful, so mix abilities, gender, cultural backgrounds, and task orientations. Assign students randomly to groups or select groups yourself.

Arrange the Room. The closer everyone is to each other, the better they can communicate. Group members should be “eye to eye and knee to knee.”

Plan Materials. Materials can be used to build positive interdependence by providing the group with only one set of materials, or by providing each member with different reading material to review and then having him or her explain to or discuss it with the group.

Assign Roles. Team members are more likely to work together if each one has a job that contributes to the task. Example roles include: recorder, time keeper, direction giver, reporter, participation encourager, checker for understanding, devil's advocate, summarizer, and paraphraser.

Step 2: Plan the workshop or meeting.

Explain the Task. Prepare research team members by explaining to them any material they need to know, and then make certain they clearly understand what they are to do in the groups. This might include explaining workshop/meeting objectives, defining concepts, explaining procedures, giving examples, and asking questions.

Structure Positive Interdependence. Research team members must feel that they need each other to complete the group's task, i.e., that they “sink or swim together.” Some ways to create this are by establishing mutual goals (e.g., in the small: all must understand technical material and make certain that others also understand; in the large: the successes of the research project are the success of the research group), joint rewards, shared materials and information, and assigned roles.

Structure Individual Accountability. Each member must feel responsible for contributing to the task and helping the team. Some ways to ensure this feeling include ability to express the group's perspective accurately and/or having each person responsible for a particular task that is necessary to achieve the team's research goal.

Structure Intergroup Cooperation. Have groups check with and help other groups that are part of a research group. Celebrate team members' success.

Explain Criteria for Success. Evaluate team members' task on a criteria-referenced basis. Make clear your criteria for evaluation. The criteria may be based on longer-term goals/objectives.

Specify Expected Behaviors. The more specific you are about the behaviors you want to see in the groups, the more likely members will do them. Make it clear that you expect to see everyone contributing, helping, listening with care to others, encouraging others to participate, and asking for help or clarification.

Teach Research Skills. For each workshop/meeting, choose one skill they need to learn or practice, point out the need for it, define it carefully, have group members give you phrases they can say when using the skill, post the phrases, and observe for and encourage the use of the skill at other venues until it is done automatically. Acknowledge and praise students who use skills in the group.

Step 3: Monitor and guide.

Arrange Face-to-Face Interaction. The beneficial outcomes of cooperative groups are due to the interaction patterns and verbal exchanges that take place among team members. Make certain there is oral summarizing, giving and receiving explanations, and elaborating by structuring the practice of these skills.

Monitor Team Members' Behavior. While team members are working in groups, circulate to see whether they understand the task and the material, give immediate feedback and reinforcement, and praise good use of group skills. If anyone is having difficulty with the task, clarify or elaborate on what they need to know.

Provide Guidance. If team members are having difficulty with group interactions, suggest more effective procedures for engagement. Ask the group what needs to improve to have a more effective environment. If team members are learning or practicing a skill, use an observation rubric to record how often team members use particular phrases or nonverbal cues associated with a skill, e.g., nodding his or head to encouragement or understanding. Share your observations with the individual or group being observed. Observation can be more informal, e.g., by using a sticky note with tic marks that denote how often you used verbal or nonverbal cues associated with a particular skill.

Step 4: Evaluate and process (post-mortem).

Evaluate Students' Understanding. Assess how well team members completed the task and give them feedback.

Process Group Functioning. In order to improve, team members need time and procedures for analyzing how well their group is functioning and how well they are using collaborative skills. Processing can be done by individuals, small groups, or the whole group. To start, have groups routinely list three things they did well in working together today and one thing they need to improve. Then summarize as a whole group.

Provide Closure. To reinforce understanding, you may wish to have groups share ideas, summarize major points, or review important facts.