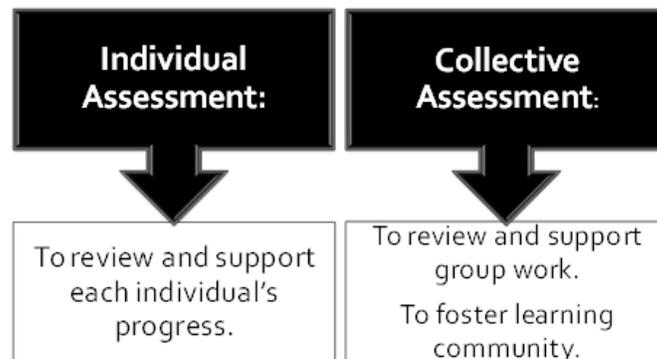


## Unit 4: Assessment of Collaborative Learning Project Outcomes

It is critical to offer students timely responses using a fair, explicit, and systematic process when assessing collaborative work. With planning and mutual accountability, assessment can become an avenue for meaningful communication—resulting in a better experience for instructors and students.

When students complete collaborative projects, they might create individual outcomes, collective outcomes, or both. Students could collaborate to learn new content or gain diverse perspectives, then describe their learning in a paper, project, or presentation. This can be described as an individual outcome of a collaborative process. Alternatively, students might collaborate and work together to produce one project, paper, or presentation that represents everyone’s work. This can be described as a collective outcome of a collaborative process. Students working to create a collective outcome might also reflect on the experience in a journal or essay, or complete some increment of the project independently, creating multiple options for assessment.

Individual and collective assessments are complementary and allow instructors to encourage individual achievement while promoting a culture of shared purpose and learning.



These issues are not unique to education. In the workplace we are increasingly expected to participate in teams and work groups and to collaborate with others who might be physically present or geographically dispersed. We worry about whether our individual contributions will be acknowledged and suitably rewarded. We worry about whether the project will be organized fairly, or whether we will end up with a greater share of the work...but no additional reward. We worry about the possibility of “freeloaders” who stand by and let others do the work and bask in the shared satisfaction of team recognition when the project succeeds. We worry about team members who contribute what we consider inadequate or substandard work that lowers the quality of the outcome...an outcome that has our names attached to it. Students enter a collaborative project with these same worries. By planning and facilitating the collaborative work with fair, systematic, and timely assessments we can greatly reduce their fears. In the process,

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**ELI Discovery Tools** are practical resources designed to support the development and implementation of teaching, learning, and technology projects or processes on campus. This unit is part of the **EDUCAUSE Learning Initiative Discovery Tool: Collaborative Learning Workshop Guide**. Each unit can be used as a stand-alone activity, or all units can be combined for a multiday learning event. The units typically include articles, discussion exercises, and questionnaires. You are welcome to add your own material or modify what you find. The complete Collaborative Learning tool set is available at [www.educause.edu/eli/collaborativelearning](http://www.educause.edu/eli/collaborativelearning).

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## Unit 4

we can teach important skills in teamwork and group process that will benefit students in future academic as well as professional collaborations.

### Learning Objectives

- To differentiate between strategies appropriate for assessing individual or collective outcomes of a collaborative process
- To produce designs or plans for collaborative learning activities
- To compare and contrast collaborative and e-collaborative learning activities
- To develop assessment processes and tools appropriate for assessing collaborative project processes and outcomes

### About Collaboration

Let's review some fundamental concepts and define key terms. For the purpose of this workshop we define *collaboration* as "an interactive process that engages two or more participants who work together to achieve outcomes they could not accomplish independently."<sup>1</sup>

We define *collaborative e-learning* as "constructing knowledge, negotiating meanings and/or solving problems through mutual engagement of two or more learners in a coordinated effort using Internet and electronic communications for some or all of their interactions."<sup>2</sup> Other definitions are as follows:

- *Mutual engagement* means all are participating in shared, reciprocal work.
- *Two or more learners* means these are activities that engage pairs or groups of learners. Others may also be a part of the collaborative e-learning activity, including the instructor or others involved in an applied or service-learning projects.
- *Coordinated effort* means the project is purposeful and meshes with curricular goals.
- *Construct knowledge, negotiate meanings and/or solve problems* means learning together in meaningful ways that use and develop higher-order thinking skills.
- *Internet and electronic communications* means learners use synchronous or asynchronous tools such as e-mail, web conferencing, instant messaging, wikis, and threaded discussion forums.

While the principles and approaches described in this unit apply generally to collaborative learning in online, blended, or face-to-face classes, we will consider additional steps that might be needed when the collaborative project is carried out online.

### About Assessment

Traditionally, instructors thought about student assessment in terms of grading. Today, assessment is seen as a progressive process that develops throughout the course, not just an accounting of outcomes at the end. For students in collaborative projects, the need for clear expectations and feedback on progress, as well as fair grading protocols, is even more essential.

The terms used to describe the feedback and grading types of assessment are *formative* and *summative*. Formative assessment provides instructors and learners with information about how learners are learning in order to help both improve performance. Summative assessment occurs when instructors gather evidence to assign grades.

Formative Assessment	Summative Assessment
<ul style="list-style-type: none"> <li>• Monitor work on a regular basis—spell out frequency or timing for instructor monitoring as part of the course or project expectations.</li> <li>• Ascertain needs for additional resources, guidance, or revisions.</li> <li>• Determine whether all participants are contributing and whether the timeline is being observed.</li> </ul>	<ul style="list-style-type: none"> <li>• Compare results with goals and objectives.</li> <li>• Identify best practices.</li> <li>• Give fair grades.</li> </ul>

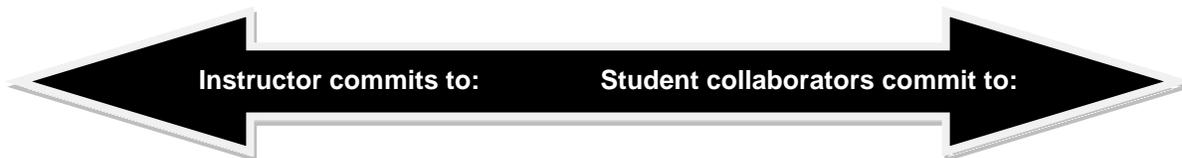
We need to consider both formative and summative strategies for assessment of collaborative projects with collective outcomes. This is not only good teaching practice; it is more effective, given that we are trying to teach not only content but also collaboration skills.

### About Collaborative Learning Activities Designed to Generate Collective Outcomes

As with any kind of assessment, the process starts with design and planning. When measurable goals and objectives are stated, they become a learning contract between the instructor and student. The agreement from the instructor’s perspective is this: “If you demonstrate accomplishment of this stated goal or objective, you will succeed in this class.” While this agreement is often implied, for collaborative projects it is useful to make it explicit. This is particularly true when the project will be completed online and the students and instructor have not established trust and proven working relationships.

Collaboration—or collaborative e-learning—starts with a plan. If we don’t know where we are going, we will not know whether we have arrived at the right place. Learners who are collaborative partners need a work plan, and this means that planning is the first step and the team charter or mission is the first deliverable. Time must be allocated for this stage of the process, and a signed agreement must be approved before the students begin on the tasks needed to complete the collaborative project.

The plan is, in essence, a contract for mutual accountability between instructors and learners as well as between learners. We need to model accountability by making our roles clear as instructors. A big part is assurance that freeloading will not be tolerated, and an understanding of the instructor roles/procedures teams can use when performance problems arise.



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|---|--|
| <ul style="list-style-type: none"> <li>• Create and model a climate of trust and belonging; create and observe ground rules for online interaction</li> <li>• Review work in progress and provide detailed feedback</li> <li>• Assist as requested on team process</li> </ul> | <ul style="list-style-type: none"> <li>• Determine and observe fair distribution of work and protocols: mission or charter</li> <li>• Report accurately on team process and progress</li> <li>• Address conflicts or problems; request help if not successful</li> </ul> |
|---|--|

## Unit 4

A contract agreement spells out specific roles, areas of responsibility, communication protocols and preferences (synchronous and or asynchronous), timelines (including response turnaround), quality standards, and an understanding of accountability. These questions may be relevant to the creation of that contract:

- Is the approach clear, understood, and agreed upon by everyone?
- Will it capitalize on and enhance the skills of all members?
- Does it require all members to contribute equivalent amounts of work?
- Does it provide for open interaction, problem solving, and evaluation?
- Does it provide for modification and improvement?
- Are fresh input and perspectives sought and added?<sup>3</sup>

### Time, Roles, and Planning

Depending on time, level and content of the class, and experience of learners with teamwork, the instructor might take more responsibility or less for determining team formation and process. If you want students to focus their efforts more on the content and activities of the project than on collaborative process, then an instructor-driven approach to planning is appropriate. In this case, the instructor does the following:

- Assigns students to teams
- Sets goals, expected team roles, and parameters
- Suggests work plan/stages, identifies key components/tasks of the project, making it simple for students to determine who does what
- Provides a template or checklist for the team agreement
- Establishes checkpoints for assessments

If you want students to gain, and reflect on, the experience of focusing more on the content and activities of the project than on collaborative process, then an instructor-driven approach to planning is appropriate. In this case, the instructor establishes measureable goals and checkpoints for assessments and encourages students to form their own teams and take charge of some or all of the planning process. (See section under “Develop a Work Agreement or Contract” below.)

### About Formative and Summative Assessment of Collaborative Projects with Collective Outcomes

One goal of collective formative assessment is to create a sense of a learning community—to help learners see how their individual pieces add up to something greater when they collaborate. Comments reflecting group work back to them can help students see that areas where they have strengths might be areas where others need to grow. Students gain a sense of purpose for participation when they see specific ways they can learn from and with others.

The Typology of Collaborative E-Learning Assessments was constructed to categorize the six interrelated types of assessments.<sup>4</sup> Of these types, three are relevant for assessing projects with collective outcomes: team self-assessment, instructor assessment, and external assessment.

**Team Self-Assessment:** Collective self-assessment takes place when the team or group assesses their combined performance. This could include a description of team participation and

contributions, 360-degree assessments, or a summary of the process used to accomplish the work. It could take the form of a written assignment, checklist completion, or a presentation to the class. Team self-assessments should be built into the project timeline, offering instructors the opportunity to provide both formative and summative assessment along the way.

**Instructor Assessment:** This type occurs when the collective outcome is assessed according to the achievement of the entire group.

**External Assessment:** When the collaborative project or activity extends beyond the classroom, external supervisors, mentors, or stakeholders might have a role in assessment of the team or group's performance. This can include feedback to team by field placement supervisor.

Teams report progress at various stages of the project and do the following:

- Compare status with work plans or agreements
- Reflect on work process—relationships as well as progress toward achieving outcomes
- Identify any performance issues or conflicts
- Update work plan as needed
- Propose revisions and new checkpoints

Instructors use teams' self-assessments as the basis for written or verbal feedback. Instructors use the team reports as teachable moments and offer troubleshooting on team process or group performance.

In the case of a performance issue, the progress report offers an objective way for students and instructors to bring the problem to light, by comparing work with the agreed-upon expectations stated in the charter.

For a service learning or fieldwork project, reports from the external stakeholders or supervisors can complement the team's self-assessment.

Progress reports can be graded, allowing instructors the opportunity to evaluate process as well as outcomes.

### About Formative and Summative Assessment of Collaborative Projects with Individual Outcomes

Some assignments involve a collaborative learning experience and individual outcomes. For example, a small group could work together on a service learning project, or a shared research project, but instead of working together to document or present it, each person creates his or her own deliverable. As a result, the assessment focuses more on the collaborative process and participation. In some cases, collaborative projects might include both collective outcomes (the paper, presentation, or project created with the team) and individual outcomes (such as a report, journal, or paper).

The above assessment steps can be adapted, with a couple of additional options. From the Typology of Collaborative E-Learning Assessments, three are relevant for assessing projects with individual outcomes: individual self-assessment, instructor assessment, and external assessment.

## Unit 4

**Individual Self-Assessment:** Individual self-assessment takes place when the learner provides his or her own assessment of performance and contributions to the collaboration. Individuals can be asked, for example, to reflect on their experiences as a part of a collaborative group or team, discuss their thoughts and feelings about effectiveness of communication or fairness of the workload, share new insights gained from others, and so forth. This type of reflection provides instructors with another angle for viewing the effectiveness and progress of the group's collaboration, in addition to opportunities to gauge the individual's grasp of the concepts and practices inherent in the assignment.

**Instructor Assessment:** The instructor assesses individual achievement in the context of a collaborative activity.

**External Assessment:** Again, when the collaborative project or activity extends beyond the classroom, external supervisors, mentors, or stakeholders might have a role in assessment of the individual student.

### Activities

#### Activity 1

Think about a time when you were assigned to a team project.

- How were expectations presented by the instructor or supervisor? Were they clear?
- What were your initial expectations? Did the project confirm your expectations, or were there surprises?
- Did you start with some level of trust and relationship with others on the project? Did you develop trust and relationship along the way, or not? Why?
- What worked well? What went badly?
- What feedback did you receive?
- How were the results assessed and/or rewarded?

#### Activity 2

Think about a collaborative project in your own professional life, and conduct a “trust audit.”

1. Team members meet all deliverable and schedule requirements.
2. On this team, we notify one another if we can't meet our commitments.
3. This team does a good job of posting commitments on the network/class site when they affect the team.
4. When circumstances change, all team members hear about it in a timely manner.<sup>5</sup>

If any of your answers are not satisfactory, describe steps you can take to improve the team's mutual accountability.

#### Activity 3

Describe one new approach for assessing collective outcomes.

- Is the proposed approach best used for formative assessment, summative assessment, or both?

- Will your approach use individual or collective assessments? How? Why?
- Would you use this approach differently in an online, blended, or face-to-face class?

### **Activity 4**

Choose a final paper or project you typically assign in an existing course. Rethink it as a collaborative activity, with the paper or project generated by a team of learners.

- How would you redesign the assignment?
- How would you revise the assignment (and course) expectations?
- What formative and/or summative approaches would you use?

## Develop a Work Agreement or Contract

### **Example 1: Learners Determine Format and Steps**

As a team, spell out your answers in a two- to four-page agreement:

- How will you learn and work together?
- What leadership model will you use (fixed, rotating, shared)?
- What parts of the project will you complete individually, and what work will you complete together?
- How often will your team meet, and in what way will you meet?
- What ground rules will your team develop?
- How will you communicate with each other?

### **Example 2: Instructor Provides Guidance on What Should be Included**

1. Clarify the assignment.
  - What are specific project steps and requirements?
  - What are the required project phases and steps?
  - What are the deliverables?
  - What are the deadlines and due dates?
  - What steps can or should be completed by team members individually?
  - What steps can or should be completed by team members as a group?
2. Clarify expectations team members have for themselves and the project.
  - What skills and knowledge do the team have? Who can provide help and leadership on specific tasks and assignments? Who would like to try something new or different? What resources do team members have that might help the project team?
  - What would members like to get out of the process? What are each person's specific learning objectives? What benefits could be gained from the project? What concerns and questions do members have?
  - When team members must work cooperatively, how will you communicate progress and get together to finalize their deliverables? Will you use shared workspaces, e-mail tracking, telephone calls, threaded conversations, and so forth?
  - How will coordination and reporting duties be handled?

## Unit 4

- What will be the consequences if a team member does not complete his or her assignments promptly?
3. Prepare a contract.
- Establish ground rules to foster a positive team climate.
  - Distribute or post a team roster including phone numbers, e-mail addresses, and other contact information.
  - Brainstorm the activities required to produce each deliverable.
  - Divide up the work.
  - Prepare a work plan.

### **Example 3: Instructor Provides a Template**

#### **Team Contract Template**

##### Team Members

- Names, roles, etc.

##### Operating Logistics

- Ground rules, deliverables, member responsibilities

##### Project Work Plan

- Key milestones and detailed tasks

## Sample Assignment Grading Rubrics

These grading rubrics help learners see exactly what they need to do to achieve the grade they want.

### **Team Formation Grading Rubric**

<b>Criteria (12 total points)</b>	<b>Comments</b>	<b>Score</b>
Provides a project charter that indicates clear role definitions and responsibilities. (3 points)	Roles are clearly defined. If everyone can't participate in the conference call, will you post outcomes of the call so others can weigh in?	3
Provides a project charter that addresses issues and risks to maximize the potential for effectiveness. (3 points)	Guidelines for work and submissions are spelled out.	3
Provides specifics of the logistics, ground rules, milestones, and tasks that indicate an effective team effort. (3 points)	Work plans are presented. Expectations are stated. Ground rules are clear and specific.	3
Provides a project charter that indicates team members reflected on their skills and development areas. (3 points)	I see that you have not specifically identified team skill goals. Did your team discuss how the roles you are assuming will allow you to build new skills in team leadership and team participation? Can you share your thoughts about this?	3

### *Team Project Assessment: Example 1*

<b>Evaluation Criteria</b>	<b>Excellent</b>	<b>Proficient</b>	<b>Satisfactory</b>	<b>Unsatisfactory</b>
Team Connection and Formation (10 points)	Connected with team and demonstrated leadership enabling team to achieve agreements for team process and collaborative completion of assignment. (10)	Connected with team and developed agreement for completing assignment. (9)	Connected with team. (8)	Did not connect with team. (0)
Team Process (10 points)	Participated fully in collaborative process and fulfilled team agreements. Contributed substantively and demonstrated critical-thinking skills. Final post made as assigned. (10)	Participated fully in team and fulfilled team agreements. Final post made as assigned. (9)	Participated in team. Final post made as assigned. (8)	Did not participate with team. (0)
Project Outcomes (75 points)	Project fulfills all criteria and demonstrates higher-order thinking. (75)	Final project is submitted with all criteria met. (70)	Final project is submitted with most criteria met. (50)	Did not complete project. (0)
Exercise Timeline Observed (5 points)	All components completed on schedule. (5)	Most components completed on schedule. (4)	Completed after scheduled due date. (2)	No messages posted. (0)

### *Team Project Assessment: Example 2*

To achieve a successful project experience and outcome, you are expected to meet the following requirements. Structural elements:

- Statement of the problem
- Background information and facts of the case
- Discussion of alternative solutions to the problem and assessment of likely obstacles and results
- Explanation and rationale for selected solution

## Unit 4

Activity	Possible Points	Points Awarded
Establishes a team by using a formal process to prepare a team charter and determine team member roles.	3	3
Analyzes the characteristics and variables that make teams effective and ineffective.	3	3
Investigates the best practices and potential methods for improving the effectiveness of a team.	3	3
Describes how the work processes such as planning, problem solving, decision making, communication, and project management help a team accomplish its goals.	3	3
Applies team processes in a case analysis.	3	3
Analyzes the team experience by reflecting on the team's process and project.	3	3
<b>Total possible points</b>	<b>18</b>	<b>18</b>

### Focus Session Resources

- All Collaborative Learning Focus Session Proceedings:  
<http://net.educause.edu/Proceedings/1022124>.
- *Penn's Open Learning Commons*, Marni Baker Stein, Director of Program Development and Lisa Minetti, Curriculum Design and Assessment Specialist, University of Pennsylvania  
<https://admin.na3.acrobat.com/a729300474/p27869872/>.
- *How Did WE Work? Assessing Collaborative Assignments*, Janet Salmons, Faculty, Capella University School of Business and Technology (slides and recording)  
<https://admin.na3.acrobat.com/a729300474/p20071884/>.

### Readings

- Assessment and Collaborative Learning:  
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.101.8803&rep=rep1&type=pdf>
- Collaborative Learning: Group Work and Study Teams:  
<http://teaching.berkeley.edu/bgd/collaborative.html>.
- Active Learning, Group and Collaborative Learning:  
[http://cte.umdj.edu/active\\_learning/active\\_group.cfm](http://cte.umdj.edu/active_learning/active_group.cfm).
- Assessment in and of Collaborative Learning:  
<http://www.evergreen.edu/washcenter/resources/acl/index.html>.
- University of Wisconsin–Madison's Engage Program:  
<http://engage.wisc.edu/collaboration/index.html>.

### Endnotes

1. Janet E. Salmons, *Taxonomy for Online Collaboration: Theory and Practice in E-Learning* (Hershey: IGI Global, 2011).
2. Ibid.

3. Jon R. Katzenbach and Douglas Smith, *The Wisdom of Teams* (McGraw-Hill, 1998).
4. Salmons, *Taxonomy for Online Collaboration*.
5. Deborah Duarte, Nancy Tennant Snyder, *Mastering Virtual Teams: Strategies, Tools, and Techniques That Succeed*, 3rd edition, revised and expanded (San Francisco: Jossey-Bass, 2006).