How to teach using

TEAM ASSIGNMENTS

The 7 step formula for fair and effective team assessment

BETTER
FEEDBACK.
BETTER
TEAMS.

How to teach using

GROUP ASSIGNMENTS

The 7 step formula for fair and effective team assessment

Peter J Mellalieu and Patrick Dodd

COPYRIGHT

WHAT'S CHANGED

This is a working paper draft-in-progress epub /Apple Books publication. We welcome your feedback as we progress towards our first edition.

 What further information would you like?

 What improvements do you suggest?

Contact the author, Peter Mellalieu peter@peerassesspro.com

Version Working Paper 0.5, 2020-06-10

Download latest version https://tinyurl.com/papEbook01

Future work plan

Chapter 4 - training the students. Refer back to rubrics in Chapter 2 and Patrricks video on training. Redo images for survey - into and exit slides.

. Extend chapters 4 through 8 to include graphics beyond those presented in the 7-step infographic.

Extend chapters 4 through 8 to include additional support text, especially in relation to teammate peer assessment and feedback.

. Write chapter 10 - Peer assessment platforms

. Chapter 11 - Get started with Peer Assess Pro

. Write Our Story - The authors involvement in using teamwork assignments in higher education. Evolution, history, and direction of Peer Assess Pro

Better chapter head graphics - wait for designer input

Calls to action - Book a demo. Register and try. Discuss your challenges with teammate peer assessment. Consulting, Training, and pricing page.

. Re-create and check Glossary and Index using view invisibles.

. Redo Gallery and other images to match Apple iBook standard of 738 x 985 (iPad full screen) - Chapters 1 through 3. Gallery 2.1 - done.

WHAT'S CHANGED

TABLE A Log of improvements and corrections

| Version and Date	Amendment
0.3, 2020-06-06	1.6 When to introduce team assignments 1.7 Teamwork across the curriculum
0.4, 2020-06-07	1.8 Features of ideal teammate peer assessment platform 2.3 Academic policies for peer assessment Gallery 2.1 Example of a student's personal result derived from a peer assessment score Deleted Figure 2.1 - replaced by Gallery 2.1
0.4.1, 2020-06-07	4.3 Teammate peer assessment surveys. 4.4 Qualitative feedback. 4.6 Overall recommendation
0.4.2, 2020-06-07	Gallery 4.2 Student experience of survey. Chapter images rescaled. Table formats fixed!
0.5, 2020-06-10	Rubric material transferred to Ch 2 deleted from Ch 3. Gallery 2.1 of personal result methods redone to fit Apple standard. Ch 2 2.8 Selecting a personal result method. 2.5 academic policies improved. Chapter 1 recast TO group assignments FROM team assignments.

Chapter 1

WHY GROUP ASSIGNMENTS

EMPLOYERS WANT TO SEE THESE ATTRIBUTES ON STUDENTS' RESUMES

December 12, 2018 | By NACE Staff

National Association of Colleges and Employers (NACE)
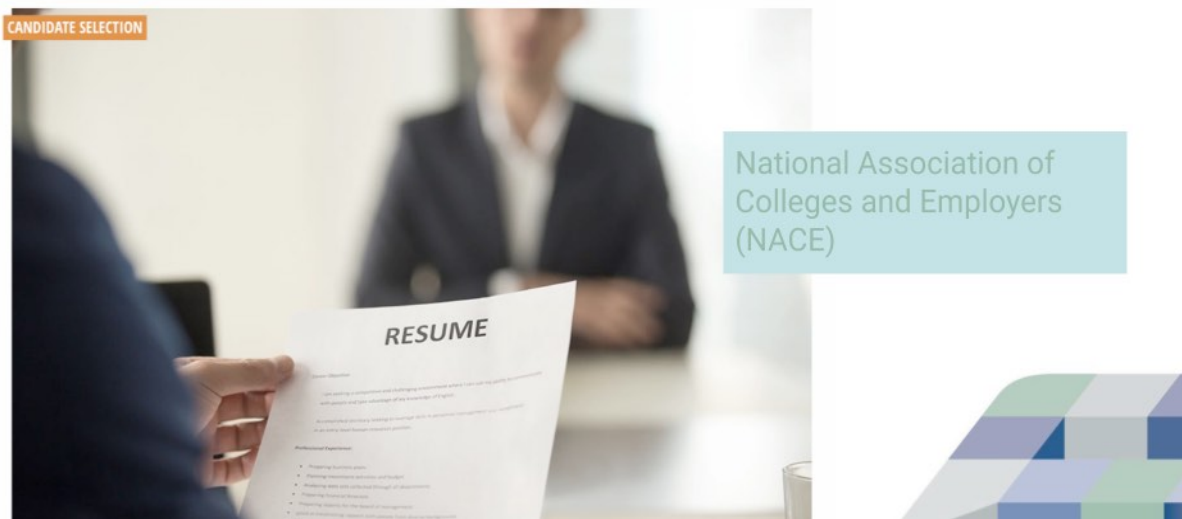
Explore why, how, and when we use team assignments in higher education

Identify the role and value of group assignments in education

Identify the drawbacks of group assignments

Introduce propositions that inform good practice for teaching with group assignments

Overview the 7 step formula for fair and effective team assessment

Identify the benefits from applying the 7 step formula for effective team assessment

Evaluate strategies for deploying team assessment as part of academic programme design

Teachers assign group assignments to their students for several reasons, some noble, others less so! One less noble reason is to reduce the grading workload. Let's admit that possibility, but now consider the more noble reasons. As teachers, we might assign group assignments to

Enable students to perform at higher intellectual levels (Vygotsky, 1978)

Provide exposure to new and different perceptions

Achieve higher satisfaction arising from feelings of connectedness, engagement, or shared purpose (Davis, 1993)

Prepare students for professional life through developing **teamwork skills** including time management, coordination, communication, conflict resolution, negotiation, problem solving, delegation and leadership (Turner, Krenus, Ireland & Pointon, 2011).

Preparing students for professional life in the 21st century has become a key concern for teachers in applied and professional disciplines such as engineering, health and business. For example, in **Audio 1.1**, Patrick discusses the a survey results presented in **Table 1.1** that highlight the top attributes employers seek in the students they recruit (NACE, 2018).

TABLE 1.1 Employers' requirements for career readiness competencies

Competencies	Weighted Average Rating
Critical thinking and problem solving	4.66
Teamwork and collaboration	4.48
Professionalism and work ethic	4.41
Oral and written communications	4.30
Digital technology	3.84
Leadership	3.65
Career management	3.38
Global and multi-cultural fluency	2.78

5 = absolutely essential   4 = essential   3 = somewhat essential   2 = Not very essential   1 = not essential
Source: National Association of Colleges and Employers, NACE (2018, Figure 42, p. 33)
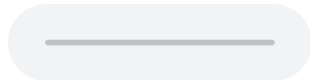
Employers' requirements for new graduate recruits

Furthermore, in engineering studies, the Washington Accord commits educators to providing assurance to their profession's registration boards that their graduates demonstrate achievement of teamwork competencies similar to those mentioned by NACE and Turner et al (IEA Graduate Attributes and Professional Competencies, 2013).

Drawbacks of group assignments

While there are many positive reasons for using group assignments as part of a student's programme of learning, there are drawbacks from the perspective of both teacher and student. From the teacher's perspective, these drawbacks include

Verifying that each teammate has achieved the academic learning outcome specified for the assignment, course or programme

Allocating a fair mark to each team member related in some way to the contribution each teammate has made

Coaching the teammates how to work together effectively

Resolving issues that emerge from counter-productive behaviors such as freeloaders, dominators, blockers and self-seekers

Designing the assignment so that students develop successfully the desired career readiness competencies. They must be unable to apply a 'divide and conquer' approach to delivering the assignment result.

Drawbacks from a student's perspective relate to some of the challenges that face a teacher

How to coordinate when and how to meet, whether physically or virtually, and how to work effectively together

How to identify and resolve dysfunctional team behaviors such as freeloaders, dominators, blockers and self-seekers

How to incentivize above average contributions to both team results and teamwork processes whilst penalizing substandard contribution through a grade penalty.

Patrick discusses drawbacks of group assignments in Audio 1.2
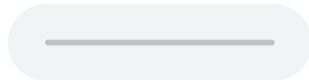
Drawbacks of group assignments

Overview

Group assignments do present challenges to teachers and students. However, we believe the rewards for both student and teacher will outweigh the drawbacks provided some basic steps are taken by the teacher in areas including

The design of the assignment

The management of students during the conduct of the assignment

The adoption of peer feedback and peer assessment as a basis for advancing team effectiveness and awarding fair grades

This book draws on our teaching experience supported with best practice literature to detail our 7 step formula for fair and effective team assessments. However, before we present our formula we present five research-based propositions that underlie the approach we advocate. Next, we summarise the goals, aims and benefits from applying the 7 step formula. We introduce several alternative approaches to deploying group assignments across a student's entire programme of study, considering the advantages and drawbacks of each strategy. Since teammate peer assessment and feedback will be revealed as essential elements for delivering the benefits of group assignments, we introduce some features of what you should consider when exploring your options for a technology-enabled digital peer assessment platform. Finally, we provide further resources to help you get started improving your teaching practice.

The 5 propositions for group assignments

Through our many years' teaching we have identified five key research findings that inform our 7 step formula for effective group assignments we propose.

Awarding all group members the same grade is not valid, fair, nor motivating for students (Kagan, 1995; Zhang & Ohland, 2009)

Freeloading on group projects is less likely if students' contributions will determine their grades (Gibbs, 2009)

Training in teamwork compounds the benefits for team effectiveness and employability (Carr, Herman, Keldsen, Miller & Wakefield, 2005)

Students should receive training in the assessment practices they will use (Sprague, Wilson, & McKenzie, 2019).

An effective peer assessment platform identifies dysfunctional team behavior such as outlier team ratings and inflated self-assessments (Sprague, Wilson, & McKenzie, 2019; Dodd & Mellalieu, 2019; Mellalieu & Dodd, 2019)

We ask initially that you accept these research findings as possibilities, as propositions that 'might be true' for you and your students. After you have reviewed and practiced applying our 7 steps formula, you'll be better informed to make your own assessment about the validity of our propositions for your teaching and learning contexts.

In Chapter 9, we revisit these five propositions explaining how they reinforce each other to yield the benefits of effective group assignments realised through adopting our 7 step formula.

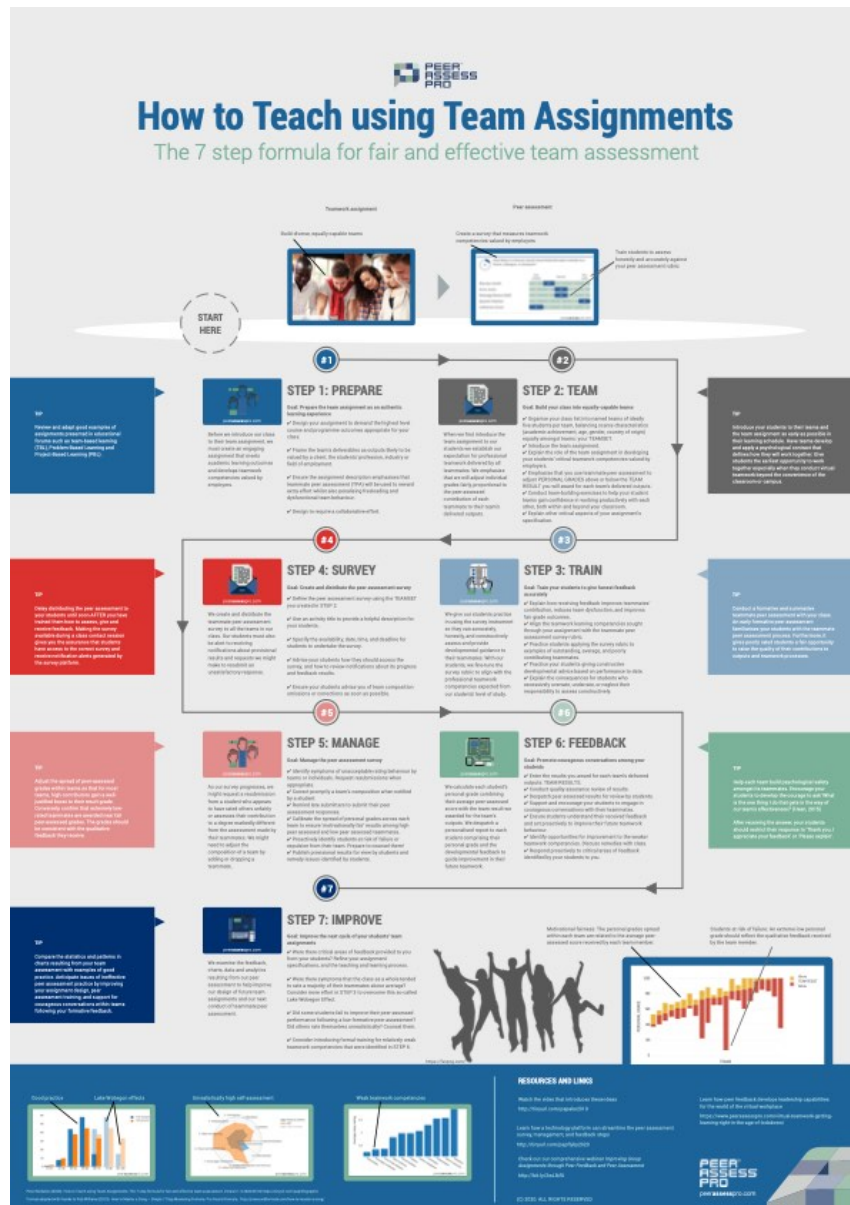# The 7 step formula for fair and effective team assessment

In the following chapters we detail each of the 7 steps summarized in Table 1.2 and presented as an infographic in Figure 1.1.

TABLE 1.2 The goals and aims of the 7 step formula

Goal and Aim
STEP 1 Prepare the group assignment as an authentic learning experience
Before we introduce our class to their group assignment, we must create an engaging assignment that meets academic learning outcomes and develops teamwork competencies valued by employers.
STEP 2 Build your class into equally-capable teams
When we first introduce the group assignment to our students we establish our expectation for professional teamwork delivered by all teammates. We emphasise that we will adjust individual grades fairly, proportional to the peer-assessed contribution of each teammate to their team's delivered outputs.
STEP 3 Train your students to give honest feedback accurately
We give our students practice in using the survey instrument so they can accurately, honestly, and constructively assess and provide developmental guidance to their teammates. With our students, we fine-tune the survey rubric to align with the professional teamwork competencies expected from our students' level of study.
STEP 4 Create and distribute the peer assessment survey
We create and distribute the teammate peer assessment survey to all the teams in our class. Our students must also be alert to receiving notifications about provisional results and requests we might make to resubmit an unsatisfactory response.
STEP 5 Manage the peer assessment survey
As our survey progresses, we might request a resubmission from a student who appears to have rated others unfairly or assesses their contribution to a degree markedly different from the assessment made by their teammates. We might need to adjust the composition of a team by adding or dropping a teammate.
STEP 6 Promote courageous conversations among your students
We calculate each student's personal grade combining their average peer-assessed score with the team result we awarded for the team's outputs. We despatch a personalised report to each student comprising their personal grade and the developmental feedback to guide improvement in their future teamwork.
STEP 7 Improve the next cycle of your students' team assignments
We examine the feedback, charts, data and analytics resulting from our peer assessment to help improve our design of future team assignments and our next conduct of teammate peer assessment.

Note how Figure 1.1. illustrates that teammate peer assessment is a crucial element for enabling grades to be awarded in proportion to a teammate's contribution, thereby reducing the likelihood of freeloading - Propositions 1 and 2. Furthermore, when used as part of a **formative assessment** cycle, a productive peer feedback platform motivates and supports just-in-time training of students in both peer assessment and teamwork competencies - Propositions 3 and 4. Finally, an effective peer assessment platform identifies dysfunctional team behavior in a timely manner so that the teacher and/or team can undertake remedial action to improve their behavior before the submission of the team's outputs for final teacher grading - Proposition 5.

FIGURE 1.1 How to teach using team assessment

The 7 step formula for fair and effective team assessment.
Download wall poster from https://tinyurl.com/papinfographic

Benefits from applying the 7 step formula

When you apply the 7 Step formula for fair and effective team assessments these key benefits emerge

Students develop **professional teamwork capabilities** valued by employers

The team's work is produced to a **higher academic quality**

Students feel a greater sense of **engagement** with the team work, and satisfaction with those results achieved

Students feel a greater sense of **fairness** that grade results are apportioned according to the relative contribution that team members have made

[Dysfunctional teams](#), at risk, and **outlier team members can be identified** early in the process of teamwork, enabling remedial intervention to be taken by either the teacher and/or other team members

The **risk of student complaints is reduced** since the teacher has strong evidence in support of the grades awarded - whether high or fail.

When to introduce group assignments and team assessment

There are three alternative strategies that institutions adopt when introducing group assignments into their academic programmes.

Capstone course

Fragmented

Orchestrated across the curriculum

Capstone course

A capstone course is usually undertaken by students in the senior, final year of their programme. Students are typically required to work together on a significant industry-based assignment for a real client, integrating and applying knowledge and generic problem-solving skills developed throughout their earlier studies.

The consequences of a student failing a capstone course are more serious than failing earlier courses. The student will typically be delayed from graduating for six months to a year, with consequently high economic costs. There is a strong motivation from many stakeholders - the teammates, the teachers, the programme directors - to graduate even the most marginal students from a capstone course - in view of the consequences of failure. However, an institution faces material risks to its credibility and ongoing existence when external accreditation agencies discover that the qualifications awarded to some graduates fail to pass muster - and employers vocalise their dissatisfaction with the institution's graduates they have experienced.

Fragmented

How can we mitigate the risk of students being unprepared for the teamwork requirements of a capstone course? One response is to sprinkle a few courses requiring team work throughout the curriculum but with little regard for meeting the expectations of academic programmes, external moderation agencies, or even the subsequent courses in which the students will engage. This fragmented approach is sometimes undertaken as a tactic for reducing teachers' grading requirements. Sometimes, the privilege of academic freedom results in different peer assessment [rubrics](#) for determining teamwork contribution, and different methods for determining [personal results](#) or grades from the peer assessment. Furthermore, there is little ability to assess whether teamwork competencies of a particular student or cohort of students have materially improved over the entirety of the academic programme. Academic moderation of grades arising from team assessment is a challenge. When students receive what they perceive to be unfavorable results, their challenges to the grade are likely to meet with success. Teachers hate this risk!

Orchestrated across the curriculum

When group assignments are purposefully deployed through several selected courses from the earliest course through to a capstone course we say that teamwork is orchestrated across the curriculum. In their earliest courses in the programme, students are introduced to the practices, tools, and responsibilities of team work. Crucially, students learn the consequences of above average or unsatisfactory team contribution in response to the use of peer assessment and peer feedback as one significant component for determining course results. That is, they receive above average or fail grades.

These early teamwork lessons are reinforced and extended in key courses through the stages of the curriculum culminating in a team-based capstone course for which the students are now rigorously prepared. Optionally, other courses may include teamwork ideally utilizing processes and evaluation **rubrics** for peer assessment and peer feedback similar to those used in the key courses. Using similar peer assessment processes and rubrics reduces the learning burden for students. There is a common language students can use amongst themselves to discuss aspects of team behaviors other from class to class. For example, a rubric will define what it means to proactively include others in the team's work, and what it means to plan for and chair a meeting. Finally, the teamwork competencies developed and demonstrated by students are aligned with and measured against curriculum, national, and international standards, such as those of the Washington Accord.

Failure is an option!

We argue that for unsatisfactory team contributors, 'Failure is an option'. However, when teacher's introduce formative team assessment opportunities early in the curriculum, persistent counter-productive, dysfunctional or 'at risk' students should become aware of the path they have chosen. Given timely feedback early in a group assignment and/or within an academic programme, these students will have the opportunity to recover without less risk to the progress of their academic studies. Similarly, with a longitudinal progress record for each student's teamwork achievement, teachers or academic programme directors will have these at risk students on their dashboard flagged for attention!

On this point, let's reflect on the words of Kenneth Bruffee (1999) as he introduces one of several approaches to teaching through group assignments, that of **collaborative learning**

"Collaborative learning teaches students to work together when the stakes are relatively low, so that they can work together effectively later on when the stakes are high"

Teamwork orchestrated across the curriculum

In summary, the ideal strategy for maximizing the benefits for students from group assignments is that they should orchestrated across the curriculum. A coherent, integrated approach to deploying group assignments will establish, reinforce, and extend the development of teamwork competencies through a student's years of education.

Additionally, there must be measures of the teamwork competencies developed in these key courses to give evidence of students' achievement, progress, and priorities for their subsequent development. Whenever teamwork is graded using peer assessment as an element, students must receive timely, formative feedback that gives them a fair opportunity to understand, reflect, and act proactively upon the personal results they have received. Finally, an ideal institution-wide platform for tracking these elements should provide index measures of employability that can be used to compare actual employment outcomes and feedback received from specific employers of the institution's graduates.

Features of an ideal teammate peer assessment platform

The Five Propositions for group assignments attest to the importance of conducting effective teammate peer assessment whenever group assignments are used. However, the contribution of an effective teammate peer assessment and feedback platform is especially evident when used to support a teamwork across the curriculum strategy. In support of a cross-curriculum approach, the features of an ideal teammate peer assessment platform include

Authoritative, standardized peer assessment survey rubrics

Standardized indexes of teamwork contribution

Flexible choices for applying determining each team member's personal result calculated from standardized peer assessment scores

Convenient, cost-effective deployment and management of a peer assessment survey activity

Convenient distribution of personalized feedback reports and other notifications to respondents

Diagnostic data and graphics that identify at risk individuals, dysfunctional teams, and outlier peer assessment rating behavior.

Permanent track-and-trace of survey results, reports and notifications so that student complaints can be resolved with authoritative data.

From the perspective of a teacher, the features of an ideal teammate peer assessment and feedback platform present the benefits illustrated Table 1.3.

TABLE 1.3 Features and benefits of an ideal teammate peer assessment platform from the teacher's perspective

Feature	Example benefit to teacher
Authoritative and standardized peer assessment survey rubrics	Reduces time for teachers to learn what's required to deploy the survey, and interpret its results. Reduces time to explain to students how to complete the survey and interpret the feedback results.
Standardized indexes of teamwork contribution	Enables comparisons to be made between teams, classes, and a student's performance over time. Adds credibility to the institution's claims for delivering students qualified with career-ready teamwork competencies.
Choices for determining peer-assessed personal result	Provides academic freedom to determine the severity of rewards and penalty for superior and inferior team contributions by individual students.
Time and cost-effective survey deployment and management	Group assignments can be assigned to students with academic integrity rather than as simple tactic to save a teacher's marking time. Enables good-practice delivery of formative and summative teammate peer assessments throughout a team assignment. Formative peer assessment mitigates the risk of later student complaints against unfair assessment by peers or other team dysfunctions.
Convenient distribution of personalized feedback reports	Enables timely feedback of formative results to students so they have a fair chance to reflect upon, and improve their teamwork contribution over the remainder of the course.
Diagnostic data identifying at risk teams and individuals	Enables proactive behavior by the teacher to resolve dysfunctional behavior such as overgenerous or unfairly low peer assessments, or collusive behavior by sub-sets of team members.
Track-and-trace of results and notifications	Student complaints can be resolved at any time with authoritative data about requests for survey responses and feedback results delivered. There is no "I did not understand"!

A similar table presenting the benefits of an ideal teammate peer assessment platform from a student's perspective is illustrated in Table 9.1.

Next chapter

The next chapter presents **STEP 1 - Prepare the group assignment as an authentic learning experience.** Before we introduce our class to their group assignment, we must create an engaging assignment that meets academic learning outcomes and develops teamwork competencies valued by employers or the profession into which the student will forge their career.

Further resources for students

Collaborative learning: Working in Groups is one chapter in a comprehensive self-study book intended for students ambitious to advance their academic skills (Turner, Ireland, Krenus, 2011). The chapter extends upon the importance and benefits of studying in groups, the roles students play in groups, how the challenges of working in groups can be overcome, and tips for making the micro-processes of group work function effectively.

Further resources for teachers

The infographic How to Teach using Team Assignments: The 7 step formula for fair and effective team assessment summarises the aims, checklist and tips for each step in a convenient wall poster format.

Enhancing career-ready competencies in diverse teams through teammate peer feedback is a video recording of a professional conference presentation that extends on several of the ideas presented in this chapter.

Digital tools for enabling developmental feedback and teamwork grading through teammate peer assessment is a slideshow used in support of an immersive workshop to compare and contrast the features of alternative teammate peer assessment platforms.

Bibliography

Bruffee, K. A. (1999) *Collaborative Learning: Higher Education, Interdependence, and the authority of Knowledge,* Johns Hopkins University Press

Deacon Carr, S., Herman, E. D., Keldsen, S. Z., Miller, J. G., & Wakefield, P. A. (2005). *The Team Learning Assistant Workbook.* McGraw Hill Irwin.

Dodd, P., & Mellalieu, P. J. (2019, November 28). *Enhancing career-ready competencies in diverse teams through teammate peer feedback* [Video - Conference Presentation]. Auckland: Peer Assess Pro/Ako Aotearoa Academy of Tertiary Teaching Excellence. http://tinyurl.com/papako2019

Employers Want to See These Attributes on Students' Resumes. (2018, December 12). NACE Center for Career Development and Talent Acquisition. https://www.naceweb.org/talent-acquisition/candidate-selection/employers-want-to-see-these-attributes-on-students-resumes/

Gibbs, G. (2009). The assessment of group work: Lessons from the literature. *Assessment Standards Knowledge Exchange*, 1–17. https://www.brookes.ac.uk/aske/documents/Brookes%20groupwork%20Gibbs%20Dec%2009.pdf

IEA Graduate Attributes and Professional Competencies. (2013). *International Engineering Alliance Secretariat.* https://www.ieagreements.org/assets/Uploads/Documents/Policy/Graduate-Attributes-and-Professional-Competencies.pdf

Mellalieu, P. J., & Dodd, P. (2019, November 28). *Digital tools for enabling developmental feedback and teamwork grading through teammate peer assessment.* Ako Aotearoa New Zealand Conference Talking Teaching 2019: Diverse Learners, Inclusive Teaching, Unitec Institute of Technology, Auckland. https://www.academia.edu/40449600

Peer Assess Pro (2020). *How to Teach using Team Assignments: The 7 step formula for fair and effective team assessment* [Infographic] https://tinyurl.com/papinfographic

Sprague, M., Wilson, K. F., & McKenzie, K. S. (2019). Evaluating the quality of peer and self evaluations as measures of student contributions to group projects. *Higher Education Research & Development*, 38(5), 1061–1074. https://doi.org/10.1080/07294360.2019.1615417

Turner, K., Ireland, L., Krenus, B., & Pointon, L. (2011). Collaborative learning: Working in Groups. In *Essential Academic Skills* (2nd ed., pp. 193–218, chap. 9). Oxford University Press.

(Davis, 1993)

(Vygotsky, 1978)

Step 1

PREPARE THE TEAM ASSIGNMENT

Prepare the team assignment as an **authentic learning** experience

Before we introduce our class to their team assignment, we create an engaging assignment that meets academic learning outcomes and develops teamwork competencies valued by employers. An assignment that addresses real-world issues, problems, or applications - **authentic learning** - will mirror the complexities and ambiguities of professional life.

Checklist

Design your assignment to demand the highest level course and programme outcomes appropriate for your class.

Frame the team's deliverables as outputs likely to be valued by a client, the students' profession, industry or field of employment.

Design to require a collaborative effort rather than 'divide and conquer' tactics.

Ensure the assignment description emphasises that **teammate peer assessment** will be used to reward extra contribution whilst penalising freeloaders and counter-productive team behavior. Example **Figure 2.1**.

Select the teammate peer assessment rubric that will be used by team member to assess the contribution of their teammates, **Gallery 2.1**.

Incorporate relevant **academic policies** into your assignment specification.

Tip

Review and adapt good examples of assignments presented in educational forums such as **Team-Based Learning** (TBL), **Problem-Based Learning** and **Project-Based Learning** (PBL).

Personal results from peer assessment

In Chapter 1, we asserted the propositions that "Awarding all group members the same grade is not valid, fair, nor motivating for students". Secondly, that "Freeloading on group projects is less likely if students' contributions will determine their grades". Use **Figure 2.1** as the basis for convincing your students you 'mean business' through your intent to apply teammate peer assessment!

Let's assume that 50/100 is the pass grade criterion for our class **Ornithology 101** in which our teams are named after native and exotic birds of Aotearoa New Zealand. **Figure 2.1**. illustrates how 'Failure is an option', for one member in each of the teams Yellow Mohua, Grey Warblers and Black Robins. Someone in Team Kiwi is borderline. All the members of Team Red Ruru failed, but that is due to the teacher awarding a low team result.

Specifically, in Team Black Robins teammate Kamryn Miller is identified clearly as a freeloader by their teammates! The team result awarded by the teacher was 95. However, when teammate peer assessment is used to determine a personal result, in this example Kamryn was awarded 42.2.

You'll observe for team Grey Warblers the wide range of personal results spread from 100 through 5. You'll have guessed that wide range is symptomatic of serious team dysfunction and/or a poorly managed freeloader! More discussion of this topic in Chapters 6 and 7.

FIGURE 2.1 Example of peer assessment used to determine personal result
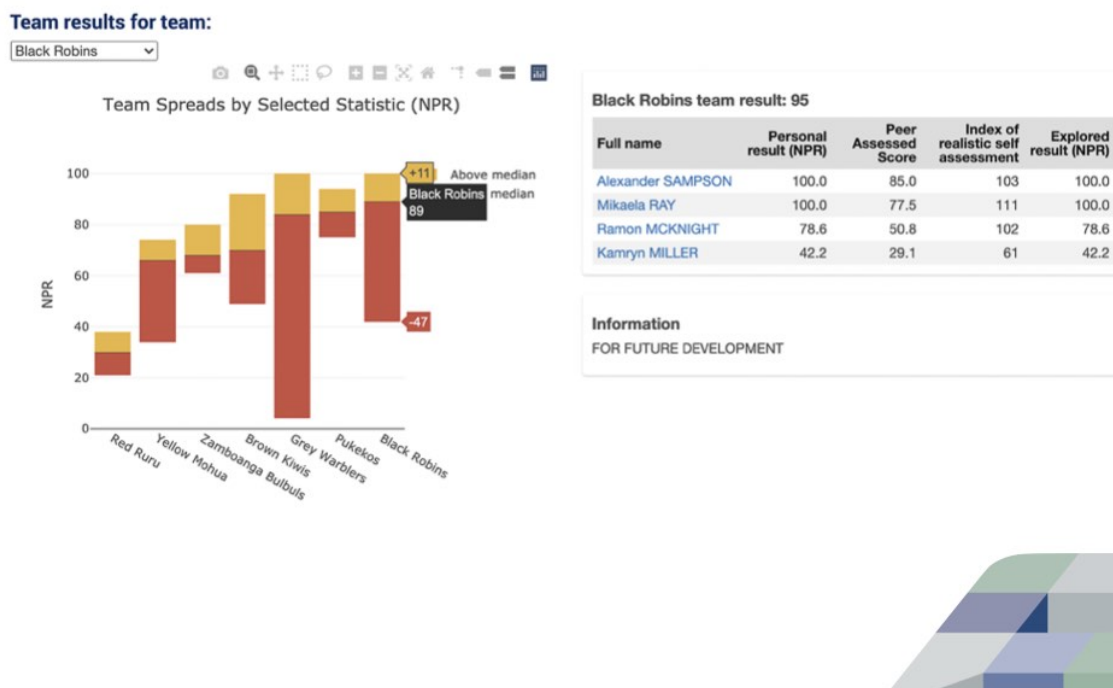
Calculation process for personal result

The basic principles for undertaking the calculations required in teammate peer assessment are

Teammates rate each other using a teammate peer assessment survey rubric such as those illustrated in Gallery 2.1

Calculate a sub-total peer assessed score FOR each student in the team from the sum of the ratings on each rubric item FROM each student in that team.

Calculate a total peer assessed score FOR each team member by summing the sub-total peer assessed score each has received FROM their teammates.

Find your set of team results. The team result is the grade the teacher awards for the total outputs of each team, such as a report, presentation or performance.

Calculate a personal result for each student in the class from their peer assessed score 'mathematically combined' with the team result.

Collect self-ratings. The self-rating is used to calculate a measure of realistic self-appraisal. However, self-ratings are generally excluded from the calculation of the total peer assessed score.

Comprehensive Assessment of Team Member Effectiveness—Behaviorally Anchored Rating Scale (BARS) Version

Write the names of the people on your team including your own name.

This self and peer evaluation asks about how you and each of your teammates contributed to the team during the time period you are evaluating. For each way of contributing, please read the behaviors that describe a "1", "3", and "5" rating. Then confidentially rate yourself and your teammates.

Contributing to the Team's Work
- 5 — Does more or higher-quality work than expected. Makes important contributions that improve the team's work. Helps to complete the work of teammates who are having difficulty.
- 4 — Demonstrates behaviors described in both 3 and 5.
- 3 — Completes a fair share of the team's work with acceptable quality. Keeps commitments and completes assignments on time. Fills in for teammates when it is easy or important.
- 2 — Demonstrates behaviors described in both 1 and 3.
- 1 — Does not do a fair share of the team's work. Delivers sloppy or incomplete work. Misses deadlines. Is late, unprepared, or absent for team meetings. Does not assist teammates. Quits if the work becomes difficult.

Interacting with Teammates
- 5 — Asks for and shows an interest in teammates' ideas and contributions. Improves communication among teammates. Provides encouragement or enthusiasm to the team. Asks teammates for feedback and uses their suggestions to improve.
- 4 — Demonstrates behaviors described in both 3 and 5.
- 3 — Listens to teammates and respects their contributions. Communicates clearly. Shares information with teammates. Participates fully in team activities. Respects and responds to feedback from teammates.
- 2 — Demonstrates behaviors described in both 1 and 3.
- 1 — Interrupts, ignores, bosses, or makes fun of teammates. Takes actions that affect teammates without their input. Does not share information. Complains, makes excuses, or does not interact with teammates. Accepts no help or advice.

Keeping the Team on Track
- 5 — Watches conditions affecting the team and monitors the team's progress. Makes sure that teammates are making appropriate progress. Gives teammates specific, timely, and constructive feedback.
- 4 — Demonstrates behaviors described in both 3 and 5.
- 3 — Notices changes that influence the team's success. Knows what everyone on the team should be doing and notices problems. Alerts teammates or suggests solutions when the team's success is threatened.
- 2 — Demonstrates behaviors described in both 1 and 3.
- 1 — Is unaware of whether the team is meeting its goals. Does not pay attention to teammates' progress. Avoids discussing team problems, even when they are obvious.

Expecting Quality
- 5 — Motivates the team to do excellent work. Cares that the team does outstanding work, even if there is no additional reward. Believes that the team can do excellent work.
- 4 — Demonstrates behaviors described in both 3 and 5.
- 3 — Encourages the team to do good work that meets all requirements. Wants the team to perform well enough to earn all available rewards. Believes that the team can fully meet its responsibilities.
- 2 — Demonstrates behaviors described in both 1 and 3.
- 1 — Satisfied even if the team does not meet assigned standards. Wants the team to avoid work, even if it hurts the team. Doubts that the team can meet its requirements.

Having Relevant Knowledge, Skills, and Abilities
- 5 — Demonstrates the knowledge, skills, and abilities to do excellent work. Acquires new knowledge or skills to improve the team's performance. Able to perform the role of any team member if necessary.
- 4 — Demonstrates behaviors described in both 3 and 5.
- 3 — Has sufficient knowledge, skills, and abilities to contribute to the team's work. Acquires knowledge or skills needed to meet requirements. Able to perform some of the tasks normally done by other team members.
- 2 — Demonstrates behaviors described in both 1 and 3.
- 1 — Missing basic qualifications needed to be a member of the team. Unable or unwilling to develop knowledge or skills to contribute to the team. Unable to perform any of the duties of other team members.

Behaviorally Anchored Rating Scale (BARS) for Comprehensive Assessment of Team Member Effectiveness.
Source: Ohland, Loughry, Woehr, Bullard, Felder, Finelli, … Schmucker, (2012).

You'll conclude that once you class size exceeds more than a few teams or 15 students, you'll need a survey system to gather your students' peer assessment ratings. Furthermore, once you have the ratings, you'll need at least a spreadsheet to produce your grade-book of peer assessed personal results for your asseignment. The grade-book is derived from each student's peer assessed score 'mathematically combined' with their team's result as we explain later.

In this chapter, we'll delve more deeply into the comparative advantages of peer assessment rubrics. We'll also explore how personal results are 'mathematically combined' from peer assessed scores and team results using several approaches commonly used by teachers. But first, let's glance at the institutional policies that might apply to your conduct of group work and peer assessment.

Academic policies for peer assessment

Check your institution or department's policies for team assignments and peer assessments. You might find policies such as

Policy 1. Group work contribution limit. *Group work should, in general, be limited to contributing no more than 40 per cent of a student's grade from any one course.*

Policy 2. Self-assessment *must not be used as a basis for determining a student's grades.*

Policy 3. Flexible calculation. Personal results advised to a student from a peer assessment calculation are advisory. The teacher will use peer assessment results as one basis for their final award of a grade for the assignment or

course.

For Policy 1 'in general' means that you should be able to argue for a higher grade contribution for courses such as capstone courses where students work in teams throughout the whole course to deliver significant project outputs. In these courses, a highly transparent and authoritative peer assessment methodology is crucial.

Policy 3 gives you the flexibility or 'wiggle room' to adjust a particular student's grades based on qualitative feedback, and/or rare, extenuating circumstances that were not captured through the peer assessment platform. Such flexibility is almost never required - in our experience - but is a comfort whilst you are in the 'trainer wheels' stage of using peer assessment. Nevertheless, you will often adjust the results spread and/or method of calculation of the personal result from the team result to get into the 'Goldilocks Zone' of reward and penalty for team contribution with which you find comfort. We'll illustrate this phenomenon later through the examples in Gallery 2.2.

We work with departments who have experienced the frustration - by teachers and students - of freeloading students as members of team assignments. Having experienced the benefits of using teammate peer assessment platforms, these departments have now mandated policies including

Policy 4. Mandatory application. *When a group assignment contributes towards a course grade, peer assessment must be used to determine students' grades. Students must be advised that peer assessment may result in fail grades for the assignment or their transfer out of a team.*

Other relevant institutional policies for team work include those for academic integrity, equity and diversity, countering harassment, student complaints resolution, and student disciplinary process. It's worth identifying how you or your students might apply these policies in the context of team assignments and assessment.

Peter informs his students from the outset of a team assignment that a team need not carry a freeloader or other counter-productive operator. He states

Policy 5. Three strikes and you're out. *A team must first seek to manage a freeloader or counter-productive team member by giving them the opportunity to contribute. If that fails, the remaining team members can apply the 'three strikes' process. A strike against a student includes failing to respond to communications, failing to attend a scheduled meeting, or delivering unsuitable, unprofessional, or plagiarised material.*

Policy 6. No last minute changes. *Adjustments to a teams's composition will in general not be made by the teacher within ten days of the team's major submission of its outputs.*

Policy 7. The power of one. *The teacher may use the results of peer assessment to reallocate a student to another team, including a team of one member.*

However, Peter insists that he must know in advance that a team is proceeding towards excluding a teammate. There may be a special circumstance of which the team might not be aware that requires his diplomatic intervention.

Policy 8. No surprises. *When teammate peer assessment has the prospect of materially raising or lowering a course grade then summative peer assessment and feedback should be used to provide students with the opportunity to adjust their behavior to gain to grade they seek.*

Teammate peer assessment rubrics

A ideal rubric for a teammate peer assessment survey must

Assess a team member's contributions to both the output of the team and the processes of working together as a team

Distinguish between different elements of contribution to the team's work

Use language that can be readily understood by students and teachers from many academic contexts, and diverse backgrounds

Enable the calculation of a fair personal result proportional to the peer assessed contribution

Provide the basis for enabling comparisons with achievement over multiple survey instances within or between classes

Have authoritative foundations based on group psychology scholarship and the requirements of employers and professions

Provide useful guidance to behavioral change when feedback results are provided to team members

One peer assessment rubric that meets several of these criteria is that developed by Carr, Herman, Keldsen, Miller & Wakefield (2005) and used in support of their *Team Learning Assistant*. Another rubric is presented by Ohland, Loughry, Wooer et al. (2012). These two rubrics were presented in <u>Gallery 2.1</u>.

The Carr et al. approach requires students to rate their teammates on a 1 to 5 Likert Scale across the ten attributes of the rubric. An example of how a survey question for the **Contribution** factor appears to students as a Likert Scale is shown in <u>Figure 2.2.</u>

Figure 2.2 Contribution to meeting team's objectives rated on a 5-point Likert Scale

In contrast, Ohland et al. propose a Behaviorally Anchored Rating Scale (BARS) defining five factors:

Contributing to the team's work

Interacting with teammates

Keeping the team on track

Expecting quality

Having relevant knowledge, Skills, and Attributes.

For each factor, the rater makes granular distinctions based on behaviors defined explicitly. For example, Table 2.1 illustrates the BARS scale for just one of the five factors and the rating value associated with the behavior of **Contributing to the team's work**.

TABLE 2.1 Contribution to the team's work defined on a Behaviorally Anchored Rating Scale (BARS)

Rating value	Behavior observed
5	Does more or higher-quality work than expected. Makes important contributions that improve the team's work. Helps to complete the work of teammates who are having difficulty.
4	Demonstrates behaviors described in both 3 and 5
3	Completes a fair share of the team's work with acceptable quality. Keeps commitments and completes assignments on time. Fills in for teammates when it is easy or important.
2	Demonstrates behaviors described in both 1 and 3
1	Does not do a fair share of the team's work. Delivers sloppy or incomplete work. Misses deadlines. Is late, unprepared, or absent for team meetings. Does not assist teammates. Quits if the work becomes difficult.
Source Ohland et al., (2012)	

The Likert Scale and BARS approaches have their advantages and drawbacks. The Likert approach is simple and so quicker for students to rate. However, the BARS approach is more likely to give ratings that compare like-with-like across several courses and over time.

Using authoritative rubrics such as the Carr et al or Ohlkand et al. is superior to allowing teachers to create their own teammate peer assessment rubrics. Furthermore, both can be used to calculate a fair personal result proportional to a peer assessed contribution calculated from the sum of ratings across the component rating factors. Furthermore, both approaches can be used to produce standardized indexes that enable relative comparisons of a student's progress from assignment to assignment, from year to year.

Alternatives for calculating personal result from peer assessed scores

Earlier, we used the term 'mathematically combined' somewhat evasively when referring to how we determine a personal result from a peer assessed score. Simply multiplying the peer assessed score by the team result will yield inadequate results. In particular, if students know that simple multiplication is your approach, our experience is some teams will collude and rate each other the highest measure presented on the rubric scales!

There are several alternative calculation methods presented in Table 2.2. As you begin your journey using teammate peer assessment to determine grades, we recommend you announce to your students that

You will adopt the Normalized Personal Result (NPR). This method rewards students with above average contribution with a personal result above the team result. Similarly, below average and freeloaders are penalized with a personal result below the team result. Incidentally, the NPR method is used in the example of personal results in Figure 2.1.

Academic Policy 3 - Flexible application will apply to your assignment. Reason: you have personal flexibility to adjust 'in the field' your team arrangements, choice of method, scaling and weighting factors as you receive your first set of responses from your peer assessment survey.

TABLE 2.2 Methods for calculating personal result from peer assessed score

Method	Symbol	Example benefit to teacher
Peer assessed score	PA Score	The raw peer assessed scores calculated from the peer assessment survey rubric. Scaled arithmetically to range from zero to 100. No standardization.
Indexed peer assessed score	PA Index	The best-rated team member in each team is awarded 100/100. All others scaled down proportional to the peer assessed score.
Indexed personal result	IPR	The best best-rated team member in each team is awarded the team result, all others scaled down proportional to the peer assessed score.
Normalized personal result	NPR	The average team member in the team is awarded the team result. All others scaled above or below the average, so that the average of the team's result matches the team result.
Rank-based personal result	RPR	The average team member in the team is awarded the team result. All others scaled above or below the average proportional to the relative rank of the teammates' peer assessed score.
Standard peer assessed score	SPAS	The average-rated team member in each team is awarded 50/100. Feature-scaled transformation adjusts all others below or above 50 to enable intra-institutional comparisons over time.

Selecting a personal personal result method

We defer explaining the underlying mathematics of the personal result calculation methods shown in Table 2.2 to the Further Resources section below. Significantly, you need not make the final choice of method until after you have received your survey responses from students. However, the more curious or ambitious students should want to know the potential impact on their grade. Start by showing students the 'typical case scenario' of Figure 2.1.that illustrates outcomes we commonly experience.
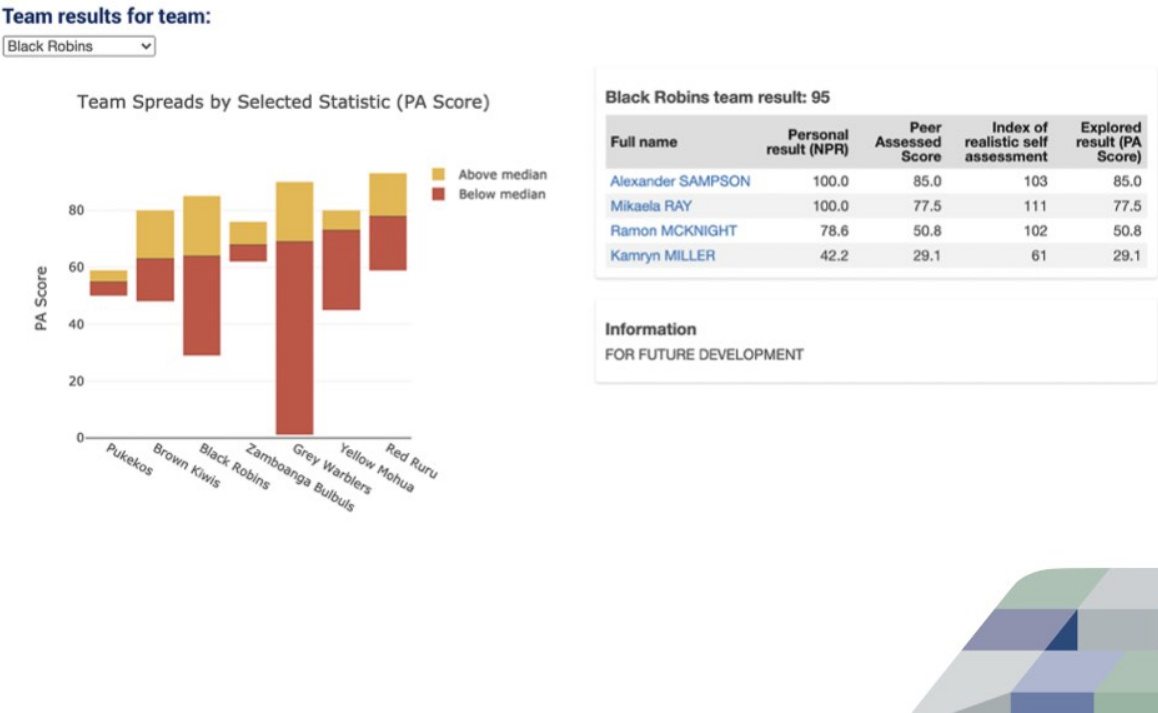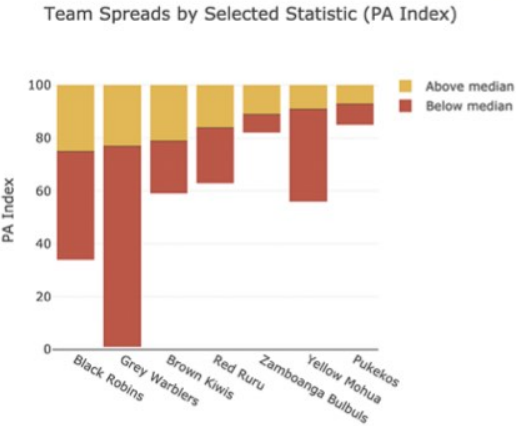
Let's explore the features, advantages and benefits of the personal result methods presented in Table 2.2. First, consider the effect of choosing each method for 27 students spread across our seven teams from our class Ornithology 101, illustrated in Gallery 2.2. We'll highlight the effect by focussing specifically on members of the team Black Robins, that collectively achieved a team result of 95.

The first two gallery images present methods that exclude using the team result in the calculation of a personal result: Peer Assessed Score (PA Score) and Peer Assessed Index (PA Index) . Often you have no team results when you conduct a formative peer assessment. So these two methods are the only methods you can apply in that circumstance. The subsequent images show the teacher's team result followed by the personal results that mathematically combine the team result with the peer assessed score: IPR, NPR and RPR.

Team results for team:

Black Robins

Team Spreads by Selected Statistic (PA Score)

Black Robins team result: 95

Full name	Personal result (NPR)	Peer Assessed Score	Index of realistic self assessment	Explored result (PA Score)
Alexander SAMPSON	100.0	85.0	103	85.0
Mikaela RAY	100.0	77.5	111	77.5
Ramon MCKNIGHT	78.6	50.8	102	50.8
Kamryn MILLER	42.2	29.1	61	29.1

Information

FOR FUTURE DEVELOPMENT

Peer assessed score (PA Score) The raw peer assessed scores calculated from the peer assessment survey rubric. Scaled arithmetically to range from zero to 100. No standardization.

Team results for team:

Black Robins ⌄

Team Spreads by Selected Statistic (PA Index)

Legend:
- Above median (yellow)
- Below median (red)

Y-axis: PA Index (0 to 100)

X-axis categories: Black Robins, Grey Warblers, Brown Kiwis, Red Ruru, Zamboanga Bulbuls, Yellow Mohua, Pukekos

Black Robins team result: 95

Full name	Personal result (PA Index)	Peer Assessed Score	Index of realistic self assessment	Explored result (PA Index)
Alexander SAMPSON	100.0	85.0	103	100.0
Mikaela RAY	91.1	77.5	111	91.1
Ramon MCKNIGHT	59.8	50.8	102	59.8
Kamryn MILLER	34.3	29.1	61	34.3

Information

FOR FUTURE DEVELOPMENT

Indexed peer assessed score (PA Index). The best-rated team member in each team is awarded 100/100. All others scaled down proportional to the peer assessed score.

Ornithologists 101 Formative

346 days elapsed

Refresh

| Peer Assess Pro | Team Composition | Team Results |

Team results

Black Robins	95.0	%
Brown Kiwis	70.0	%
Grey Warblers	75.0	%
Mailbox Martins	50.0	%
Pukekos	85.0	%
Red Ruru	30.0	%
Wax Eyes	50.0	%
Yellow Mohua	60.0	%
Zamboanga Bulbuls	70.0	%

Submit

Team results used in the personal result calculations for IPR, NPR and RPR that follow.

Team results for team:

Black Robins ⌄

Team Spreads by Selected Statistic (IPR)

Legend:
- Above median
- Below median
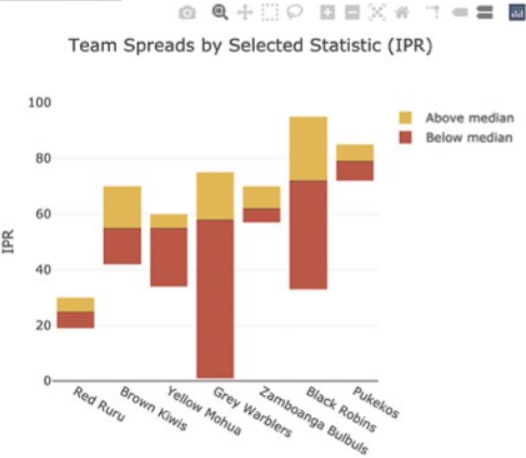
Black Robins team result: 95

Full name	Personal result (IPR)	Peer Assessed Score	Index of realistic self assessment	Explored result (IPR)
Alexander SAMPSON	95.0	85.0	103	95.0
Mikaela RAY	86.6	77.5	111	86.6
Ramon MCKNIGHT	56.8	50.8	102	56.8
Kamryn MILLER	32.5	29.1	61	32.5

Information

FOR FUTURE DEVELOPMENT

Indexed personal result (IPR). The best best-rated team member in each team is awarded the team result, all others scaled down proportional to the peer assessed score.

Team results for team:

Black Robins ▾

Team Spreads by Selected Statistic (NPR)

NPR (y-axis)

Legend:
- Above median (yellow)
- Below median (red)

X-axis categories: Red Ruru, Yellow Mohua, Zamboanga Bulbuls, Brown Kiwis, Grey Warblers, Pukekos, Black Robins
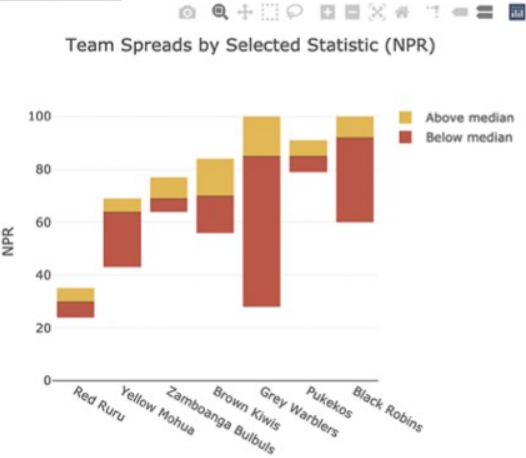
Black Robins team result: 95

Full name	Personal result (NPR)	Peer Assessed Score	Index of realistic self assessment	Explored result (NPR)
Alexander SAMPSON	100.0	85.0	103	100.0
Mikaela RAY	100.0	77.5	111	100.0
Ramon MCKNIGHT	84.0	50.8	102	84.0
Kamryn MILLER	59.8	29.1	61	59.8

Information

FOR FUTURE DEVELOPMENT

Normalized personal result (NPR). The average team member in the team is awarded the team result. All others scaled above or below the average, so that the average of the team's result matches the team result. Scale factor 1.0. Most teachers use this method with a Scale Factor between 1.0 and 1.5.

Team results for team:

Black Robins ▾

Team Spreads by Selected Statistic (NPR)

■ Above median
■ Below median
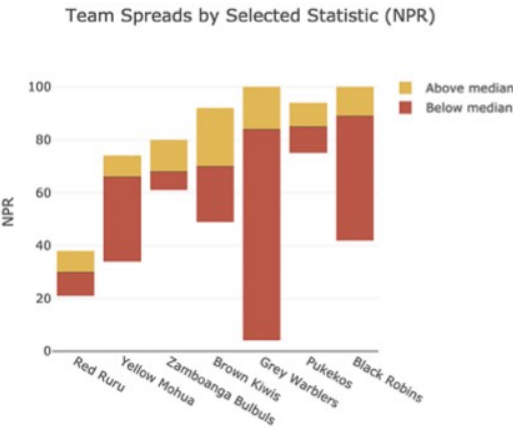
Black Robins team result: 95

Full name	Personal result (NPR)	Peer Assessed Score	Index of realistic self assessment	Explored result (NPR)
Alexander SAMPSON	100.0	85.0	103	100.0
Mikaela RAY	100.0	77.5	111	100.0
Ramon MCKNIGHT	78.6	50.8	102	78.6
Kamryn MILLER	42.2	29.1	61	42.2

Information

FOR FUTURE DEVELOPMENT

Normalized personal result (NPR) Scale factor 1.5. When the scale factor is increased from 1.0 to 1.5 the range of personal results in each team is increased. However, the average of each team's results continues to match the team result awarded by the teacher. Most teachers use this method with a Scale Factor between 1.0 and 1.5.

Team results for team:

Black Robins

Team Spreads by Selected Statistic (RPR)
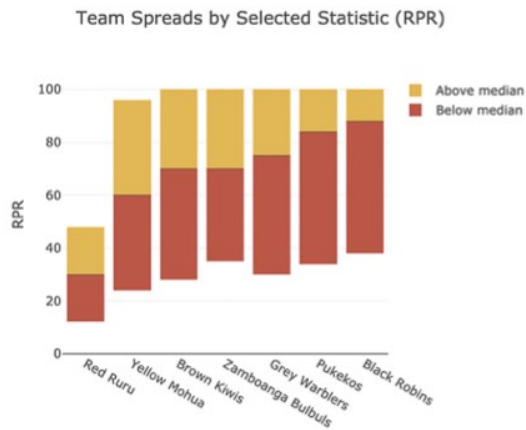
Black Robins team result: 95

Full name	Personal result (RPR)	Peer Assessed Score	Index of realistic self assessment	Explored result (RPR)
Alexander SAMPSON	100.0	85.0	103	100.0
Mikaela RAY	100.0	77.5	111	100.0
Ramon MCKNIGHT	76.0	50.8	102	76.0
Kamryn MILLER	38.0	29.1	61	38.0

Information

FOR FUTURE DEVELOPMENT

Rank-based personal result (RPR). The average team member in the team is awarded the team result. All others scaled above or below the average proportional to the relative rank of the teammates peer assessed score.

Better feedback. Better teams.

TABLE 2.3 Typical applications for alternative methods of determining personal result

Method	Symbol	Typical applications
Peer assessed score	PA Score	When no team result is available. When you want to see how honest and competent students assess each other according to the Likert or BARS ratings.
Indexed peer assessed score	PA Index	When no team result is available. When you want to give the best performer in each team 100. WARNING: invites collusion by students so everyone scores maximum 100.
Indexed personal result	IPR	When a team result is available. Used by teachers pathologically averse to giving any student more than the result achieved by the team.
Normalized personal result	NPR	When a team result is available. Used by most teachers. Works effectively and transparently to reward above average contribution and penalize freeloaders or counter-productive teammates. A scale factor adjusts the reward:penalty impact.
Rank-based personal result	RPR	When a team result is available. Used to apply a standard, very severe reward:penalty spread of personal results within each team.
Standard peer assessed score	SPAS	When you want to compare peer assessments between teams, assignments, and years for the purposes of eduanalytic investigations.

How Peer Assess Pro helps

The **Peer Assess Pro** digital platform enhances the fairness and effectiveness of teamwork using <u>teammate peer assessment</u>. The platform provides team members with personal reports that encourage timely, constructive conversations around team members' strengths, and opportunities to improve a member's contribution to their team's future achievement.

Movie 2.1 illustrates several of the features and benefits for students and teachers that arise from using a digital platform for teammate peer assessment and feedback.

A digital platform to enable teammate peer assessment

Peer Assess Pro delivers additional benefits to team leaders, team coaches, teachers and students including

An academically authoritative survey rubric and standardized metrics that enable valid comparisons between different groups and classes from year to year, Table 2.1.

Early identification of at-risk, freeloader, or counter-productive individuals and dysfunctional teams, Figure 2.1.

A choice of method for calculating personal result for each teammate proportional to their relative contribution to the team result. Alternative calculation methods illustrated in Gallery 2.2

Comprehensive team performance analytics at the level of individual, team, and higher level arrangements such as a class

Further resources for teachers and students

(To come) 'How to' references and links to educational forums related to team assignments and assessment in higher education, such as Collaborative Learning, Team-Based Learning (TBL) (eg Fink, 2013), Problem-Based Learning and Project-Based Learning (PBL).

Bibliography

Carr, S. D., Herman, E. D., Keldsen, S. Z., Miller, J. G., & Wakefield, P. A. (2005). Peer feedback. In The Team Learning Assistant Workbook. McGraw Hill Irwin. Fink, L. D. (2013). *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses* (Kindle; 2 edition). Jossey-Bass.

Ohland, M. W., Loughry, M. L., Woehr, D. J., Bullard, L. G., Felder, R. M., Finelli, C. J., ... Schmucker, D. G. (2012). APPENDIX B: Behaviorally Anchored Rating Scale (BARS) Version, from Comprehensive Assessment of Team Member Effectiveness. *Academy of Management Learning & Education*, 11(4), 609–630. http://amle.aom.org/content/11/4/609.short

Step 2

BUILD YOUR TEAMS

Build your class into equally-capable teams

When we first introduce the team assignment to our students we establish our expectation for professional teamwork delivered by all teammates. We emphasise that we will adjust individual grades fairly, proportional to the peer-assessed contribution of each teammate to their team's delivered outputs.

Checklist

Organise your class list into named teams of ideally five or seven students per team, balancing scarce characteristics (academic achievement, age, gender, country of origin) equally amongst teams: your teamset, Gallery 3.1.

Introduce the team assignment.

Explain the role of the team assignment in developing your students' critical teamwork competencies valued by employers, **Chapter 1 - Why team assignments?**

Emphasise that you use teammate peer assessment to adjust personal results above or below the team result you will award for each team's delivered outputs, **Gallery 2.2**

Conduct team-building exercises to help your student teams gain confidence in working productively with each other, both within and beyond your classroom.

Explain other critical aspects of your assignment's specification.

Tip

Introduce your students to their teams and the team assignment as early as possible in their learning schedule. Have teams develop a psychological contract that defines how they will work together. Give students the earliest opportunity to work together especially when they conduct virtual teamwork beyond the convenience of the classroom or campus.

Building your team arrangement

The first process for launching a teammate peer assessment is the arrangement of your class students into teams, a **teamset**. Start by adapting a class list to produce a teamset structured as illustrated in **Gallery 3.1**. You will launch the peer assessment survey using this teamset in **Step 4 Create the peer assessment.**

GALLERY 3.1 Create a team arrangement for your class of students

Extend a class list...

id	first	last	email	team	group_code
BL1	Kamryn	MILLER	Kamryn@noreply.com		
BL2	Alexander	SAMPSON	Alexander@noreply.com		
BL3	Mikaela	RAY	Mikaela@noreply.com		
BL4	Ramon	MCKNIGHT	Ramon@noreply.com		
BR1	Estrella	HAWKINS	Estrella@noreply.com		
BR2	Mohamed	ZIMMERMAN	Mohamed@noreply.com		
BR3	August	DAUGHERTY	August@noreply.com		
BR4	Nehemiah	MCCONNELL	Nehemiah@noreply.com		
GR1	Joslyn	HOOVER	Joslyn@noreply.com		

Start with your class list. Emails are required to provide regular notifications to the students such as reminders, or advice about availability of feedback.

... into a teamset

id	first	last	email	team	group_code
BL1	Kamryn	MILLER	Kamryn@noreply.com	Black Robins	
BL2	Alexander	SAMPSON	Alexander@noreply.com	Black Robins	
BL3	Mikaela	RAY	Mikaela@noreply.com	Black Robins	
BL4	Ramon	MCKNIGHT	Ramon@noreply.com	Black Robins	
BR1	Estrella	HAWKINS	Estrella@noreply.com	Brown Kiwis	
BR2	Mohamed	ZIMMERMAN	Mohamed@noreply.com	Brown Kiwis	
BR3	August	DAUGHERTY	August@noreply.com	Brown Kiwis	Team names
BR4	Nehemiah	MCCONNELL	Nehemiah@noreply.com	Brown Kiwis	
GR1	Joslyn	HOOVER	Joslyn@noreply.com	Grey Warblers	

Arrange the students into their teams. At least three team members per team. Ideally five to seven.

... into a teamset

Use ALL these row headers!!!

id	first	last	email	team	group_code
BL1	Kamryn	MILLER	Kamryn@noreply.com	Black Robins	Ornithology101
BL2	Alexander	SAMPSON	Alexander@noreply.con	Black Robins	Ornithology101
BL3	Mikaela	RAY	Mikaela@noreply.com	Black Robins	Ornithology101
BL4	Ramon	MCKNIGHT	Ramon@noreply.com	Black Robins	Ornithology101
BR1	Estrella	HAWKINS	Estrella@noreply.com	Brown Kiwis	Ornithology101
BR2	Mohamed	ZIMMERMAN	Mohamed@noreply.com	Brown Kiwis	Ornithology101
BR3	August	DAUGHERTY	August@noreply.com	Brown Kiwis	Ornithology101
BR4	Nehemiah	MCCONNELL	Nehemiah@noreply.com	Brown Kiwis	Ornithology101
GR1	Joslyn	HOOVER	Joslyn@noreply.com	Grey Warblers	Ornithology101

Class name

Team names

Save as .csv file

The group_code defines a higher level arrangement, such as the class name or assignment. Export (Save) as a .csv file after editing

Alternatively, produce the teamset by exporting a comma separated variables (CSV) file from your learning management system. Confirm the column headers match the requirements for launching a peer assessment activity according to the requirements of the platform you have chosen, as illustrated in Gallery 3.1.

Adjustments to team composition

Inevitably, you will find several matters disrupt the initial team arrangement you planned. Your peer assessment platform should easily handle these adjustments without loss of survey results already submitted by students.

New students enroll or arrive late for the class

Students withdraw from or fail to arrive for the class

A team requires a restructure for extreme reasons

How Peer Assess Pro helps

Peer Assess Pro provides comprehensive instructional resources to help teachers and students understand the value, process, and mechanics for conducting teammate peer assessment. The resources include

Video 'why' and 'how to' guides

Introducing students to peer assessment

A quickstart guide

A knowledge base of Frequently Asked Questions

Self-directed learning resources for students

Peer Assess Pro handles the requirement for a change to team composition at any stage through **Step 5 - Manage the peer assessment.** Import your revised teamset into the Peer Assess Pro platform. Responses from students who have already submitted will be maintained. Only members of teams whose membership has changed must adjust their responses. The platform will automatically notify them of the need to resubmit. You do not need to abandon the peer assessment then launch a new activity.

Further resources for teachers and students

Review this resource Introducing students to peer assessment

Review the video showing the Student's experience of the peer assessment survey

Review the Self-directed learning resources for students

Step 3

TRAIN YOUR STUDENTS

Train your students to give honest feedback accurately

We give our students practice in using the survey instrument so they can accurately, honestly, and constructively assess and provide developmental guidance to their teammates. With our students, we fine-tune the survey rubric to align with the professional teamwork competencies expected from our students' level of study.

Checklist

Explain how receiving feedback improves teammates' contribution, reduces team dysfunction, and improves fair grade outcomes.

Align the teamwork learning competencies sought through your assignment with the teammate peer assessment survey rubric.

Practice students applying the survey rubric to examples of outstanding, average, and poorly contributing teammates.

Practice your students giving constructive developmental advice based on performance to date.

Explain the consequences for students who excessively overrate, underrate, or neglect their responsibility to assess constructively.

Tip

Conduct a formative and summative teammate peer assessment with your class. An early formative peer assessment familiarises your students with the teammate peer assessment process. Furthermore, it gives poorly rated students a fair opportunity to raise the quality of their contributions to outputs and teamwork processes.

Introducing the peer assessment rubric

Formative feedback

Fairness demands that you provide the opportunity for students to provide

Qualitative evidence that supports or explains the ratings they have provided to each team member

Developmental advice that provides behaviorally-specific suggestions about how the team member could better contribute to the teams's work in future

The teacher with advice about any issues they may be experiencing regarding the team assignment or classwork generally

The teacher should strongly encourage reporting of this qualitative developmental guidance when a peer assessment survey is conducted as a formative assessment early in the team's work together. Team member's need to know in a timely manner that they need to adjust their behavior if necessary to make up for lost ground that might count against them in the summative peer assessment for the assignment.

Some teachers rate the quality of qualitative feedback provided by students to each other. Beyond a grade based on peer assessment rating, they apply an additional grade based on each student's quality of feedback (Parker & Coykendall, 2012).

Overall recommendation

Once survey respondents have concluded their responses to both the quantitative ratings and qualitative feedback, it us useful to ask one summarising question "How likely is it that you would recommend this team member to a friend, colleague, or employer?" On a Likert Scale from Very Unlikely to Very Likely we find very high statistical correlations between this rating and standard [peer assessed scores](). Consequently, this overall recommendation is helpful as a cross-check to confirm the individual rating components.

FIGURE 4.2 Recommendation of overall contribution to the team's work

How Peer Assess Pro helps

Survey platform designed for quick and convenient use by students on mobile devices and computers. An illustration of the student's experience is

presented in [Gallery 4.1](#)

Survey collects quantitative and qualitative data including developmental feedback, overall recommendation, and feedback for the teacher

A standard survey rubric based on authoritative research. Reduces the time needed to train students in the survey's use especially when used in more than one assessment

Choice of standard methods for calculating personal results derived from the peer assessment rubric. Examples of calculations are readily explained to students, and justified in accreditation and moderation processes. See [Gallery 2.2](#).

Standardized peer assessed scores enable comparisons between teams, courses, and over time, enabling validation of progressive improvement.

GALLERY 4.1 A peer assessment survey delivered through the Peer Assess Pro platform

1 WELCOME TO YOUR PEER ASSESS PRO SURVEY

Peer Assess Pro Ltd
Ornitholology101
Peter Mellalieu
DUE: 28 Feb 10:00 AM

Next

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

2 **IS THIS YOUR TEAM?**

TEAM: Brown Kiwis

Estrella HAWKINS
Mohamed ZIMMERMAN
August DAUGHERTY
Nehemiah MCCONNELL

DO NOT PROCEED UNLESS YOU ARE COMPLETELY HAPPY THAT THE ABOVE IS CORRECT

No.... There is an error with the above team membership

YES (Proceed)

Logged in as **August DAUGHERTY**

Logout

7 Shows initiative by doing research and analysis. Takes on relevant tasks with little prompting or suggestion.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

Part B: Contribution to Task Accomplishment

PEER ASSESS PRO

8

Prepares for, and attends scheduled team meetings and class meetings.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	⊙	⊙	⊙	⊙	⊙
Mohamed ZIMMERMAN:	⊙	⊙	⊙	⊙	⊙
August DAUGHERTY (Self):	⊙	⊙	⊙	⊙	⊙
Nehemiah MCCONNELL:	⊙	⊙	⊙	⊙	⊙

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

9 Helps the team achieve its objectives. Makes positive contributions to meetings.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

PEER ASSESS PRO

10

Reliably fulfils assigned tasks. Work is of professional quality.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

Part B: Contribution to Task Accomplishment

PEER ASSESS PRO

11 Contributes ideas to the team's analysis. Helps my learning of course and team project concepts.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	○	○	○	○	◉
Mohamed ZIMMERMAN:	○	◉	○	○	○
August DAUGHERTY (Self):	○	○	○	◉	○
Nehemiah MCCONNELL:	○	○	○	○	◉

Submit

Logged in as **August DAUGHERTY**

Logout

12 Provide specific examples of productive or ineffective behaviours related to your ratings for Contribution to Task Accomplishment.

Estrella HAWKINS:

> Estrella is very proactive in researching and seeking guidance from our teacher/her tutor. She is very vocal in team discussions and offers ideas. I would suggest that she practice being more concise in her writing and accomplish tasks in a timely manner.

Mohamed ZIMMERMAN:

> Enter your answer here...

August DAUGHERTY (Self):

> Enter your answer here...

Nehemiah MCCONNELL:

> Enter your answer here...

Submit

Logged in as **August DAUGHERTY**

12 Provide specific examples of productive or ineffective behaviours related to your ratings for Contribution to Task Accomplishment.

Estrella HAWKINS:

> Estrella is very proactive in researching and seeking guidance from our teacher/her tutor. She is very vocal in team discussions and offers ideas. I would suggest that she practice being more concise in her writing and accomplish tasks in a timely manner.

Mohamed ZIMMERMAN:

> discussions. However, he is always late to meetings and he is not very thorough or detail-oriented in his work. For example, the references in his work are not from credible sources. I would suggest that he put more effort in finding academic sources to back up his good ideas.

August DAUGHERTY (Self):

> As the leader, I think I was not remiss in setting up meetings and offering help to members. However, I do think I could have done a better job in making sure that the team had enough time to review our work.

Nehemiah MCCONNELL:

> Nehemiah is a very reliable team member. She is always on time to meetings, offers good ideas during discussions, and very receptive to feedback. I would suggest that she be more proactive and offer her opinions without prompting.

Submit

Logged in as **August DAUGHERTY**

13

In the five questions that follow, rate each team member on a 5-point scale. Rate your typical or average team member a mid-level rating of 3.

Please ensure your ratings distinguish between higher and lower levels of performance within your team. For example, if a team member is a good listener, yet another member is a better listener, the latter should receive a higher rating on the 5-point scale.

Next

Logged in as **August DAUGHERTY**
Logout

Powered by **Xorro-Q**

14 Keeps team focused on priorities. Facilitates goal setting, problem solving, and task allocation to team members.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	⊙	⊙	⊙	⊙	⊙
Mohamed ZIMMERMAN:	⊙	⊙	⊙	⊙	⊙
August DAUGHERTY (Self):	⊙	⊙	⊙	⊙	⊙
Nehemiah MCCONNELL:	⊙	⊙	⊙	⊙	⊙

Submit

Logged in as **August DAUGHERTY**

Logout

PEER ASSESS PRO

Supports, coaches, or encourages all team members to contribute productively.

15

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	○	○	○	◉	○
Mohamed ZIMMERMAN:	○	◉	○	○	○
August DAUGHERTY (Self):	○	○	○	○	◉
Nehemiah MCCONNELL:	○	○	○	◉	○

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

16 Listens carefully and welcomes the contributions of others.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

Part C: Contribution to Leadership and Team Processes

17 Manages conflict effectively. Helps the team work in a harmonious manner.

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

Demonstrates effective leadership for the team. Chairs meetings productively.

18

	Almost Never		Average, normal		Outstanding
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

19 Provide specific examples of productive or ineffective behaviours related to your ratings for Contribution to Leadership and Team Processes.

Estrella HAWKINS:

overall. What I would suggest is for her to practice giving alternative solutions whenever she offers criticism to other people's work. It will be more helpful to members than just merely pointing out that something wrong in the report.

Mohamed ZIMMERMAN:

During meetings in class, Mohamed was able to work with the team and handle conflicts well. It would have been great, however, if he was more participative in the group outside of class as well.

August DAUGHERTY (Self):

sure we followed it. However, I think I need to improve team communications. Often, I knew what everyone was up to. But not everyone knew what everyone else was doing. Because of the lack of visibility, I had to answer a lot of repetitive questions from members.

Nehemiah MCCONNELL:

Nehemiah was able to make positive contribution to team processes. While she did not demonstrate much leadership, she was nevertheless an asset in getting tasks done reliably.

Submit

Logged in as **August DAUGHERTY**

PEER
ASSESS
PRO

How likely is it that you would recommend this team member to a friend, colleague, or employer?

5

	Very Unlikely		Neutral		Very Likely
Estrella HAWKINS:	◉	◉	◉	◉	◉
Mohamed ZIMMERMAN:	◉	◉	◉	◉	◉
August DAUGHERTY (Self):	◉	◉	◉	◉	◉
Nehemiah MCCONNELL:	◉	◉	◉	◉	◉

Submit

Logged in as **August DAUGHERTY**

Logout

20 In the questions that follow, you will have the opportunity to provide general feedback to your team members and your teacher that will help them become more effective in participating in and managing group projects. The feedback that you provide to your team members will remain anonymous however the feedback to your teacher will not.

Next

Logged in as **August DAUGHERTY**

Logout

Powered by **Xorro-Q**

21 What specific behaviours or attitudes would help your team member contribute more effectively towards your team's accomplishments, leadership, and processes? Please provide specific positive or constructive feedback that could enable the team member to improve their behaviour. Considering your team member's strengths, how could that person help other team members to acquire similar strengths for Task Accomplishment, Leadership, or Team Processes?

Estrella HAWKINS:

I would suggest that Estrella improve her research skills by identifying relevant information, writing in a concise way, and making inferences and conclusions where applicable.

Mohamed ZIMMERMAN:

I would suggest that Mohamed make it a point to attend all meetings (and be on time), conduct thorough academic research on his assigned tasks, and help other team members improve so that the overall report is of high quality.

August DAUGHERTY (Self):

I think I would definitely be more discerning of my team's strengths and weaknesses and make sure that there is enough time for team review and report revision.

Nehemiah MCCONNELL:

I would suggest that Nehemiah deepen her research on topics assigned to her. It would also be great if she can become more confident in voicing out her thoughts and ideas.

Submit

Logged in as **August DAUGHERTY**

22 Provide advice for the teacher about improving the effectiveness of team work in this course. Please explain any issues or concerns you have about the Peer Assess Pro survey and feedback. Provide any other feedback to the course teacher.

You say: 22/23 Qs

```
I have valued the opportunity to give guidance to my teammates about what their strengths are,
and how they could contribute more effectively to our teamwork.
I'd appreciate more time in class to discuss tips about how to chair meetings more effectively.
```

Submit

Logged in as **August DAUGHERTY**

Logout

Bibliography

Carr, S. D., Herman, E. D., Keldsen, S. Z., Miller, J. G., & Wakefield, P. A. (2005). Peer feedback. In *The Team Learning Assistant Workbook*. McGraw Hill Irwin.

Ohland, M. W., Loughry, M. L., Woehr, D. J., Bullard, L. G., Felder, R. M., Finelli, C. J., Layton, R. A., Pomeranz, H. R., & Schmucker, D. G. (2012). The comprehensive assessment of team member effectiveness: Development of a behaviorally anchored rating scale for self-and peer evaluation. *Academy of Management Learning & Education*, 11(4), 609–630. http://amle.aom.org/content/11/4/609.short

Parker, R., & Coykendall, S. (2012). Rate Your Mate®: A Peer Review Process that Facilitates & Assesses Collaboration in Student Groups. *Brain-Based*

Learning and Teaching, 31–33. https://www.academia.edu/27483807

Step 4

CREATE THE PEER ASSESSMENT

Create and distribute the peer assessment survey

We create and distribute the teammate peer assessment survey to all the teams in our class. Our students must also be alert to receiving notifications about

provisional results and requests we might make to resubmit an unsatisfactory response.

Checklist

Define the peer assessment survey using the TEAMSET you created in STEP 2.

Use an activity title to provide a helpful description for your students.

Specify the availability, date, time, and deadline for students to undertake the survey.

Advise your students how they should access the survey, and how to review notifications about its progress and [feedback results](#).

Ensure your students advise you of team composition omissions or corrections as soon as possible.

Tip

Delay distributing the peer assessment to your students until soon AFTER you have trained them how to assess, give and receive feedback. Making the survey available during a class contact session gives you the assurance that students have access to the correct survey and receive notification alerts generated by the survey platform.

How Peer Assess Pro helps

MANAGE THE PEER ASSESSMENT

Manage the peer assessment survey

As our survey progresses, we might request a resubmission from a student who appears to have rated others unfairly or assesses their contribution to a degree

markedly different from the assessment made by their teammates. We might need to adjust the composition of a team by adding or dropping a teammate.

Checklist

Identify symptoms of unacceptable rating behaviour by teams or individuals. Request resubmissions when appropriate.

Correct promptly a team's composition when notified by a student.

Remind late submitters to submit their peer assessment responses.

Calibrate the spread of personal grades across each team to ensure 'motivationally fair' results among high peer assessed and low peer assessed teammates.

Proactively identify students at risk of failure or expulsion from their team. Prepare to counsel them!

Publish provisional results for view by students and remedy issues identified by students.

Tip

Adjust the spread of peer-assessed grades within teams so that for most teams, high contributors gain a well-justified boost to their result grade. Conversely, confirm that extremely low-rated teammates are awarded near fail peer-assessed grades. The grades should be consistent with the qualitative feedback they receive.
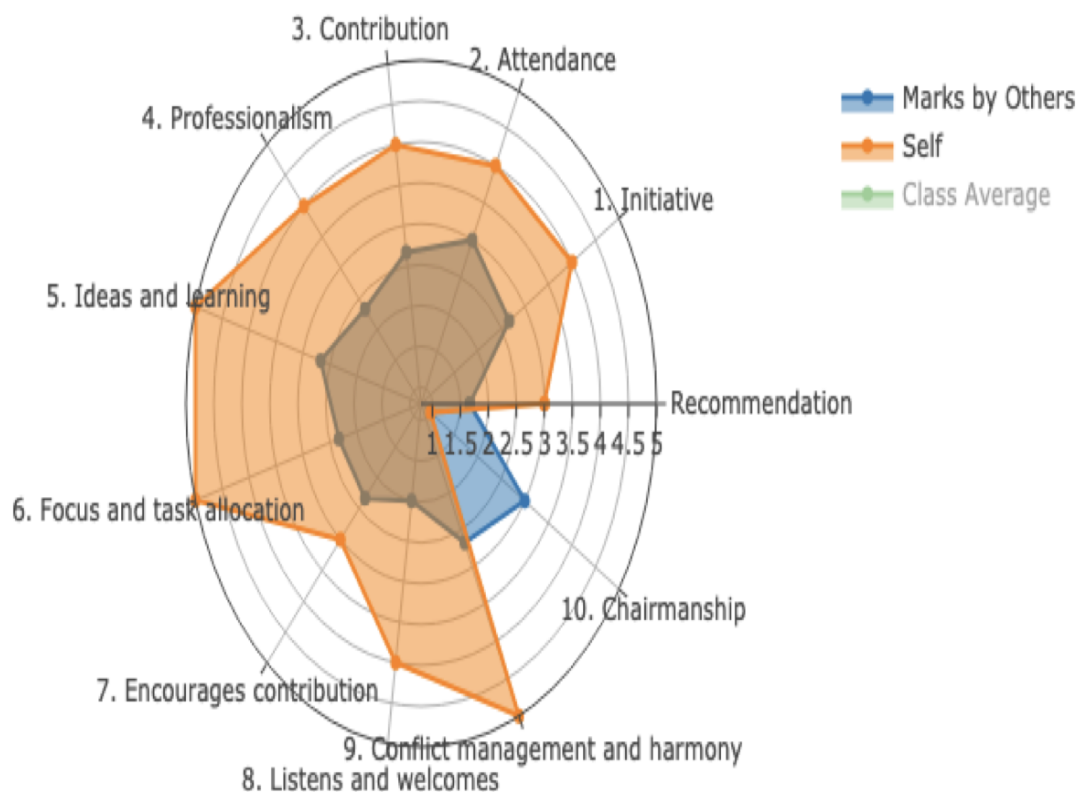
How Peer Assess Pro helps

Permanent track-and-trace of exception notifications identified by the platform and communicated to individual team members.

Step 6

COURAGEOUS CONVERSATIONS

Promote courageous conversations among your students

We calculate each student's personal grade combining their average peer-assessed score with the team result we awarded for the team's outputs. We despatch a personalised report to each student comprising their personal

grade and the developmental feedback to guide improvement in their future teamwork.

Checklist

Enter the results you award for each team's delivered outputs: TEAM RESULTS.

Conduct quality assurance review of results.

Despatch results for view by students.

Support and encourage your students to engage in courageous conversations with their teammates.

Ensure students understand their received feedback and act proactively to improve their future teamwork behaviour.

Identify opportunities for improvement to the weakest teamwork competencies. Discuss remedies with class.

Respond proactively to critical areas of feedback identified by your students to you.
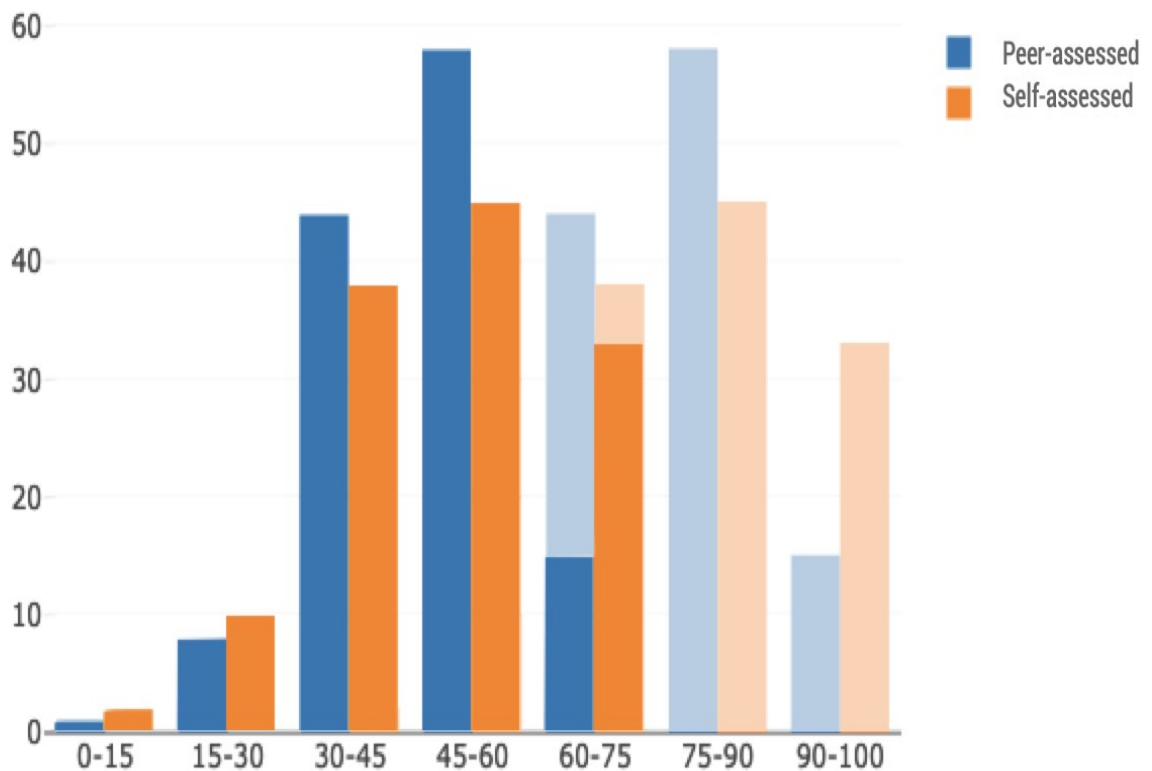
Tip

Help each team build psychological safety amongst its teammates. Encourage your students to develop the courage to ask 'What is the one thing I do that gets in the way of our team's effectiveness?' (Heen, 2015)

How Peer Assess Pro helps

IMPROVE THE NEXT CYCLE

Improve the next cycle of your students' team assignments

We examine the feedback, charts, data and analytics resulting from our peer assessment to help improve our design of future team assignments and our next conduct of teammate peer assessment.

Checklist

Were there critical areas of feedback provided to you from your students? Refine your assignment specifications, and the teaching and learning process.

Were there symptoms that the class as a whole tended to rate a majority of their teammates above average? Consider more effort in STEP 3 to overcome this so-called Lake Wobegon Effect.

Did some students fail to improve their peer-assessed performance following a low formative peer assessment? Did others rate themselves unrealistically? Counsel them.

Consider introducing formal training for relatively weak teamwork competencies that were identified in STEP 6.

Tip

Compare the statistics and patterns in charts resulting from your team assessment with examples of good practice. Anticipate issues of ineffective peer assessment practice by improving your assignment design, peer assessment training, and support for courageous conversations within teams following your formative feedback.

How Peer Assess Pro helps

Chapter 9

REASSESS THE PROPOSITIONS

How the propositions for effective team assessment yield valued outcomes

Revisiting the propositions for effective team assignments

In Chapter 1 we presented five key research findings that informed our 7 step approach to effective team assignments. Let's recall the five propositions.

Awarding all group members the same grade is not valid, fair, nor motivating for students(Kagan, 1995; Zhang & Ohland, 2009)

[Freeloading](#) on group projects is less likely if students' contributions will determine their grades (Gibbs, 2009)

Training in teamwork compounds the benefits for team effectiveness and employability (Carr, Herman, Keldsen, Miller & Wakefield, 2005)

Students should receive training in the assessment practices they will use (Sprague, Wilson, & McKenzie, 2019).

An effective [peer assessment platform](#) identifies [outlier team ratings](#) and inflated self-assessments (Sprague, Wilson, & McKenzie, 2019; Dodd & Mellalieu, 2019)

In **[Gallery 9.1](#)** we illustrate how the five propositions interact with each other through a mutually-reinforcing system that contributes to the benefits of team assessment we asserted in [Chapter 1 - Why team assignments](#)

Improved sense of fairness about grade outcomes

Improved personal and team academic results

Improved teamwork competencies

Improved employability through developing career ready competencies

Improved team cohesion, motivation and dynamics

GALLERY 9.1 Integrating the five propositions

Key propositions on group assessments

Awarding all group members the **same grade** is **not valid, fair**, nor **motivating** for students
(Kagan, 1995; Zhang & Ohland, 2009)

Free riding on group projects is **less likely** if students' contributions will determine their grades
(Gibbs, 2009)

Students should receive **training in the assessment practices** they will use
(Sprague, Wilson, & McKenzie, 2019).

Training in teamwork compounds the benefits for team effectiveness and **employability**
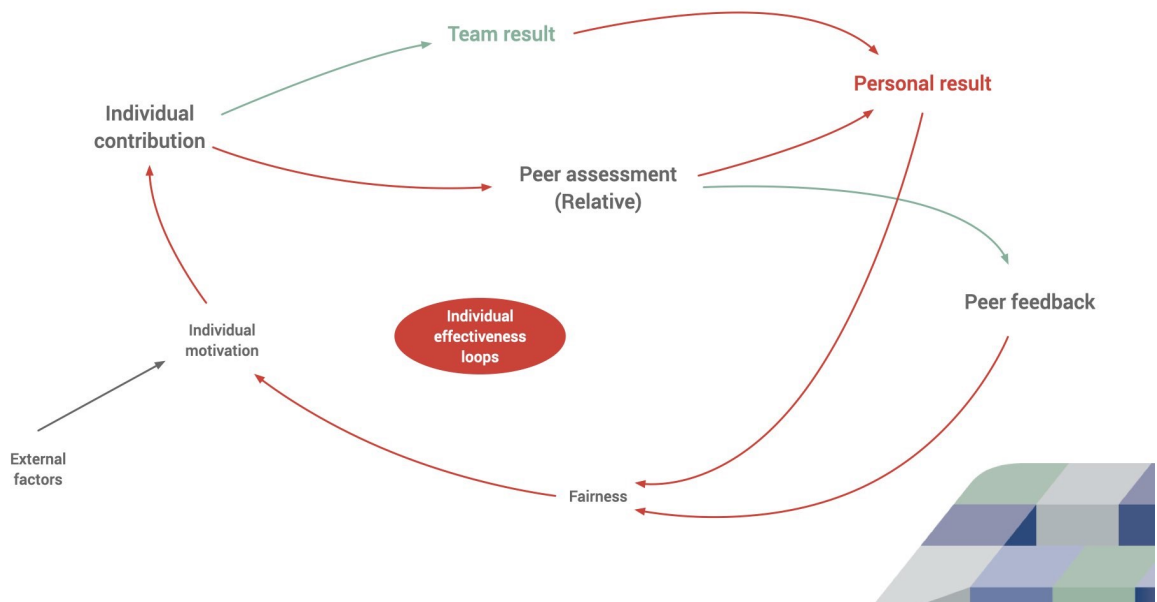(Carr, Herman, Keldsen, Miller & Wakefield, 2005)

An effective peer assessment platform identifies **inflated self-assessments** and **outlier team ratings**
(Sprague, Wilson, & McKenzie, 2019; Dodd & Mellalieu, 2019)

Overview
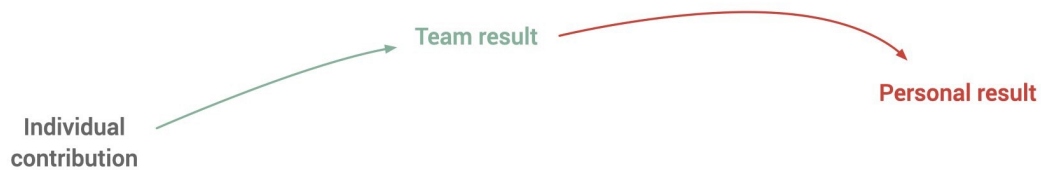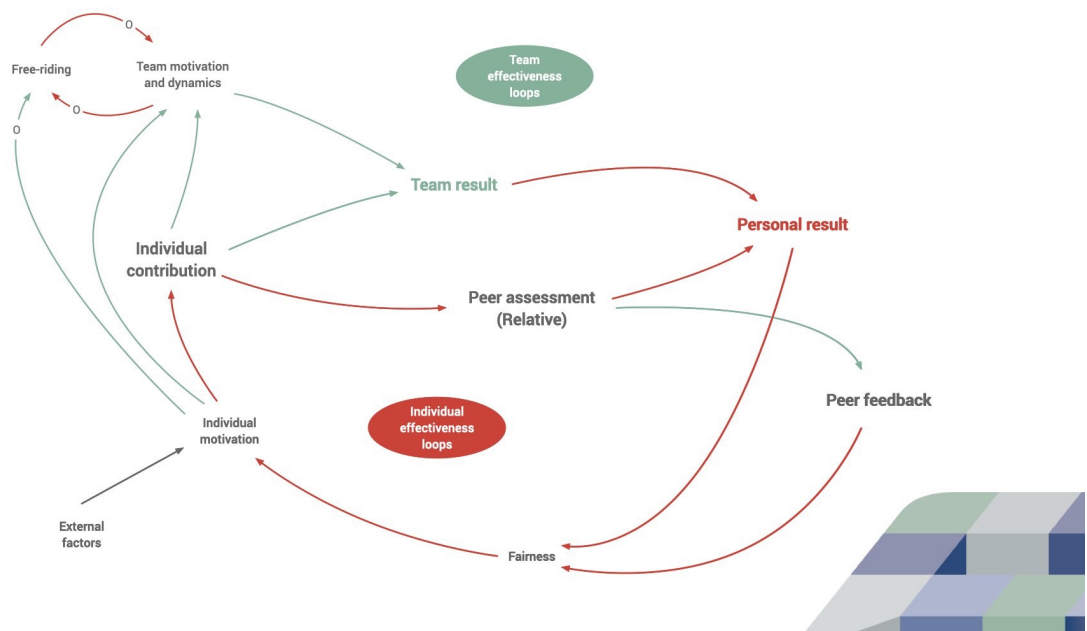
Without peer assessment every teammate receives the same grade, which is not fair

Peer assessment and peer feedback raises the sense of fairness, raises individual motivation and contribution, and therefore raises the team result

As all teammates' motivation is raised, the likelihood of freeloading is reduced. That raises team cohesion, and team motivation to a achieve better team result.

O A rise in the first variable OPPOSES the downstream variable
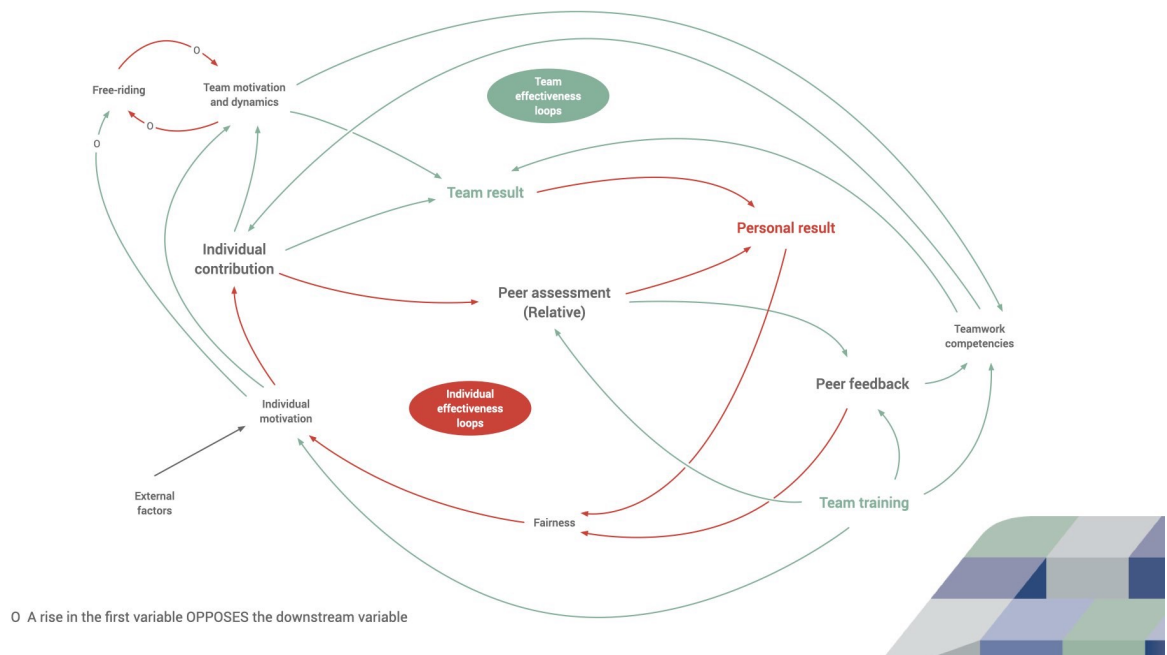
However, training students in the practices of peer assessment, giving and receiving feedback, and teamwork competencies pays dividends in raising even further the benefits of peer assessment and peer feedback.
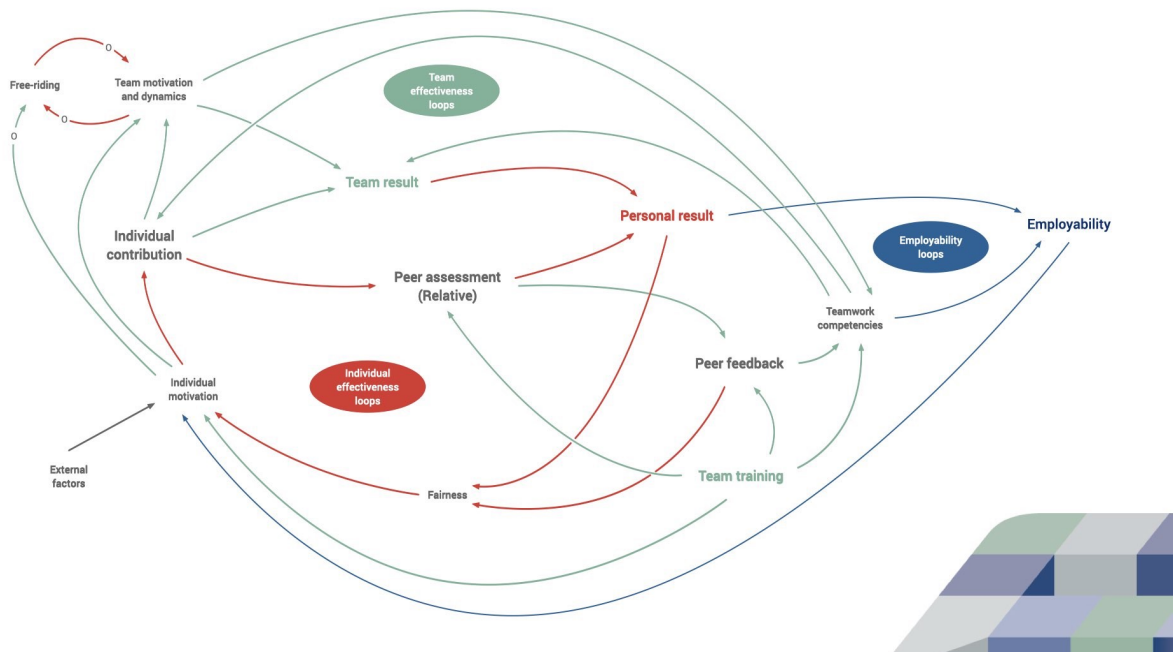
Finally, each teammates' employability is raised in consequence of their development of teamwork competencies and the higher personal result they achieve

Student outcomes from applying the key propositions

Same team result for all

Team peer assessment & feedback

Team training for feedback

Legend:
- Team Result
- Personal Result
- Fairness
- Employability
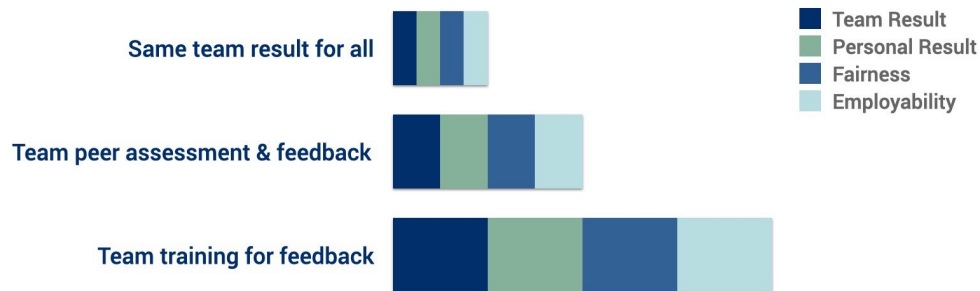
Team training for teamwork, peer assessment and peer feedback raises several outcomes for students valued by academics and employers

Better feedback
Better teams

References

Employers Rate the Essential Need of the Career Readiness Competencies (2018). Job Outlook 2019. Figure 42, p. 33. Bethlehem, PA. National Association of Colleges and Employers (NACE). Retrieved from https://www.naceweb.org/

Carr, S. D., Herman, E. D., Keldsen, S. Z., Miller, J. G., & Wakefield, P. A. (2005). Peer feedback. In The Team Learning Assistant Workbook. New York: McGraw Hill Irwin.

Maani, K., & Cavana, R. (2000). Causal Loop Modelling. In Systems Thinking, System Dynamics: Managing Change and Complexity (pp. 25–55, Chapter 3).

Mellalieu, P. J., & Dodd, P. (2018, November). Honest performance feedback from their team members contributes highly to students' course learning. Poster presentation presented at the 2018 Ako Aotearoa Northern Hub 6th Projects Colloquium, Jet Park Airport Hotel & Conference Centre, Mangere, Auckland. Retrieved from https://www.academia.edu/38736633/Honest_performance_feedback_from_their_team_members_contributes_highly_to_students_course_learning

Mellalieu, P. J., & Dodd, P. (2019a). Better teams from peer assessment and feedback. Peer Assess Pro https://www.peerassesspro.com/better-teams-from-peer-assessment-and-feedback/

Mellalieu, P. J. (2019b). The Positive Feedback Loop that Improves Team Effectiveness. Retrieved 27 August 2019, from Peer Assess Pro website: https://www.peerassesspro.com/the-positive-feedback-loop/

Sprague, M., Wilson, K. F., & McKenzie, K. S. (2019). Evaluating the quality of peer and self evaluations as measures of student contributions to group projects. Higher Education Research & Development, 38(5), 1061–1074. https://doi.org/10.1080/07294360.2019.1615417

Gibbs, 2009; Kagan, 1995; Zhang & Ohland, 2009 cited in Sprague et al.

Mellalieu, P. J., Mirzaei, M., & Dodd, P. (2019, August 10). The Positive Feedback Loop that Improves Team Effectiveness. Peer Assess Pro. https://www.peerassesspro.com/the-positive-feedback-loop/

Table 9.1 shows how these benefits are delivered by an digital teammate peer assessment platform.

TABLE 9.1 How the benefits of team assessment are delivered through a digital platform

| Benefit	Platform feature
Fairness about grade outcomes	Students learn through timely, personalized reports why they received the grade awarded and how they compare with teammates and the class as a whole.
Improved personal and team academic results	Students receive personalized developmental feedback that provides a guide towards gaining an improved grade in their future teamwork together.
Improved teamwork competencies	Students are directed to self-help resources that help them interpret and act proactively in response to the personalized feedback and recommendations for development they have received.
Improved employability	Students receive personal reports presenting improvements over time, and present qualitative evidence in support of claims the student makes during a recruitment application.
Improved team cohesion, motivation and dynamics	The teacher receives early warnings of dysfunctional team behavior and at risk or outlier individual student behavior.

Now you have considered and, perhaps, undertaken our 7 step formula, you can now assess the validity of our propositions for your teaching and learning contexts and identified the value of using a digital teammate peer assessment platform.

Chapter 10

PEER ASSESSMENT PLATFORMS

Heatmap contribution for platform selection

Feature	Importance	Platform 1 Weight	Platform 2 Weight	Peer Assess Pro Weight
Personal result calculation	3	3	6	9
'At risk' alerts	1	-	2	3
Student notifications	1	-	-	3
Result preview before publication	2	6	-	6
Teamset management	1	1	2	3
Teacher convenience	3	6	9	6
Learning Management Systems interoperability	3	-	9	3
Student badge	1	-	-	-
Privacy and security	3	6	9	6
Pedagogical foundation	3	3	9	6
Support and knowledge base	2	2	4	4
Education analytics	1	1	1	3
Continuous platform improvement	2	-	2	4
Other features	2	6	-	-
Weighted contribution		34	53	56
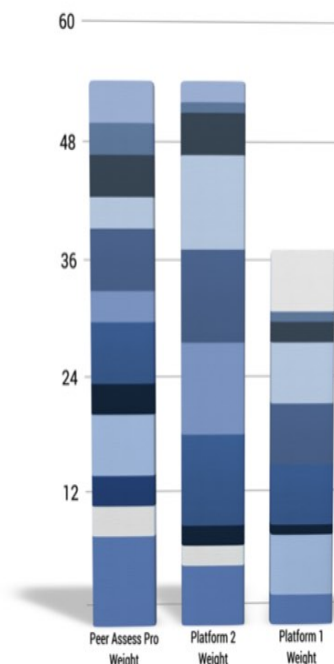
Identify how to select the peer assessment platform that meets your needs

Identify the features of an ideal teammate peer assessment platform

Identify the features crucial to your peer assessment requirements

Evaluate the competitive benefits of alternative peer assessment platforms

Comparative rating for platform selection

Feature	Importance	Platform 1 Rating	Platform 2 Rating	Peer Assess Pro Rating
Personal result calculation	3	1	2	3
'At risk' alerts	1	-	2	3
Student notifications	1	-	-	3
Result preview before publication	2	3	-	3
Teamset management	1	1	2	3
Teacher convenience	3	2	3	2
Learning Management Systems interoperability	3	-	3	1
Student badge	1	-	-	-
Privacy and security	3	2	3	2
Pedagogical foundation	3	1	3	2
Support and knowledge base	2	1	2	2
Education analytics	1	1	1	3
Continuous platform improvement	2	-	1	2
Other features	2	3	-	-
Weighted contribution		**34**	**53**	**56**

$$w = \sum_{f=1}^{n} i_f r_f$$

More to come!

[Problem-Based Learning](#)

Learning through solving problems

[Authentic learning](#)

Authentic learning refers to a wide variety of educational and instructional techniques focused on connecting what students are taught in school to real-world issues, problems, and applications. The basic idea is that students are more likely to be interested in what they are learning, more motivated to learn new concepts and skills, and better prepared to succeed in college, careers, and adulthood if what they are learning mirrors real-life contexts, equips them with practical and useful skills, and addresses topics that are relevant and applicable to their lives outside of school.

One important principle of authentic learning is that it mirrors the complexities and ambiguities of real life. In its purest expression, authentic learning culminates in students making some form of genuinely useful contribution to their community or to a field of study.

Great Schools Partnership. (2013, May 15). Authentic Learning Definition. The Glossary of Education Reform. https://www.edglossary.org/authentic-learning/

[Teammate peer assessment](#)

Engages teammates rating each other's contribution to their team's processes, outputs, and outcomes as they pursue together a group assignment. The peer assessment typically includes quantitative ratings and qualitative evidence to support the awarded ratings.

[Team result](#)

Grade awarded by Teacher to each team's delivered outputs, such as report, presentation. Range 0 to 100.

[Teammate peer feedback](#)

Communicates to teammates in a personalised report the quantitative and qualitative results of teammate peer assessment. Ideally, the report includes developmental advice from each teammate directed towards raising the report recipient's individual effectiveness for their current and future group assignments. Typically, the communication of the peer feedback report is the first stage for constructive, courageous conversations between teammates as they clarify understanding of the feedback received, and the implications for the adjusted behaviours recommended by their teammates.

[Personal result](#)

A grade awarded to one teammate calculated from the teammate's received peer assessed score combined mathematically with the team result awarded by the teacher for that team's total outputs. In typical applications, the personal result is calculated above or below the team result in proportion to the relative (peer assessed) contribution of each teammate.

In the example, the team result is 70 for the team Brown Kiwis. Here, the Normalized Personal Result (NPR) method is selected as the mathematical procedure for determining the personal result from the peer assessed score and team result. The Normalized Personal Result is defined mathematically so that some team members are awarded a personal result above the team result (August DAUGHERTY), and some below (Mohammed ZIMMERMAN).

Personal result calculated using Normalized Personal Result method

Brown Kiwis team result: 70

Full name	Personal result (NPR)	Peer Assessed Score
August DAUGHERTY	85.8	80.0
Nehemiah MCCONNELL	69.4	61.3
Estrella HAWKINS	65.4	56.7
Mohamed ZIMMERMAN	59.5	50.0

Example from Peer Assess Pro teacher's dashboard.

Furthermore, for the NPR method, the mean of the team's personal results is defined to equal the team result. The spread of teammates' personal results around the team result can also be adjusted through a scale factor.

See the glossary entry for Personal Result Method for a discussion of alternative choices for determining the personal result awarded a student, such as the peer assessed score, indexed peer assessed score, and indexed personal result.

Peer Assessed Score (PAS)

A single composite index measuring the relative degree to which a teammate (team member) has contributed to their team's results as rated by their teammates through a teammate peer assessment survey. Typically, the Peer Assessed Score excludes self-assessment and qualitative ratings. Range 0 to 100.

In most circumstances, the Peer Assessed Score is combined mathematically with a Team Result to produce a Personal Result (or personal grade) for each team member which is, therefore, proportional to the team members relative contribution to their team.

The Personal Result Method defines the process and mathematical functions used to combine the Peer Assessed Score with the Team Result to produce the Personal result.

Personal Result Method

The Personal Result Method controls the degree of spread of Personal Results within a team in relation to each teammates' relative Peer Assessed Score within their team. Method options include: Indexed (gentle), Ranked (fierce), or Normalised (variable, further adjustable through a Scale Factor)

Valid assessed team

A team where at least one half of a team's teammates have submitted the teammate assessment survey. Feedback results are hidden from both the teacher and teammates until a team qualifies as valid. In the Peer Assess Pro digital platform, a team of 7 members requires 4 submissions. Teams of 3, 4 and 5 teammates require 3 submissions, the minimum threshold of submissions for a valid team.

Feedback results

The personalised report for each teammate presenting the feedback of their Personal Result, Peer Assessed Score, Team Result, developmental guidance from peers and/or the teacher, and other qualitative feedback.

An ideal digital peer assessment platform should provide Provisional, Updated, and Finalised Feedback results made available for viewing to teammates only through explicit publish actions by the Teacher, after they have quality assured the results to be made visible.

Furthermore, results should only be displayed to students who are members of a Valid Assessed Team. Teammates who are not members of a Valid Assessed Team should be prompted to complete the peer assessment survey and/or encouraged to remind their teammates to complete.

Peer assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Self-assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Realistic self-assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Peer Assess Pro

Peer Assess Pro is a digital platform that enhances the fairness and effectiveness of teamwork using teammate peer assessment and peer feedback. The platform provides team members with personal reports that encourage timely, constructive conversations around team members' strengths, and opportunities to improve a member's contribution to their team's future achievement. The result is 'better teams through better feedback'.

The Peer Assess Pro platform delivers additional benefits to team leaders, team coaches, teachers and students including

✓ Early identification of at-risk individuals and dysfunctional teams

✓ Calculation of a personal result for each team member proportional to their relative contribution to the team result

✓ Comprehensive team performance analytics at the level of individual, team, and higher level arrangements such as a class

✓ Standardised survey rubrics and metrics that enable valid comparisons between different groups and classes from year to year

✓ Permanent track-and-trace of exception notifications identified by the platform and communicated to individual team members.

Freeloading

Freeloading (Social loafing, hitchhiking, free riding) is a common problem that often arises in team work. Free riding occurs when one or more team members fail to contribute fairly towards the team's goals. Whilst poor motivation is one cause, other causes include laziness and alienation because they don't feel their contribution will be accepted by the group (Turner et al, 2011).

A team's leader can avoid freeloading through assigning every team member meaningful tasks from the beginning of the team's work together. The leader should regularly check on progress, and support team members who are experiencing difficulties

The teacher can apply formative and summative teammate peer assessment during the progress of the teamwork. Through formative peer assessment, the teacher - and team - can intervene proactively to guide an at risk team member towards more productive contributions to the team.

Dysfunctional team behavior

Dysfunctional teams are characterized by

- Dysfunctional roles or irregular behavior carried out by one or more team members and/or
- Colluding action conducted by many of the team members

Dysfunctional roles include free riding, dominators, aggressors, rebels and self-seekers

Colluding action includes scapegoating or blaming a team member, bullying, or unfair or inadequate peer assessment.

An effective platform for teammate peer assessment will address dysfunctional team behavior through facilities to

- Identify outlier peer assessment ratings by individual team members
- Identify collusive team ratings
- Ofter convenient facilities to request correction to dysfunctional peer assessment ratings.

Team-Based Learning (TBL)

Team-based learning is a specialized form of group learning with distinctive goals and procedures developed by Michaelsen, Knight, and Fink (2002). In TBL, student teams engage in meaningful, problem-focused tasks. That is, one type of authentic learning. The premise of the method is that team cohesion will lead to learning (Michaelsen & Sweet, 2012). Compared with group learning and problem-based learning, TBL is distinctive through the application of four principles (Sisk, 2011)

- Form heterogeneous teams
- Stress student accountability
- Provide meaningful team assignments focusing on solving a real-world problem
- Provide feedback to the students.

Furthermore, teams are composed of five to seven members assigned anonymously.

Team-based learning has been used in a variety of fields, such as business, engineering, the natural sciences, mathematics, medicine, nursing, informatics, and the humanities. The state of the science related to TBL is unclear. However, a systematic research review is presented in Sisk (2011).

Michaelsen, L. K., Baumarm Knight, A., & Fink, L. D. (2002). Team-based learning: A transformative use of small groups. Greenwood Publishing Group.

Michaelsen, L. K., & Sweet, M. (2012). Fundamental principles and practices of team-based learning. In Team-Based Learning in the Social Sciences and Humanities: Group Work that Works to Generate Critical Thinking and Engagement. Stylus Publishing, LLC.

Sisk, R. J. (2011). Team-Based Learning: Systematic Research Review. Journal of Nursing Education, 50(12), 665–669. https://doi.org/10.3928/01484834-20111017-01

Formative assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Teamset

A teamset is an arrangement of students in their teams. A teamset must be created before launching a teammate peer assessment activity. The teamset must include identifying information for each team member

- first - the first name(s) of the student
- last - the last name(s) of the student
- email - a valid email that will enable notifications and feedback results to be communicated from the peer assessment platform to the student
- id - a unique identifier that enables the teammate to gain access to the peer assessment survey
- group_code - an identifier referring to a higher level arrangement than that of the teams. Typically, the group_code is a short class identifier, or a short assignment identifier.

Example arrangement of a class of students into a teamset

Here there are three teams all members of the one class Ornithology101. The team Grey Warblers has insufficient team members to enable valid peer assessment.

... into a teamset

Use ALL these row headers!!!

id	first	last	email	team	group_code
BL1	Kamryn	MILLER	Kamryn@noreply.com	Black Robins	Ornithology101
BL2	Alexander	SAMPSON	Alexander@noreply.com	Black Robins	Ornithology101
BL3	Mikaela	RAY	Mikaela@noreply.com	Black Robins	Ornithology101
BL4	Ramon	MCKNIGHT	Ramon@noreply.com	Black Robins	Ornithology101
BR1	Estrella	HAWKINS	Estrella@noreply.com	Brown Kiwis	Ornithology101
BR2	Mohamed	ZIMMERMAN	Mohamed@noreply.com	Brown Kiwis	Ornithology101
BR3	August	DAUGHERTY	August@noreply.com	Brown Kiwis	Ornithology101
BR4	Nehemiah	MCCONNELL	Nehemiah@noreply.com	Brown Kiwis	Ornithology101
GR1	Joslyn	HOOVER	Joslyn@noreply.com	Grey Warblers	Ornithology101

Class name

Team names

Save as .csv file

An ideal team size is five to seven students. The minimum acceptable for a peer assessment activity is three students, the minimum necessary to enable a valid assessed team.

Several matters may disrupt your team arrangement that will require an adjustment to the teamset

- New students enroll or arrive late for the class
- Students withdraw from or fail to arrive for the class
- A team requires a restructure for extreme reasons

An efficient teammate peer assessment platform will handle conveniently the requirement for a change to team composition at any stage prior to and including Step 5 - Manage the peer assessment.

Collaborative learning

The collaborative learning approach, advocated by Kenneth Bruffee, engages students working in consensus groups and research teams, tutoring peers, and helping each other with editing and revision. Bruffee concludes that, in the short run, collaborative learning helps students learn better than learning alone. Students learn more thoroughly, more deeply, and more efficiently. In the long run, Bruffee claims that "collaborative learning is the best possible preparation for the real world, as students look beyond the authority of teachers, practice the craft of interdependence, and construct knowledge in the very way that academic disciplines and the professions do. With no loss of respect for the value of expertise, students learn to depend on one another, rather than depending exclusively on the authority of experts and teachers."

Bruffee's advocates collaborative learning because

- Colleges and universities should begin think about themselves, not as stores of information but as institutions of reacculturation
- College and university professors should not be purveyors of information but as agents of cultural change who foster reacculturation by marshaling interdependence among student pers.
- Colleges and universities should revise longstanding assumptions about the nature and authority of knowledge and about classroom authority.

Bruffee, K. A. (1999). Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge. Johns Hopkins University Press.

Rubrics

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Teamwork skills

Skills typically required in professional life including time management, coordination, communication, conflict resolution, negotiation, problem solving, delegation and leadership.

Turner, K., Ireland, L., Krenus, B., & Pointon, L. (2011). Collaborative learning: Working in Groups. In Essential Academic Skills (2nd ed., pp. 193–218, chap. 9). Oxford University Press.

Problem-Based Learning

Learning through solving problems

Related Glossary Terms

Authentic learning, Collaborative learning

Authentic learning

Authentic learning refers to a wide variety of educational and instructional techniques focused on connecting what students are taught in school to real-world issues, problems, and applications. The basic idea is that students are more likely to be interested in what they are learning, more motivated to learn new concepts and skills, and better prepared to succeed in college, careers, and adulthood if what they are learning mirrors real-life contexts, equips them with practical and useful skills, and addresses topics that are relevant and applicable to their lives outside of school.

One important principle of authentic learning is that it mirrors the complexities and ambiguities of real life. In its purest expression, authentic learning culminates in students making some form of genuinely useful contribution to their community or to a field of study.

Great Schools Partnership. (2013, May 15). Authentic Learning Definition. The Glossary of Education Reform. https://www.edglossary.org/authentic-learning/

Related Glossary Terms
Collaborative learning, Problem-Based Learning, Team-Based Learning (TBL)
Index
Chapter 2 - Prepare the team assignment
Chapter 2 - Prepare the team assignment

Teammate peer assessment

Engages teammates rating each other's contribution to their team's processes, outputs, and outcomes as they pursue together a group assignment. The peer assessment typically includes quantitative ratings and qualitative evidence to support the awarded ratings.

Related Glossary Terms

Dysfunctional team behavior, Freeloading, Peer Assess Pro, Peer Assessed Score (PAS), Peer assessment, Personal result, Self-assessment, Team result, Teammate peer feedback

Index

Team result

Grade awarded by Teacher to each team's delivered outputs, such as report, presentation. Range 0 to 100.

Related Glossary Terms

Feedback results, Peer Assessed Score (PAS), Personal result, Teammate peer assessment

Index

Teammate peer feedback

Communicates to teammates in a personalised report the quantitative and qualitative results of teammate peer assessment. Ideally, the report includes developmental advice from each teammate directed towards raising the report recipient's individual effectiveness for their current and future group assignments. Typically, the communication of the peer feedback report is the first stage for constructive, courageous conversations between teammates as they clarify understanding of the feedback received, and the implications for the adjusted behaviours recommended by their teammates.

Related Glossary Terms

Feedback results, Freeloading, Peer Assess Pro, Teammate peer assessment

Index

Chapter 1 - Why group assignments

Personal result

A grade awarded to one teammate calculated from the teammate's received peer assessed score combined mathematically with the team result awarded by the teacher for that team's total outputs. In typical applications, the personal result is calculated above or below the team result in proportion to the relative (peer assessed) contribution of each teammate.

In the example, the team result is 70 for the team Brown Kiwis. Here, the Normalized Personal Result (NPR) method is selected as the mathematical procedure for determining the personal result from the peer assessed score and team result. The Normalized Personal Result is defined mathematically so that some team members are awarded a personal result above the team result (August DAUGHERTY), and some below (Mohammed ZIMMERMAN).

Personal result calculated using Normalized Personal Result method

Brown Kiwis team result: 70

Full name	Personal result (NPR)	Peer Assessed Score
August DAUGHERTY	85.8	80.0
Nehemiah MCCONNELL	69.4	61.3
Estrella HAWKINS	65.4	56.7
Mohamed ZIMMERMAN	59.5	50.0

Example from Peer Assess Pro teacher's dashboard. All rights reserved.

Furthermore, for the NPR method, the mean of the team's personal results is defined to equal the team result. The spread of teammates' personal results around the team result can also be adjusted through a scale factor.

See the glossary entry for Personal Result Method for a discussion of alternative choices for determining the personal result awarded a student, such as the peer assessed score, indexed peer assessed score, and indexed personal result.

Related Glossary Terms
Feedback results, Peer Assess Pro, Peer Assessed Score (PAS), Personal Result Method, Team result, Teammate peer assessment

Index

Peer Assessed Score (PAS)

A single composite index measuring the relative degree to which a teammate (team member) has contributed to their team's results as rated by their teammates through a teammate peer assessment survey. Typically, the Peer Assessed Score excludes self-assessment and qualitative ratings. Range 0 to 100.

In most circumstances, the Peer Assessed Score is combined mathematically with a Team Result to produce a Personal Result (or personal grade) for each team member which is, therefore, proportional to the team members relative contribution to their team.

The Personal Result Method defines the process and mathematical functions used to combine the Peer Assessed Score with the Team Result to produce the Personal result.

Related Glossary Terms

Index

Personal Result Method

The Personal Result Method controls the degree of spread of Personal Results within a team in relation to each teammates' relative Peer Assessed Score within their team. Method options include: Indexed (gentle), Ranked (fierce), or Normalised (variable, further adjustable through a Scale Factor)

Related Glossary Terms

Valid assessed team

A team where at least one half of a team's teammates have submitted the teammate assessment survey. Feedback results are hidden from both the teacher and teammates until a team qualifies as valid. In the Peer Assess Pro digital platform, a team of 7 members requires 4 submissions. Teams of 3, 4 and 5 teammates require 3 submissions, the minimum threshold of submissions for a valid team.

Related Glossary Terms

Feedback results, Teamset

Feedback results

The personalised report for each teammate presenting the feedback of their Personal Result, Peer Assessed Score, Team Result, developmental guidance from peers and/or the teacher, and other qualitative feedback.

An ideal digital peer assessment platform should provide Provisional, Updated, and Finalised Feedback results made available for viewing to teammates only through explicit publish actions by the Teacher, after they have quality assured the results to be made visible.

Furthermore, results should only be displayed to students who are members of a Valid Assessed Team. Teammates who are not members of a Valid Assessed Team should be prompted to complete the peer assessment survey and/or encouraged to remind their teammates to complete.

Related Glossary Terms

Peer Assessed Score (PAS), Personal result, Team result, Teammate peer feedback, Valid assessed team

Index

Chapter 5 - Create the peer assessment

Peer assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Related Glossary Terms

Self-assessment, Teammate peer assessment

Self-assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Related Glossary Terms

Peer assessment, Realistic self-assessment, Teammate peer assessment

Realistic self-assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Related Glossary Terms

Self-assessment

Peer Assess Pro

Peer Assess Pro is a digital platform that enhances the fairness and effectiveness of teamwork using teammate peer assessment and peer feedback. The platform provides team members with personal reports that encourage timely, constructive conversations around team members' strengths, and opportunities to improve a member's contribution to their team's future achievement. The result is 'better teams through better feedback'.

The Peer Assess Pro platform delivers additional benefits to team leaders, team coaches, teachers and students including

✔ Early identification of at-risk individuals and dysfunctional teams

✔ Calculation of a personal result for each team member proportional to their relative contribution to the team result

✔ Comprehensive team performance analytics at the level of individual, team, and higher level arrangements such as a class

✔ Standardised survey rubrics and metrics that enable valid comparisons between different groups and classes from year to year

✔ Permanent track-and-trace of exception notifications identified by the platform and communicated to individual team members.

Related Glossary Terms
Dysfunctional team behavior, Personal result, Teammate peer assessment, Teammate peer feedback

Index

Freeloading

Freeloading (Social loafing, hitchhiking, free riding) is a common problem that often arises in team work. Free riding occurs when one or more team members fail to contribute fairly towards the team's goals. Whilst poor motivation is one cause, other causes include laziness and alienation because they don't feel their contribution will be accepted by the group (Turner et al, 2011).

A team's leader can avoid freeloading through assigning every team member meaningful tasks from the beginning of the team's work together. The leader should regularly check on progress, and support team members who are experiencing difficulties

The teacher can apply formative and summative teammate peer assessment during the progress of the teamwork. Through formative peer assessment, the teacher - and team - can intervene proactively to guide an at risk team member towards more productive contributions to the team.

Related Glossary Terms

Index

Dysfunctional team behavior

Dysfunctional teams are characterized by

- Dysfunctional roles or irregular behavior carried out by one or more team members and/or

- Colluding action conducted by many of the team members

Dysfunctional roles include free riding, dominators, aggressors, rebels and self-seekers

Colluding action includes scapegoating or blaming a team member, bullying, or unfair or inadequate peer assessment.

An effective platform for teammate peer assessment will address dysfunctional team behavior through facilities to

- Identify outlier peer assessment ratings by individual team members

- Identify collusive team ratings

- Ofter convenient facilities to request correction to dysfunctional peer assessment ratings.

Related Glossary Terms
Freeloading, Peer Assess Pro, Teammate peer assessment

Index

Team-Based Learning (TBL)

Team-based learning is a specialized form of group learning with distinctive goals and procedures developed by Michaelsen, Knight, and Fink (2002). In TBL, student teams engage in meaningful, problem-focused tasks. That is, one type of authentic learning. The premise of the method is that team cohesion will lead to learning (Michaelsen & Sweet, 2012). Compared with group learning and problem-based learning, TBL is distinctive through the application of four principles (Sisk, 2011)

- Form heterogeneous teams

- Stress student accountability

- Provide meaningful team assignments focusing on solving a real-world problem

- Provide feedback to the students.

Furthermore, teams are composed of five to seven members assigned anonymously.

Team-based learning has been used in a variety of fields, such as business, engineering, the natural sciences, mathematics, medicine, nursing, informatics, and the humanities. The state of the science related to TBL is unclear. However, a systematic research review is presented in Sisk (2011).

Michaelsen, L. K., Baumarm Knight, A., & Fink, L. D. (2002). *Team-based learning: A transformative use of small groups*. Greenwood Publishing Group.

Michaelsen, L. K., & Sweet, M. (2012). Fundamental principles and practices of team-based learning. In *Team-Based Learning in the Social Sciences and Humanities: Group Work that Works to Generate Critical Thinking and Engagement*. Stylus Publishing, LLC.

Sisk, R. J. (2011). Team-Based Learning: Systematic Research Review. *Journal of Nursing Education*, 50(12), 665–669. https://doi.org/10.3928/01484834-20111017-01

Related Glossary Terms

Authentic learning, Collaborative learning

Index

Formative assessment

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Index

Teamset

A **teamset** is an arrangement of students in their teams. A teamset must be created before launching a teammate peer assessment activity. The teamset must include identifying information for each team member

- **first** - the first name(s) of the student

- **last** - the last name(s) of the student

- **email** - a valid email that will enable notifications and feedback results to be communicated from the peer assessment platform to the student

- **id** - a unique identifier that enables the teammate to gain access to the peer assessment survey

- **group_code** - an identifier referring to a higher level arrangement than that of the teams. Typically, the group_code is a short class identifier, or a short assignment identifier.

Example arrangement of a class of students into a teamset
Here there are three teams all members of the one class Ornithology101. The team Grey
Warblers has insufficient team members to enable valid peer assessment.

An ideal team size is five to seven students. The minimum acceptable for
a peer assessment activity is three students, the minimum necessary to
enable a valid assessed team.

Several matters may disrupt your team arrangement that will require an
adjustment to the teamset

- New students enroll or arrive late for the class

- Students withdraw from or fail to arrive for the class

- A team requires a restructure for extreme reasons

An efficient teammate peer assessment platform will handle conveniently
the requirement for a change to team composition at any stage prior to
and including Step 5 - Manage the peer assessment.

Related Glossary Terms

Valid assessed team

Index

Collaborative learning

The collaborative learning approach, advocated by Kenneth Bruffee, engages students working in consensus groups and research teams, tutoring peers, and helping each other with editing and revision. Bruffee concludes that, in the short run, collaborative learning helps students learn better than learning alone. Students learn more thoroughly, more deeply, and more efficiently. In the long run, Bruffee claims that "collaborative learning is the best possible preparation for the real world, as students look beyond the authority of teachers, practice the craft of interdependence, and construct knowledge in the very way that academic disciplines and the professions do. With no loss of respect for the value of expertise, students learn to depend on one another, rather than depending exclusively on the authority of experts and teachers."

Bruffee's advocates collaborative learning because

- Colleges and universities should begin think about themselves, not as stores of information but as institutions of reacculturation

- College and university professors should not be purveyors of information but as agents of cultural change who foster reacculturation by marshaling interdependence among student pers.

- Colleges and universities should revise longstanding assumptions about the nature and authority of knowledge and about classroom authority.

Bruffee, K. A. (1999). *Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge*. Johns Hopkins University Press.

Related Glossary Terms
Authentic learning, Problem-Based Learning, Team-Based Learning (TBL)

Index

Rubrics

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Index

Teamwork skills

Skills typically required in professional life including time management, coordination, communication, conflict resolution, negotiation, problem solving, delegation and leadership.

Turner, K., Ireland, L., Krenus, B., & Pointon, L. (2011). Collaborative learning: Working in Groups. In *Essential Academic Skills* (2nd ed., pp. 193–218, chap. 9). Oxford University Press.

Index