

Peer assessment method – for staff

Peer evaluation of group work contribution can be used to encourage students to participate in group assessments. Students and academics feel it is unfair for a student who has made little or no contribution to the group effort to receive the full benefit of the group grade. An online method was developed to gather formative and summative peer assessments for students. With the assistance of the Sydney eLearning team this method was implemented as an “Assessment Quiz” using CE6 (previously WebCT). The method below describes the process for downloading and analysing the peer assessment data.

A copy of the peer assessment of group work contribution Quiz will first need to be installed on your eLearning site. This may be downloaded as compressed file from the eLearning site for this project*. Within the site you will find a link to a journal article on the method and student attitudes towards peer assessment of group work contribution. Once the quiz is installed on your eLearning site you may modify the questions to suit your students' needs. I ask students to consider their expectations of peer's contribution to group work. These are similar from semester to semester but I will vary the quiz questions as the students' attitudes change.

Feel free to contact me and let me know how it works for your UoS.

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** Please contact the Sydney eLearning Helpdesk on 9351 8728 if you want access to this site.*

Summary of the process

1. Randomly assign students to groups of four to five individuals to undertake a project. I use a random allocation to encourage students to work in new peer groups reduce the impact of friendship on peer assessment. You may prefer self selection using Sign-up sheets in the LMS.
2. Students are informed of the peer assessment model at the commencement of the subject and given written and verbal instructions.
3. Peer assessment (formative) is conducted at a mid point during the subject to provide students with group feedback. Once all the group assessment tasks are complete, students are asked to assess their peers' contributions to the group project (summative). These are both done using a Quiz in the LMS.
4. All Quiz results are exported to a spreadsheet using Assessment Reports.
5. Data is examined to remove duplicate entries and corrected for student naming errors.
6. If a penalty is to be applied this is entered into the eLearning grade book.
7. Students with an unsatisfactory formative or summative peer assessment are encouraged to meet with the UoS coordinator. Peers comments and scores are discussed with a student in a manner that never identifies the individual.

Create groups for the assignment (Teach tab)

In the Group Manager create random or self selecting groups.

Create the assessment (Build tab)

In the build tab, Assessments tool, create a Quiz for each person: 'Peer Evaluation: Person 1', 'Peer Evaluation: Person 2' etc. depending on how many students you have in each group.

In 'Edit Quiz properties' select 'Do not release score'.

Pick up valid assessment attempts (Teach tab)

You need to be in the Teach tab and in the Assessment Manager to pick up the quiz attempts.

Comment: Some students commence the quiz but for some reason do not submit. The following steps will force the submission of attempts that contain valid data. This occurs less often as the students become more familiar with the process.

There may be a valid reason why the student did not submit the data so you could choose to ignore this step. If there is incomplete data for a student who has performed poorly in peer assessment you may then go back and review 'In Progress' attempts for missing data.

Go to the Assessment Manager from the Teach tab

- Tab 'Not Submitted';
- Open attempts
- Select 'Force Submission' on attempts with valid data
- Select 'Update Grade'
- Repeat for all 'Peer Assessment' quizzes by changing 'View by:' drop down menu for the next quiz

Download data

In the Assessment Manager

- For a quiz select 'View Reports' (from the Action link next to the quiz title)
- Select report type 'Overall Statistics'
- 'Run Report'
- Download records
- Save as 'csv' file for each quiz

Combine quizzes

- Open a new excel file
- Copy and paste data from each quiz into the one worksheet
- Create a new column title 'quiz'
- Insert a number that corresponds with the quiz number
- Copy and paste into appropriate rows
- Save the excel file

Clean up data

Multiple Attempts

- When multiple attempts are made within the same quiz the following data is not recorded 'Last name', 'First name' and 'User name'. Copy this data from the first attempt into the additional attempts
- Some students will enter data twice as they are not sure it went through correctly or they have changed their mind. The first attempt can be deleted.
- Some students will have entered new student data in the same quiz. Although this was not the recommended way of completing the quiz the data is still valid and should be included in the analysis

Group name

- Sort all data by the 'Group Name' Column
- Some students include the tutorial name with the group number
- Remove additional words and spaces
- Insert students group number if the question was left blank
- Repeat the sort

Peer's unikey

- Some students may not have correctly entered their peers UniKey details
- Sort the row by 'Peer's unikey' column
- Search for missing characters or numbers in the 'Peer's unikey' column
- For missing characters search the column with the provided number to locate the correct unikey details.
- For missing numbers, the correct unikey should be located adjacent after the sort.
- If the peer has completed a peer assessment quiz their correct unikey will also be listed in the 'User name' column.
- Copy and Paste the correct details

Deleted rows not containing useful data

- Blank responses
- Look for rows containing 'not answered' for peers name and delete

Feedback Paragraph

- By removing the following entries the feedback will be easier to read.
- Remove the following using find and replace tool
- Under options select 'match the entire cell'
- Leave 'Replace with:' entry blank
- Type the following in the 'Find what:' one at a time
 - Comments
 - no answered
 - nil
- Select 'Replace All'

Calculate individual scores

Select Columns with 'Yes' and 'No' responses

Select 'edit' then 'replace'

- Find 'a.Yes' then Replace '1'
- Find 'b.No' then Replace '0'
- Find 'not answered' then Replace '0'

Rename existing 'Score' Column to 'Score H'

- (H for Holistic i.e. Agree type responses)

Insert new column called 'Score C'

- (C for criteria i.e. yes or no responses)
- to the right of the exiting column called 'Score H'
- Sum the criteria questions and express score as a fraction of 3
- i.e. $=\text{SUM}(L2:R2)*3/7$
 - '7' is the number of 'yes/no' type questions in this example

Insert New Column title 'Score M' (M is for Mean)

- Calculate the mean of 'Score C' and 'Score H'
- i.e. $=\text{AVERAGE}(G2:H2)$
- Copy into all cells within the column

Insert a new column called 'Penalty'

- Dive column 'Score M' by 2,
- i.e. $=I2/2$
- Copy into all cells within the column

Copy and Paste the formulas into all cells within the columns 'Score C', 'Score M' & 'Penalty'

Reduce the result to one decimal point whilst still highlighted

The column titled 'grade' can be deleted

Identify students that require further investigation

- Sort all rows by the 'Penalty' column with the values increasing
- Then for students with a penalty below 1
 - Insert a blank row (line)
 - Sort by 'Group name' (number), then 'Peer's unikey.
 - Adjust column widths
 - Print the selection

Participation in Peer Assessment (Pivot Table)

Students are expected to perform peer assessment. A penalty of 5 marks applies for non participation the peer evaluation process. The following method checks that all students participated in the peer assessment process.

Method

Select all cells containing data.

- Note: Avoid selecting the whole columns as this greatly increases the file size.

Select (MS Excel 2003),

- Data,
 - PivotTable and PivotChart Report
 - Use the defaults
 - MS excel list or database
 - PivotTable
 - Finish

Rename the new worksheet to 'Participation'

From the 'PivotTable Field List'

- Drag 'Group name' into Column A 'Drop row fields here'
- Drag 'Last name' to the right of 'Group name'
- Drag 'First name' to the right of 'Last name'
- Drag 'Penalty' into the column title 'Drop Column Fields Here' where it states 'Drop Data Items Here'.
 - Right click a cell under the column 'total'
 - Select 'Value Field Settings..'
 - Ensure the numbers being displayed are a 'Count' of rows in the data worksheet for each of the student surnames listed.
- Print out the above list
- Print out a list of students currently within the UOS sorted by group name and student surname.
- Compare the lists and note on the printed copy students with less or greater than the expected submissions or no submissions
- Students with no participation will have 5 marks detected from the UOS grade. Students less than expected will have a pro-rata deduction i.e. a student who contributed 1 out of possible 5 peer assessments will receive a 4 out of possible 5 penalty score.
- Ensure that students with greater than expected number of submission did not include a self assessment or multiple entries for the same peer. You may wish to remind the student that submitting a self assessment was not appropriate. In groups where a student has been identified with a penalty the rows containing self assessment or repeated peer assessment by an individual will need to be deleted from the data worksheet to avoid incorrect calculation of the average peer penalty. Refresh the Pivot table after deleting a row from the data worksheet to update all values. For all other groups these errors can be ignored.

Peer Assessment Penalty (Pivot Table)

Create a new pivot table based on the previous table.

Select:

- Data,
 - PivotTable and PivotChart Report
 - Another PivotTable and PivotChart Report
 - Next
 - Select the PivotTable that contains the data you wish to use
 - Next
 - Where do you want to put the PivotTable report
 - New worksheet

Rename the new worksheet to 'Penalty'

From the 'PivotTable Field List'

- drag 'Group name' into Column A 'Drop row fields here'
 - Note: if you have some unexpected fields here you may correct this in the original data worksheet. Return to the PivotTable worksheet and correct errors. Return to 'PivotTable' and select 'data' from top menu then select 'refresh data'. The information in the PivotTable will be updated.
- Drag 'Peer's unikey' to the right of 'Group name'
- Drag 'Penalty' into the column title 'Drop Column Fields Here' where it states 'Drop Data Items Here'
 - The numbers being displayed are a count of rows in the data worksheet for each of the student surnames listed
 - Right click on a cell in the new column and change the 'Field Settings' to 'Average'

Work through the printout of students who received an individual peer penalty score of less than one to determine if the average penalty is also less than one, on average did their peers feel that the students contribution to group work was unsatisfactory. Students who receive an average penalty score of less than one will have their group assessment adjusted by the fraction of the average penalty score. If the average penalty is greater than 1 then the student will be awarded the full group assessment grade.

If the average penalty for a student is lower than 1 double click on score to review the peers grades and comments. The following will make it easier to read the comments column.

- Highlight (select) the 'Comments' columns
- Right click on the column and select the 'Column Width'.
 - Change to 100
- Right click on the column and select 'Format Cells'
 - Select the 'Alignment' tab
 - Select 'Wrap text' under the 'Text control' heading

Unfortunately only 250 characters of the student comments are transferred to the pivot table. Go back to the original data worksheet to obtain the full comments if truncated and 'Copy' and 'Paste' them into the new worksheet. The responses to the criteria questions and the peer's comments are helpful when discussing with a student why their peers felt their contribution to the group work assessment was unsatisfactory. The additional evidence will also give the UoS coordinator confidence

in awarding an individual peer assessment penalty. Also check sufficient students provided a peer assessment. It would be unfair to penalise a student if only one student provided a peer assessment.

If a penalty is required then record the average penalty on your printout of students who received penalty scores lower than one. Rename the new work sheet with 'Group Number' 'Unikey' and 'Surname'. Move the worksheet to the end of the worksheets. The individual worksheets will be a quick reference if reviewing the peer assessment with the student. Repeat for all students receiving an average penalty of less than one. Ensure that when discussing peer assessment scores and comments with an individual that the name of the peer remains anonymous.

Add grades to the Grade book in eLearning (CE6)

The following method is for recording the peer assessment and non participation penalties in the grade book of eLearning.

Start with the MS Excel worksheet that contains all enrolled students names, unikey, groups.

- Rename the column with the students Unikey to 'User ID'.
 - The Unikey column is created by copy the Email column and using the Find and Replace tool to find '@uni.sydney.edu.au' and replace with nothing.
- Create three new columns titled Peer Penalty, Peer Participation, and Peer Comments.
- Copy and Paste the words 'Satisfactory Performance in Peer Assessment' for all students into the column titled 'Peer Comment'
- Copy and Paste '1' into the column titled 'Peer Penalty'
- Copy and Paste '0' into the column titled 'Peer Participation'

For all students with an unsatisfactory peer assessment

- Edit the column 'Peer Penalty' by adding the penalty fraction with 2 decimal points.
- Edit the 'Peer comment' column with the following text"
 - 'Unsatisfactory Peer Assessment - ?% of the group assessment awarded.'
 - Insert the percentage of peer assessment score to be awarded for the individual

For all students who did not participate completely in the peer assessment process

- Edit the column 'Peer Participation' by adding the penalty to be subtracted from the UoS grade
- Add to the 'Peer comment' column the following text"
 - 'Penalty for incomplete participation in peer assessment process = - ?
 - or
 - 'Penalty for non participation in peer assessment process = - 5'

Import into eLearning Grade Book

- Copy and Paste the 'User ID', 'Peer Penalty', 'Peer Participation', and 'Peer Comment' columns into a new MS Excel file.
- Save the new file in a 'csv' (comma delimited) format where the columns are separated by commas with a files name 'peer grade book upload.csv'
- In eLearning,

- Select 'Teach' tab
- Select 'Import from Spreadsheet'
- Browse for 'csv' file and select
 - Separator = 'Comma' and Character Set = 'Unicode (UTF-8)
 - Select 'Upload'
- The column 'User ID' should be found as an existing Grade Book Column.
 - Select Peer Penalty, Peer Participation, Peer Comment to be '- Add as new column -'
 - Select Import
- The new columns can be seen using the 'View All' tab as the last three columns.

Modify Student Grade by penalties

- Within Grade book Select 'Grade Book Options' button on the top right of the screen.
 - select 'column settings'
 - In the column 'Peer Penalty and 'Peer Participation' change the type from 'text' to 'numeric'
- Edit the 'midterm' and / or 'final' calculation
 - Multiply the group assessment grade by the 'Peer Penalty' column.
 - Subtract the 'Peer Participation' column from the student's total grade.

Display Peer Comments in Students 'My Grades'

- Within Grade book Select 'Grade Book Options' button on the top right of the screen.
 - select 'column settings'
 - In the column 'Peer Comment' select 'Yes' to release to students