Individual assessment feedback (INDAF)

User guide

App Version 2.1.2.0

Upon starting up INDAF, please check the bottom right corner of the Dashboard. This shows the version number. If this is not 2.1.0.0 or later, please download and install the latest INDAF version from the Software Center.

Table of contents

1   Main INDAF outputs

The App 'Individual assessment feedback (INDAF) is suitable for any assessment for which questions can be grouped into Categories. INDAF creates individual feedback reports in pdf format, providing students with the overall grade and a generic feedback section. The user can then select from three optional sections to be included in the report. These sections all relate to the student's individual performance. For Categories, excellent performance, as well as performance that requires attention (areas for development) are highlighted.

Example report

Physiology of Exercise and Training

Student Performance Summary

B111129	Your Mark	Your Grade (%)
Overall (out of 80)	52	65

Category Performance Summary

Categories	Category mark	Percentage	Comment
Physiology (out of 20)	6	30%	Area for Development
Anatomy (out of 20)	17	85%	Excellent
Research methods (out of 20)	13	65%	-
Calculations (out of 40)	27	68%	-

Percentage scores are colour coded. The darker the shade of green, the better the percentage score.
Categories with excellent scores are flagged blue, areas for development are flagged orange

optional section 1

Individual Question Overview

Questions	Maximum Mark	Your Mark
Q1	10	2
Q2	10	4
Q3	10	7
Q4	10	10
Q5	10	6
Q6	10	7
Q7	10	6
Q8	10	10
Whole Assessment	80	52

optional section 2

Individual Feedback

Focus on Physiology, tips for further study: Example 1,2,3.

Well done on Anatomy.

You may consider XYZ to better understand area ABC.

optional section 3

Example report, continued from previous page

Generic Feedback

Below is generic group feedback which represents a summary of students' performance on the above examination. Reflect on the general areas of strength and areas for attention and consider the extent to which they apply to you/your performance. Take note of the general advice for future assessments.

General strengths (aspects done well)
(e.g. re: knowledge/understanding; critical thinking/analysis; reading/research; presentation/communication)

- Anatomy-related questions were very well answered (69% average)
- Questions 4 and 8 were very well answered

General areas for attention (aspects not done so well)
(e.g. re: knowledge/understanding; critical thinking/analysis; reading/research; presentation/communication)
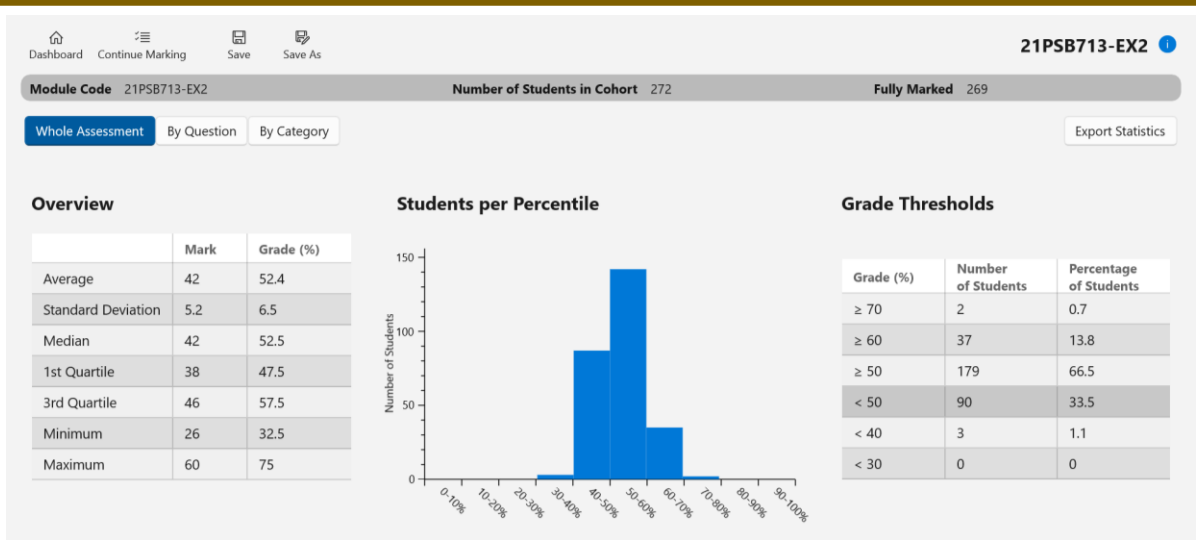
- Physiology-related questions were poorly answered (27% average)
- Questions 1 and 2 were poorly answered

General advice for future assessments

- Try to link material taught in the labs with material taught in the lectures. Seeing the link will help you truly understand
- Use the core textbooks indicated to revise (main textbook: Physiology of Sport and Exercise by Kenney/Wilmore/Costill, and those indicated by invited lecturers) – do not limit your revision to studying the lecture slides only.
- Read additional literature suggested in any "further reading" recommendation (this includes readings in the lab book!).

On completion of the marking, statistics are available for the Whole Assessment (top), By Question (middle), and By Category (bottom).

Example statistics overview

Module Code 21PSB713-EX2   **Number of Students in Cohort** 272   **Fully Marked** 269

Whole Assessment | By Question | By Category   Export Statistics

Overview

	Mark	Grade (%)
Average	42	52.4
Standard Deviation	5.2	6.5
Median	42	52.5
1st Quartile	38	47.5
3rd Quartile	46	57.5
Minimum	26	32.5
Maximum	60	75

Students per Percentile

(bar chart: Number of Students vs percentile 0-10% … 90-100%)

Grade Thresholds

Grade (%)	Number of Students	Percentage of Students
≥ 70	2	0.7
≥ 60	37	13.8
≥ 50	179	66.5
< 50	90	33.5
< 40	3	1.1
< 30	0	0

Module Code 21PSB713-EX2   **Number of Students in Cohort** 272   **Fully Marked** 269

Whole Assessment | By Question | By Category   Export Statistics

	Awarded	Mark Average (SD)	Grade (%) Average (SD)	0-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%	Number of Students Attempting Question
Q1	10	2.8 (1.7)	27.5 (17)	38	35	34	65	45	51			1		269
Q2	10	2.6 (1.2)	25.6 (11.7)		63	67	70	68					1	269
Q3	10	5.2 (1.4)	52.3 (14.1)				43	44	58	55	69			269
Q4	10	8.6 (1.1)	85.7 (11.5)								65	65	139	269
Q5	10	4.7 (3)	46.9 (29.9)	27	24	25	25	27	32	26	26	19	38	269
Q6	10	5.1 (2)	50.9 (19.9)			36	41	29	39	40	50	34		269
Q7	10	3.6 (2.2)	35.8 (21.5)	26	30	37	33	43	42	28	30			269
Q8	10	9.5 (0.5)	94.9 (5.5)							1		1	267	269

(Header: Number of Students per Percentile)

Module Code 21PSB713-EX2   **Number of Students in Cohort** 272   **Fully Marked** 269

Whole Assessment | By Question | By Category   Export Statistics

|	Awarded	Mark Average (SD)	Grade (%) Average (SD)	0-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%	Number Attempting
Physiology	20	5.3 (2.2)	26.6 (10.9)	8	49	86	83	42				1		269
Anatomy	20	13.8 (1.8)	69 (9.1)						29	92	89	59		269
Research methods	20	9.8 (3.6)	48.9 (18)		14	25	34	49	60	42	32	12	1	269
Calculations	40	20.7 (3.3)	51.8 (8.4)				18	79	114	56	2			269

(Header: Number of Students per Percentile)

2 Navigation through INDAF

2.1 Dashboard and Archive

1. Switch between Dashboard and Archive using the top tabs.

2. View user guides.

3. 'New Assessment' moves the user to Tab 1: Setup (chapter 2.2).

4. INDAF files are auto-saved every 6 minutes for the preceding 2 hours and can be recovered.

5. INDAF files located on the computer, or received via e-mail, can be added to the Dashboard.

6. Current assessments, as well as their current marking progress, are shown in the Dashboard.

7. Clicking on assessment opens action menu.

8. Current assessments no longer needed can be added to the Archive (drag and drop).
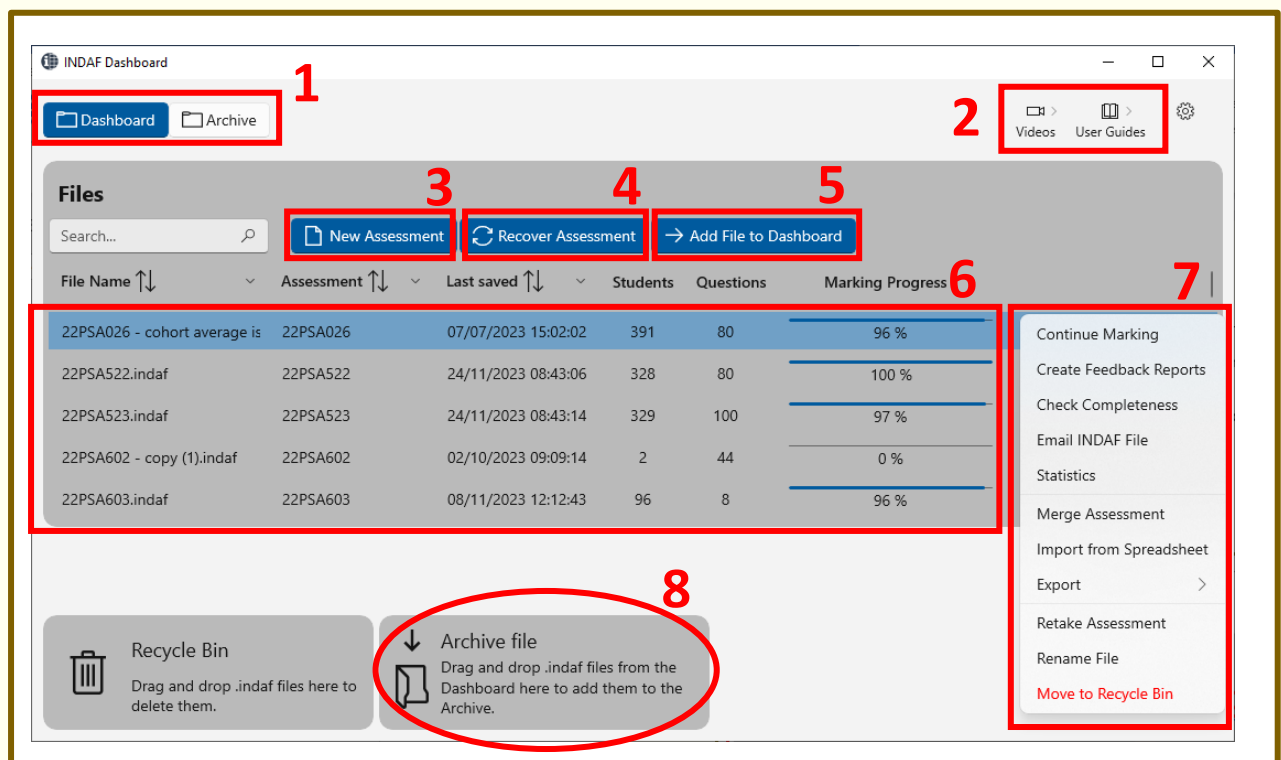
9. Within the Archive, files can be organised within folders (create 'New Folder' if required). Once, created, drag/drop files into folders.
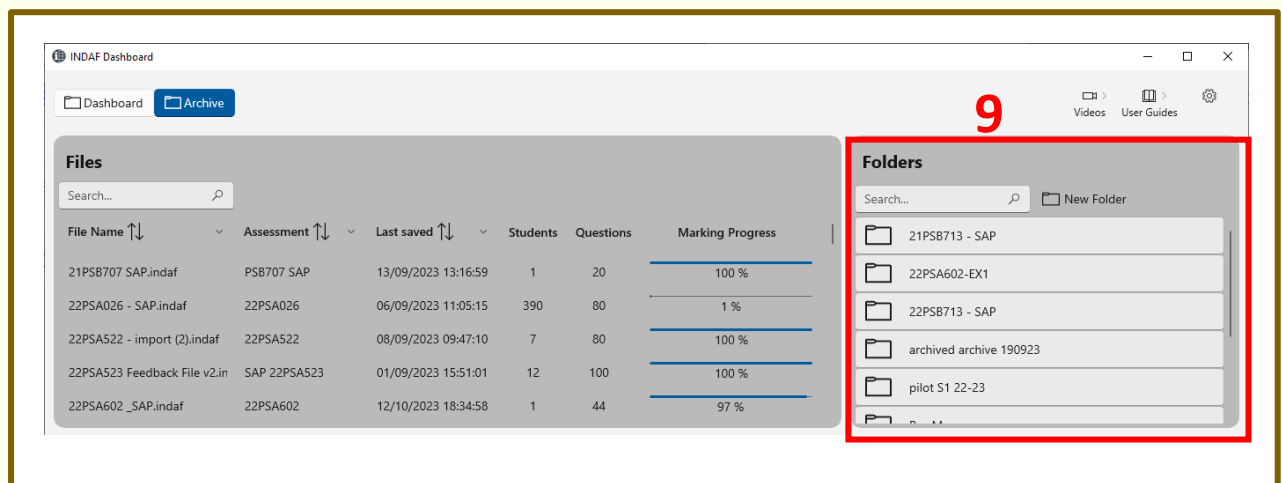
2.2   Setup

1. Home icon. This returns the user to the dashboard from anywhere within INDAF.

2. Current assessment always shown in top right corner.

3. Navigation within the assessment.

4. Hover over input fields to reveal further information.

5. Download ID numbers from Learn (Click information icon for further detail). Alternatively, manually insert student IDs in the input box below. This can be done in bulk, e.g., copy cells from an Excel spreadsheet and paste them into the field 'Manually add student IDs'.

6. Students are sorted by ID by default. If they were imported from Learn via the .csv file, it is also possible to sort them by student name. Whilst student names are not shown (anonymity!), they are stored in the background. Sorting IDs by student name may be helpful if exam scripts are returned in that order (as is often the case for exam hall assessments). This order will be retained in the marking table, which means the order within the INDAF file matches the order of the scripts received.
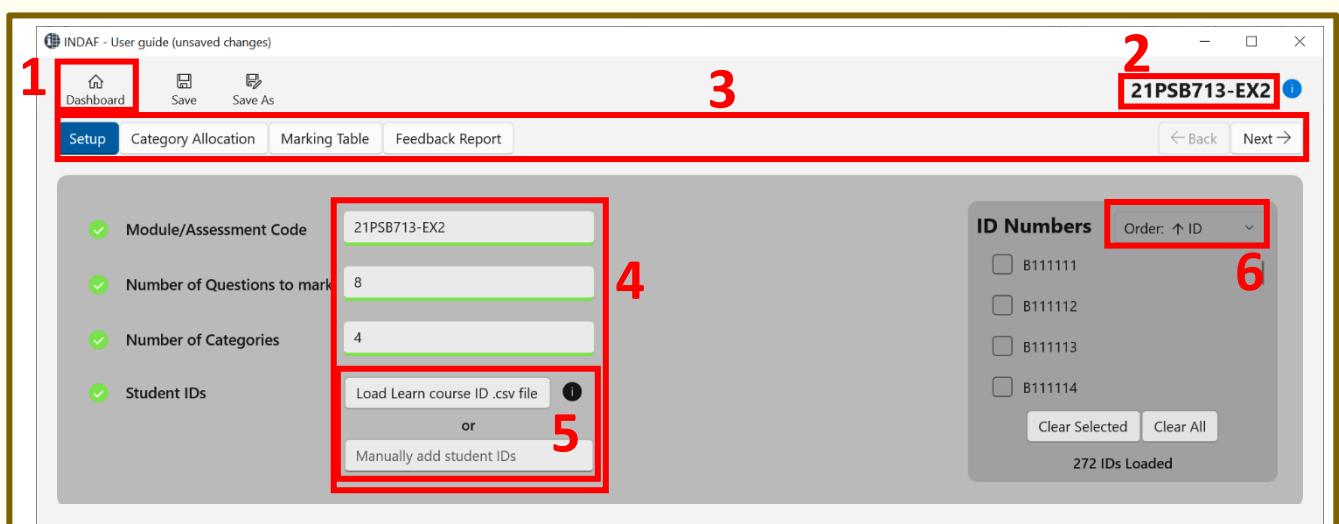
2.3   Category allocation

1. Input maximum marks awarded per question.

2. If an assessment has optional questions (causing the assessment 'Total awarded' mark to be lower than the sum of all questions), 'Total awarded' must be adjusted manually. See Chapter 3.5 for more detailed explanations.

3. Amend question titles (optional); e.g., change' Q1' to '1a'.

4. Amend Category titles; e.g., change' Category 1' to 'Physiology'.

5. Allocate questions to Categories using the tick boxes.

6. Select/unselect all tick boxes for a Category.

7. If, at <u>any</u> point during the marking process, any specifics in this Tab need changing, users can return and update (including adding/removing Categories).

2.4   Marking table

1. Swap between student and cohort view (use any according to personal preference).

2. Input marks. For assessments that contain optional questions, type in 'n' for those questions that were not attempted.

3. Optional: Complete Overall (qualitative) feedback, which is individual to each student (so it is most likely not appropriate for large cohorts). Alternatively, overall feedback can be generated using AI (see next section for details).

4. Qualitative comments often used can be saved and re-used. They can also be imported in bulk.

5. Once a student is completely marked, the 'Preview Report' Option appears (may be useful to inform any overall feedback to the student).

Cohort view

Student view

6. Filter options (cohort view only): Data within the marking table can be filtered and display IDs with the following attributes:

    1. 1. n < Expected (for exams with optional questions – this indicates not enough questions that were left out have been defined)
    2. n > Expected (for exams with optional questions – this indicates too many questions that were left out have been defined)
    3. Marking Incomplete
    4. Marking Complete
    5. Unmarked

7. Direct access to Statistics from Marking Table: This allows the user to check cohort, question and category statistics during marking.

8. *AI-powered feedback: This feature is currently piloted and not available to standard users (see next section for details).*

9. *AI powered feedback: This feature is currently piloted and not available to standard users. This feature rewrites feedback in the textbox. For example, bullet points can be converted into sentences.*

2.5 AI powered feedback (pilot project)

This feature is currently piloted and not available to standard users.
A valid OpenAI API key must be provided in Settings.

Upon completion of marking, individual qualitative feedback can be generated in bulk. The overall mark, category marks and user inputs define the prompt sent to OpenAI, which generates the feedback.

AI powered feedback generation takes time (~5-20 seconds per report), during which INDAF is unresponsive. However, INDAF can work in the background and users can use other applications during feedback generation.

1. **Temperature:** This adjusts the focus of the AI model. Values closer to Zero make the output more focused. Values closer to One allow more creativity.
2. **Resources:** Users can define any further resources based on the various categories defined for this assessment. For example, a specific Physiology textbook chapter for the first category in this example.
3. **Freetext:** This allows the user to finetune the prompt sent to the AI feedback generator. For examples, users may indicate whether a given topic area is going to be followed up in a future module.
4. **Preamble:** This text will appear before the AI-generated content. Users may indicate to students how exactly the text that follows is generated (i.e., using a GPT model and that converts the individual assessment performance into text)
5. **Prompt:** This field is populated based on the above information. It is not directly editable.

2.6   Feedback report

1. The report title appears as first line on the report.

2. Grade boundaries are pre-set for an Undergraduate Assessment, they can be manually changed if required.

3. Choose sections to be included in report.

4. Preview sample report to check the report layout.

5. Check whether all mandatory actions to create feedback reports have been completed.

6. 'Create Learn Upload Zip' creates a Zip file that allows the direct upload of all PDF reports onto the respective student profiles on Learn. An assignment activity on Learn needs creating first for this. For more detailed information, see information icon, or chapter 6 within this guide.

7. If all ID numbers are selected, INDAF only creates reports for those students that have been marked. Reports are not created for student IDs that contain no data.

8. Include cohort statistics into the Generic Feedback.

3   Creating Categories – examples

3.1   Example 1: Categories formed based on sub-questions

Category Allocation

		Question Title	1a	1b	1c	1d	2a	2b	2c	3a	3b	4
✓		Max. Mark	10	10	10	10	10	10	10	10	10	10
✓	Question 1 🗑 ☐		✓	✓	✓	✓	■	■	■	■	■	■
✓	Question 2 🗑 ☐		■	■	■	■	✓	✓	✓	■	■	■
✓	Question 3 🗑 ☐		■	■	■	■	■	■	■	✓	✓	■
✓	Question 4 🗑 ☐		■	■	■	■	■	■	■	■	■	✓

(Navigation tabs: Setup | Category Allocation | Marking Table | Feedback Report)

Associated feedback report

Student Performance Summary

a	Your Mark	Your Grade (%)
Overall (out of 100)	60	60

Category Performance Summary

Categories	Category mark	Percentage	Comment
Question 1 (out of 40)	26	65%	-
Question 2 (out of 30)	25	83%	Excellent
Question 3 (out of 20)	4	20%	Area for Development
Question 4 (out of 10)	5	50%	-

3.2 Example 2: Categories formed based on question scores (low vs high), lab vs lecture content, nature of questions, or thematic areas

You may want to associate more than one Category per question. Below, question 2 belongs to Thematic area 1, but is also a high scoring question, and tests lecture related content. Creating more Categories as such may hence provide the learner with more detail in the feedback report.

Category Allocation

Question Title	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total Max. Mark
Max. Mark	5	10	10	4	3	10	10	8	3	10	73
Thematic area 1	✓	✓	■	■	■	■	■	■	■	■	
Thematic area 2	■	■	✓	✓	✓	■	■	■	■	■	
Thematic area 3	■	■	■	■	■	✓	✓	■	■	■	
Thematic area 4	■	■	■	■	■	■	■	✓	✓	✓	
low scoring questions	✓	■	■	✓	✓	■	■	■	✓	■	
high scoring questions	■	✓	✓	■	■	✓	✓	✓	■	✓	
lecture related content	✓	✓	■	■	■	✓	✓	✓	■	■	
lab related content	■	■	✓	✓	✓	■	■	■	✓	✓	
calculation based quest	■	✓	■	✓	✓	■	■	■	■	■	
application-related	■	■	■	■	✓	■	✓	✓	■	■	
synthesis of evidence	■	■	■	■	■	■	■	✓	✓	☐	

Associated feedback report

Student Performance Summary

a	Your Mark	Your Grade (%)
Overall (out of 73)	44	60

Category Performance Summary

Categories	Category mark	Percentage	Comment
Thematic area 1 (out of 15)	14	93%	Excellent
Thematic area 2 (out of 17)	10	59%	-
Thematic area 3 (out of 20)	5	25%	Area for Development
Thematic area 4 (out of 21)	15	71%	Excellent
low scoring questions (out of 15)	9	60%	-
high scoring questions (out of 58)	35	60%	-
lecture related content (out of 43)	23	53%	-
lab related content (out of 30)	21	70%	Excellent
calculation based questions (out of 17)	12	71%	Excellent
application-related (out of 21)	9	43%	-
synthesis of evidence (out of 11)	7	64%	-

3.3 Example 3: Categories formed based on essay-based questions

Category Allocation

Associated feedback report

Student Performance Summary

a	Your Mark	Your Grade (%)
Overall (out of 80)	38	48

Category Performance Summary

Categories	Category mark	Percentage	Comment
knowledge / understanding (out of 20)	9	45%	-
analysis (out of 20)	5	25%	Area for Development
reading / research (out of 20)	7	35%	Area for Development
presentation / communication (out of 20)	17	85%	Excellent
Question 1 overall (out of 40)	15	38%	Area for Development
Question 2 overall (out of 40)	23	58%	-

3.4 Example 4: Essay-based questions – feedback NOT based on Categories

For essay-based questions, you may want to give students qualitative feedback only, without dividing essay questions into Categories. In this case, Category titles are given the same name as the questions titles.

Going a step further, the Category analysis can be taken off from the feedback report altogether by unchecking the associated box 'Include Category Overview' in the 'Feedback Report' tab. However, this would then require some detailed qualitative comments to make sure students receive individual feedback on their essay – otherwise the feedback report only consists of the overall mark and some generic feedback.

Category Allocation

Marking (student view shown)

Associated feedback report

Student Performance Summary

a	Your Mark	Your Grade (%)
Overall (out of 200)	115	58

Category Performance Summary

Categories	Category mark	Perce...
Essay 1 (out of 100)	50	50
Essay 2 (out of 100)	65	65%

This part can be taken off the report by unchecking the associated box 'Include Category Overview' in the 'Feedback Report' tab.

Percentage scores are colour coded. The darker the shade of green, the better the percentage score.

Categories with excellent scores are flagged blue, areas for development are flagged orange

Individual Feedback

Some very detailed feedback on Essay 1:

lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum

Some very detailed feedback on Essay 2:

lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum lorem ipsum

3.5   Example 5: Optional questions

Example: Assessment for which 4 out of 6 questions need answering

1. Within 'Category Allocation' adjust the 'Total awarded'. In this example, it is reduced to 40.

2. Within 'Marking table', code any questions that were not attempted with 'n'. In this example, INDAF expects 2 questions to be coded with 'n' to make the 'Adjusted total' of 40. If the correct number of n's are specified, they show grey. If fewer are specified for a student, they show red, if more are specified, they show yellow.

3. If fewer n's than expected are specified for a student, the flag 'n < Expected' shows.

4. The above steps ensure correct calculations of Overall and Subcategory marks.

Category Allocation

Marking table

Associated Feedback Report

b	Your Mark	Your Grade (%)
Overall (out of 40) **3**	20	50

Category Performance Summary

Categories	Category mark	Percentage	Comment
Subcategory 1 (out of 20)	5	25%	Area for Development
Subcategory 2 (out of 0)	n/a	n/a	No Question selected in Category **3**
Subcategory 3 (out of 20)	15	75%	Excellent

Percentage scores are colour coded. The darker the shade of green, the better the percentage score.

Categories with excellent scores are flagged blue, areas for development are flagged orange

Individual Question Overview

| Questions	Maximum Mark	Your Mark
Q1	10	1
Q2	10	4
Q3	10	Question Not Attempted **3**
Q4	10	Question Not Attempted
Q5	10	7
Q6	10	8
Whole Assessment	40	20

4   Multiple markers: Sharing and merging INDAF files

1. Module leader to complete all relevant assessment information (Setup and Category allocation, see chapters 2.2 and 2.3). Save assessment and return to Dashboard (Marking Progress is 0% as nothing has been marked yet).

2. This INDAF file is now shared with all external markers via e-mail (click on Assessment and select E-mail option).

3. When markers receive this file, instruct them to include it into their INDAF dashboard via 'Add File to Dashboard'.

4. They then complete their marking (see chapter 5).

5. On completion of the marking, module leaders collate all INDAF files via e-mail (external markers follow step 2 above) and add them to their Dashboard via 'Add file to Dashboard'.
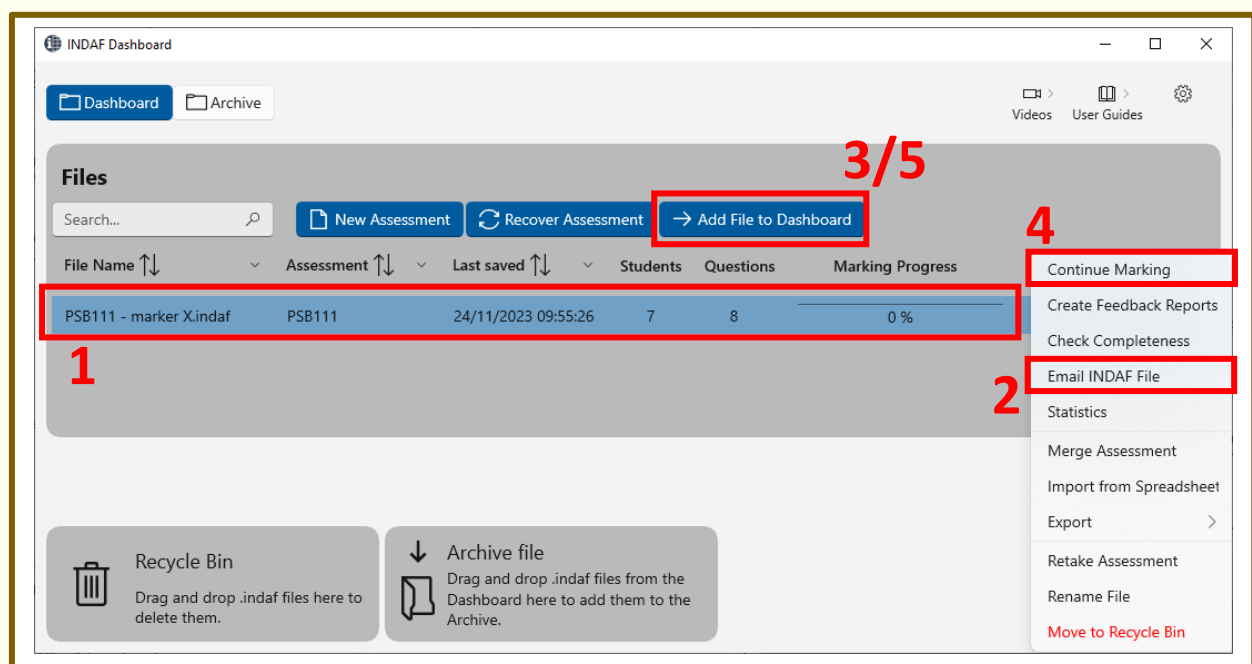
6. Rename file if necessary.

7. Select 'Merge Assessment' to compile all marks into a single file (if there are 3 external markers, this process is repeated 3 times).

8. Select the file to Merge.

9. Click 'Merge'. INDAF detects conflicts and will alert the user to that (e.g., two markers accidently mark the same student, and there are differing marks for the same student).

10. A new merged file is now created that includes data from both markers (in the example below, the 28% marked by X have been added to the 57% marked by Y).
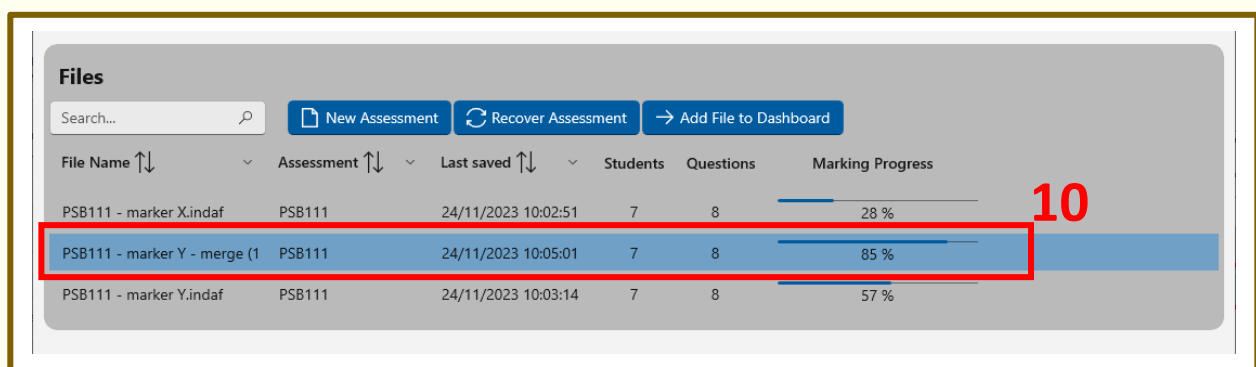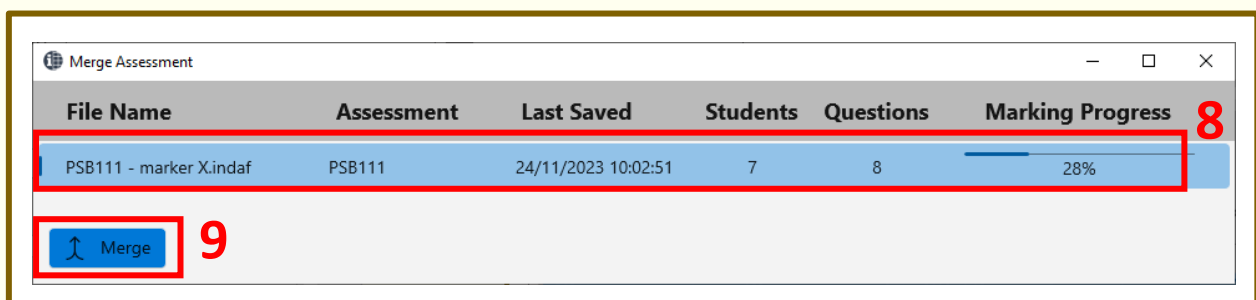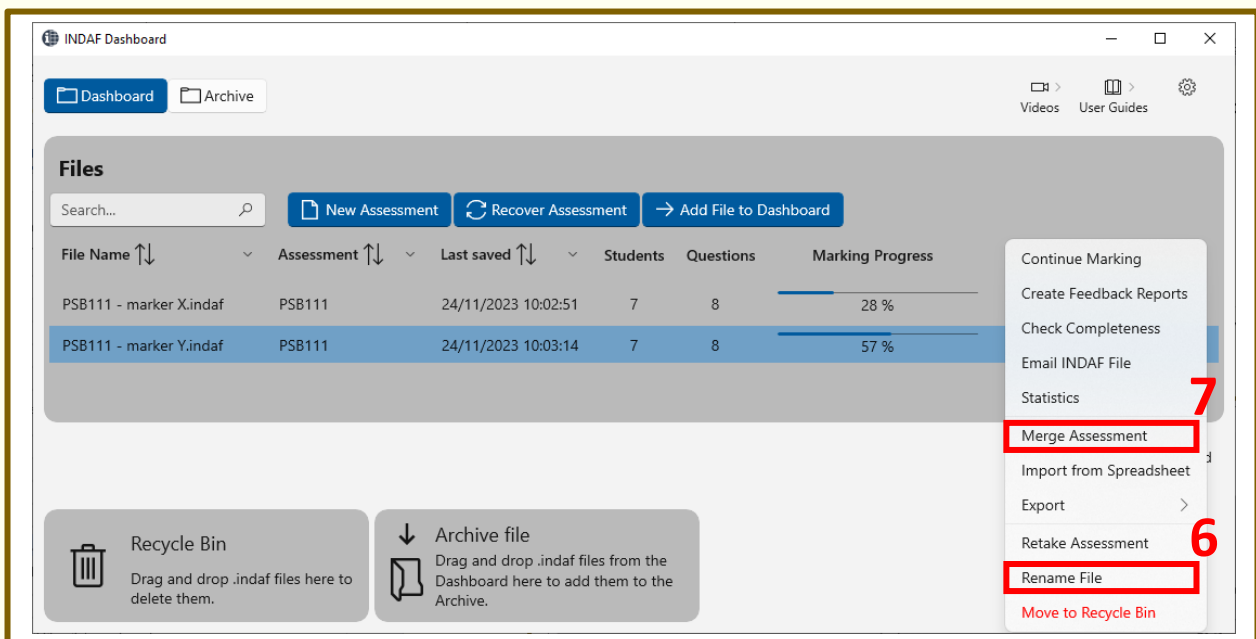
5   Importing marks into INDAF

5.1   Step 1: Set up assessment within INDAF

Follow the steps outlined in chapters 2.2 and 2.3 to set up an assessment, then save it. At this point the assessment does not contain any marks.

The assessment may contain more questions than the marker plans to import (e.g., the marker may wish to import marks for 8 questions, but manually mark an additional 4 questions within INDAF - in this case, 12 questions must be defined in the INDAF Setup. The import function will then import the 8 external questions and include that data, leaving Q9 – Q12 blank for manual marking.

5.2   Step 2: Preparing the data to import

Data must be prepared in Excel. It may be data generated from a Learn Quiz or OMR data. For INDAF to recognise data it must have the following format:

1. ID numbers must be given in column 1 (they must match the ID numbers of the INDAF file!).
2. Question titles must be given in row 1. If you are working with a file automatically generated (e.g., OMR output), make sure only question scores are shown for each column (starting with Column B). Remove any columns containing aggregate / percentage scores (usually found at the very right). The 'Overall feedback' column must contain the header 'Overall feedback'.
3. Only 1 tab should be used (do not create multiple tabs).
4. Make sure your file is saved as .xls, .xlsx, or .csv. If you are unsure, select 'Save As' within Excel, and select one of these file types.
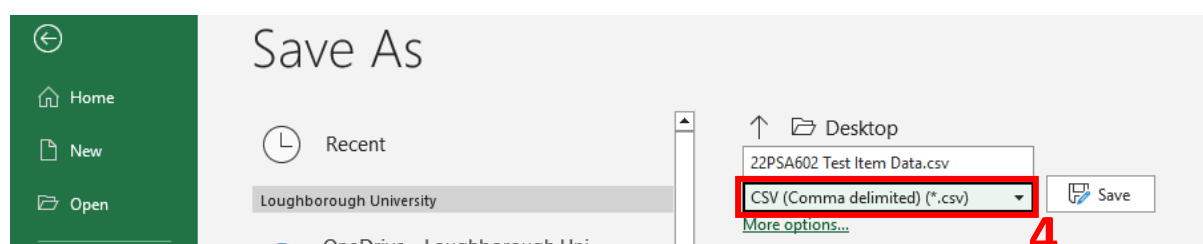
5.3   Step 3: Import marks

5. On the dashboard, select the INDAF assessment you want to import the marks to, and select 'Import from Spreadsheet'. In the following prompt, select the Excel file that contains the data to import.
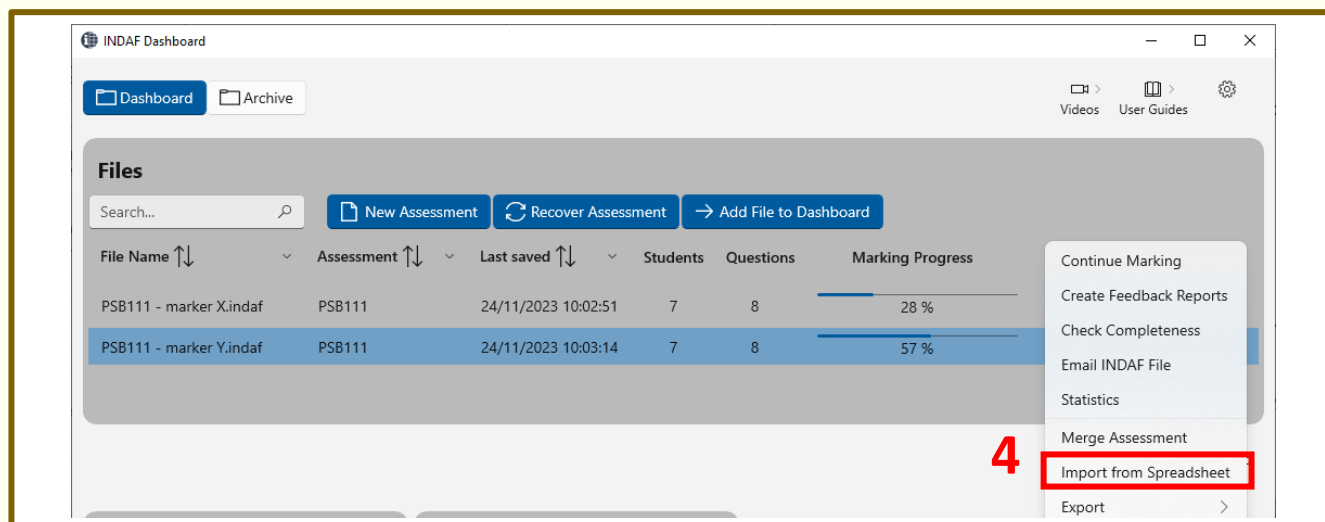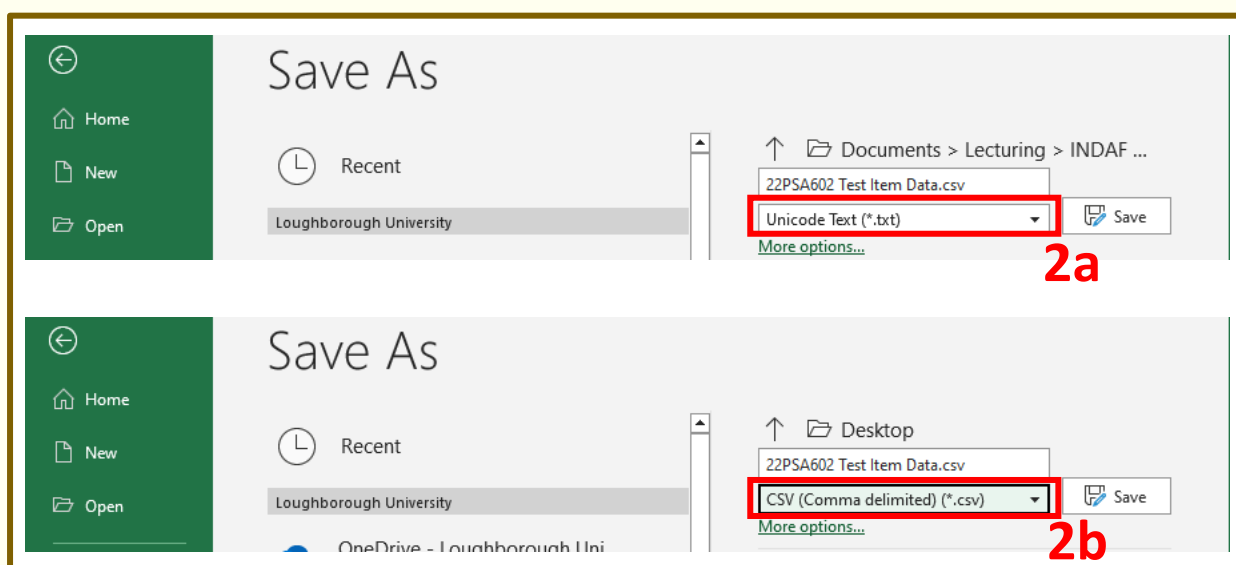

5.4   Import: Troubleshooting

If INDAF cannot import, please check the following:

The file containing OMR data can 'appear' like a *.csv file, but on closer inspection, it is in fact a *.txt file in disguise – INDAF cannot deal with this and will not allow import.

Solution: Within Excel, select 'Save As', and manually change the dropdown from '*.txt' (2a) to '*.csv' (2b).

6   Adding feedback report pdfs to Learn

6.1   Step 1: Create an assignment activity in Learn

1. On the Learn module main page, add a new activity (in Edit mode)

2. Select 'Assignment'

3. Name the activity (e.g., 'Feedback report Sem. 1').

4. Untick all boxes related to Availability and Submission types.

5. Tick all boxes related to Feedback types.

6. Select 'No' for 'Anonymous submissions' and 'Use marking workflow'.

7. Restrict access, so students can only view reports from marks release date.

6.2   Step 2: Download (blank) grading worksheet from Learn

1. On Learn, access the assignment activity created in the previous step (6.1), and select 'Grade', then 'View all submissions'.

2. Select 'Download grading worksheet'. This saves the grading worksheet as a csv file in your generic Downloads folder (to be used in Step 3, 6.3).
   The reason for doing this: Within this file, the ID numbers of the students are listed alongside a Learn Identifier number, which is required for correct feedback reports upload.
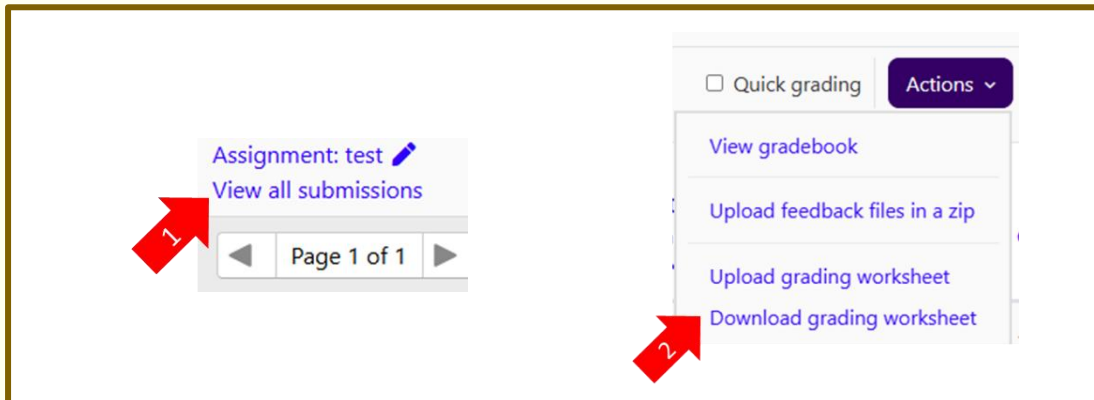
6.3   Step 3: Create the Learn Upload Zip using INDAF

1. In the Dashboard, select Create Feedback reports. This directs the User to the Feedback report page.
2. Define a folder to save reports to
3. 'Create Learn Upload Zip'. This opens a file selector. Select the csv file downloaded in Step 2 (6.2; the blank grading worksheet). This then creates the Zip file required for the next step.


_____
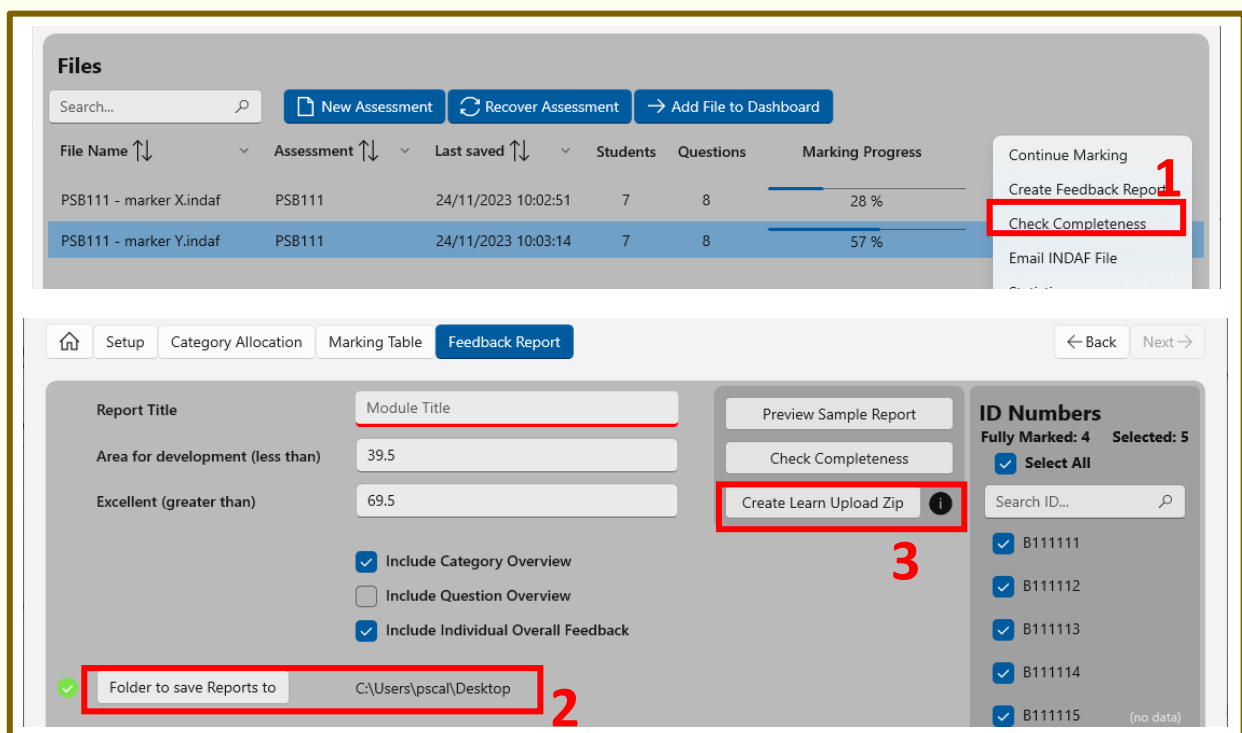
6.4   Step 4: Upload the Learn Upload Zip

3. On Learn, access the assignment activity created in the previous step (6.1), and select 'Grade', then 'View all submissions'.

1. Use the 'Grading action' dropdown menu to choose 'Upload multiple feedback files in a zip'.

2. Select the Zip file you have created in Step 3 (6.3) and submit the form. This matches the feedback reports with the students in your module, visible in the 'View all submissions' area of the Assignment activity.
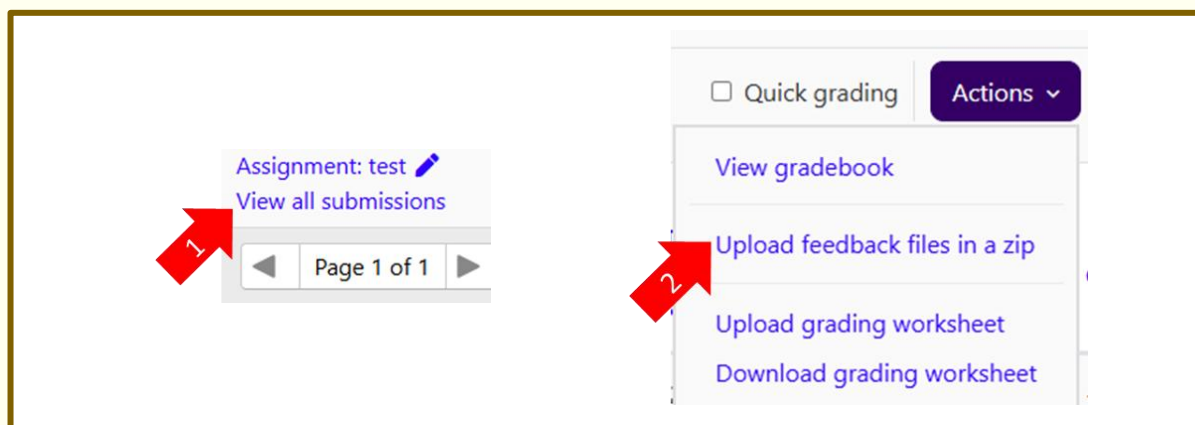
7   Exporting marks from INDAF to a LUSI Report
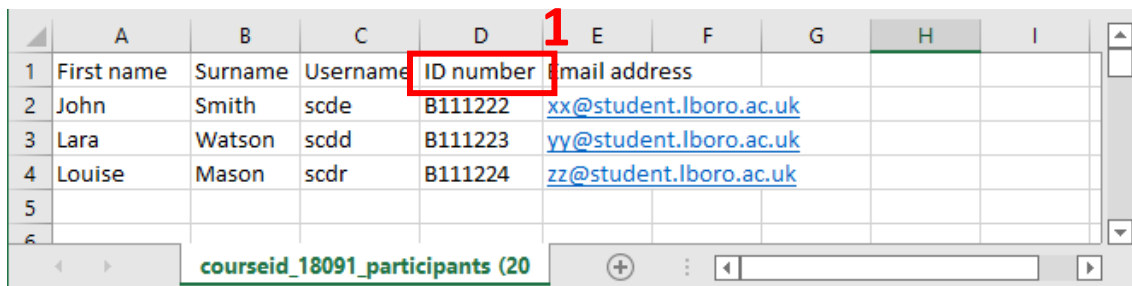
1. Download the LUSI report from LUSI (your administrators may give it to you).
2. Select the INDAF file for which data should be exported in the LUSI report.
3. Follow the prompts to allocate the marks to the appropriate assessment within the LUSI report.
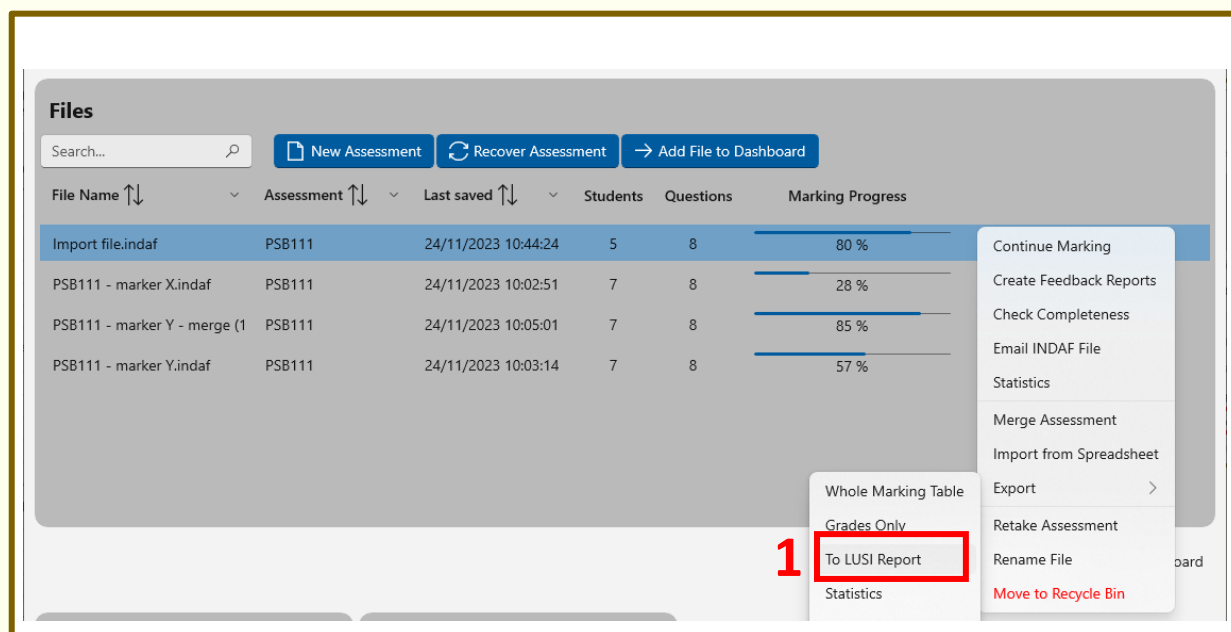
8 Nerdy stuff

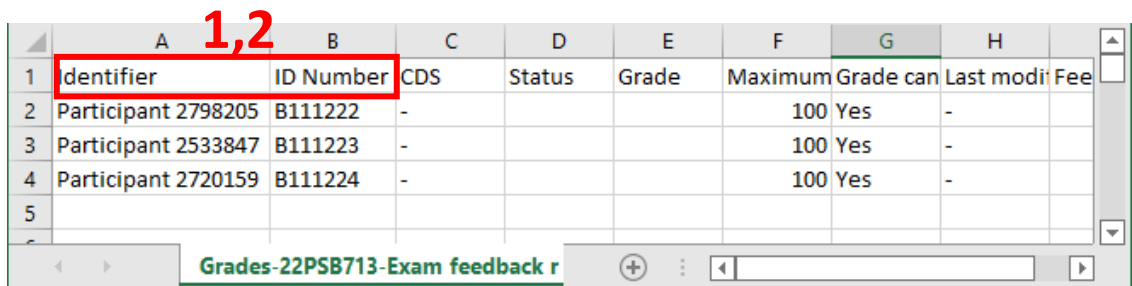## 8.1 Csv file requirement: Load Learn course ID .csv file

1. Header must contain the word 'ID number'.
2. INDAF will extract all data underneath that title.

8.2 Csv file requirement: Create Learn Upload Zip

1. Header must contain the word 'ID number'.
2. Header must contain the word 'Identifier'.
3. INDAF will extract all data underneath these titles.

8.3   Csv file requirement: LUSI report

1. The 2023 version of the LUSI report is structured as shown in 1a-1d.
2. Should this change, access INDAF settings.
3. Change the specifics defining where INDAF should look for student IDs and assessment components.

9   Questions and feedback

Any questions or suggestions for further improvement, please contact indaf@mailbox.lboro.ac.uk

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