OPERATION GUIDE

KYOCERA

TEACHING ASSISTANT
User Guide

November 2016

KYOCERA DOCUMENT SOLUTIONS

Contents

1. Introduction

KYOCERA's Teaching Assistant automates printing and grading of multiple choice exams using bubble-sheet forms.

2. Typical Workflow

2.1 Creating an exam

When an instructor needs to create a multiple choice exam, users have the choice between using the Teaching Assistant Excel Plug-in or to use **Teaching Assistant** direct on the MFP to print blank test sheets; one for each student. These blank test sheets are handed to the class at the start of the test. Test questions could be posted on a board or printed and distributed to the students along with the test sheets.

Students write their name and fill out their student ID (if applicable) in the space provided. Each question is answered by shading the corresponding bubble on the test sheet. After completing the test, students return their marked test sheets to the instructor.
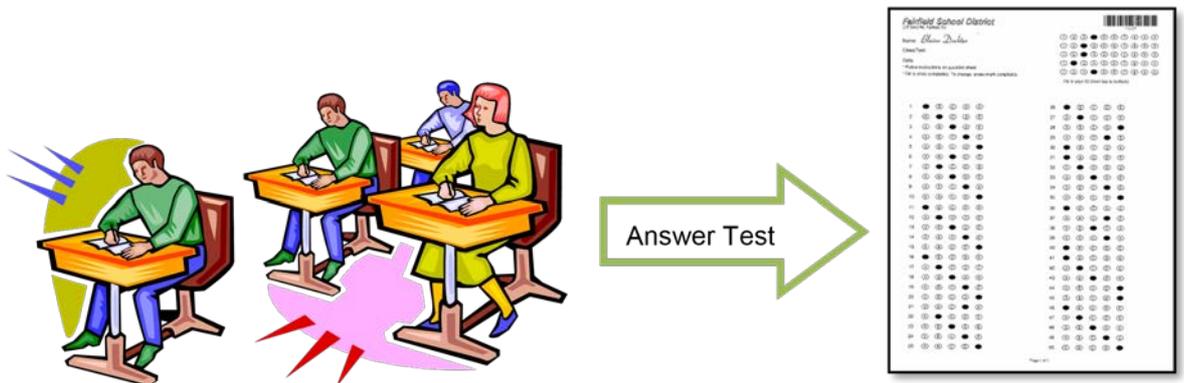
Note: KYOCERA Document Solutions recommends that black pen or #2 pencil be used to fill in the sheet for best results. Sheet bubbles should be marked as completely as possible.

2.2 Automated Test Grading

When printing the required number of test sheets, Teaching Assistant will also print out an instructors "answer key" master. This page is automatically printed; the instructor can then fill out the correct answers for each question on this designated "answer key" page.

Mark Correct Answers
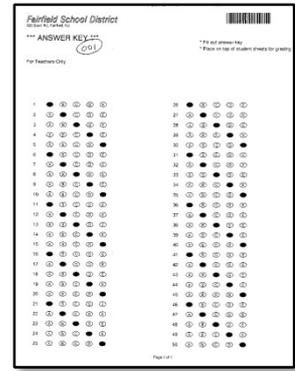
When ready, the instructor scans all the test sheets, along with the answer key at the MFP into Teaching Assistant. Teaching Assistant scores each student's test and prepares a report of the results from each student. The report s can be:

    a. Printed at the MFP in summary or detailed form.
    b. Sent to the instructor as a PDF and CSV file in an e-mail attachment.

Scan   Print

c. Saved to a USB flash drive as a PDF file and CSV file.
Note: When the instructor exits the Teaching Assistant application, all the files are cleared from the MFP.

3. Operation

Teaching Assistant consists of two components: one component to print the tests, the second for automated grading. The grading component will only support tests printed from Teaching Assistant.

3.1 Creating Tests

1. Open the Applications screen (by pressing the 'Application' key on the panel).
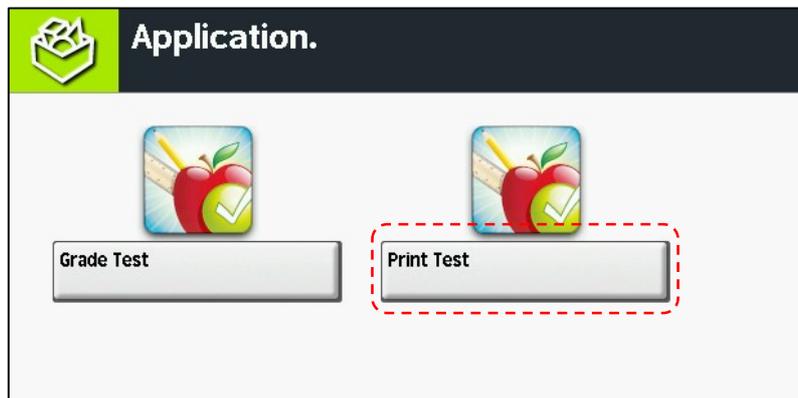
2. Press 'Print Test' button.
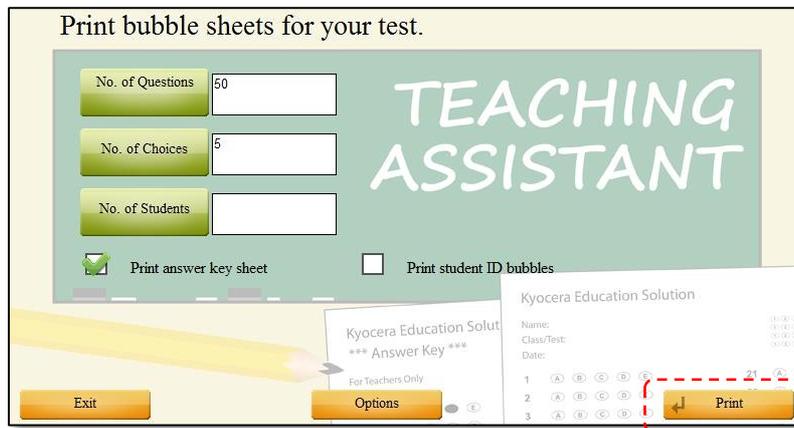
3. Enter values for:
   a. Number of Questions to appear on the bubble sheet test page. Instructors can select from 2-500 questions.
   b. Number of Answer Choices for each question. Instructors can designate from 2-8 choices. All questions will have the same number of choices when printed. Note: Multiple choice/multiple answer test questions are valid. True/False questions are valid as well using the first two bubbles in the row.
   c. Number of Students taking the test. No limit is set for number of students.
4. Select additional options:
   a. Check 'Print Answer Key' if a blank answer key page is required for grading. Default mode for Teaching Assistant will automatically print an answer key.
   b. Check the 'Print Student ID bubbles' checkbox if students are required to enter their IDs on the answer sheets. Default mode for Teaching Assistant will not enable this feature.
5. Press Green button to start printing (or touch the Print button on the panel, or press the Enter key on the keypad).
6. MFP will now print the blank test sheets.
7. Blank sheets (excluding the answer key page) are distributed to the class, along with the test questions.
8. Students select an answer by shading the corresponding bubble with either a pencil or pen. Note: KYOCERA Document Solutions recommends that black pen or pencil be used to fill in sheet for best results. Sheet bubbles should be marked as completely as possible.

Printing Options

To temporarily change the test title, press the *Title* button. The test title can be changed to test-specific text such as "Math Exam – 5th Grade". The title will be printed on all test sheets and will also appear on reports that are printed after grading. Changes made to the Title and Info fields are temporary and will revert to "KYOCERA Teaching Assistant" every time the application is launched.

Up to 45 characters can be entered in the Title field. The Info field is printed in smaller font and can accommodate up to 70 characters of text.

Printing of test sheets can be tracked in a cost control system by entering a valid account code in the Account Code field. This code must correspond to a code setup on the MFP. The code could relate to a department, individual or function in the organisation.

If Teaching Assistant is required to use an Account Code for all printing, it can be entered in the System Settings screen. To access the System Settings screen, please press the System Settings button and authenticate as an administrator.

3.2 Grading Tests

1. Teacher must fill out the correct answers on the 'Answer Key' page. Ensure all questions are answered.
2. Open the Applications screen (accessed by pressing the 'Application' key on the panel).
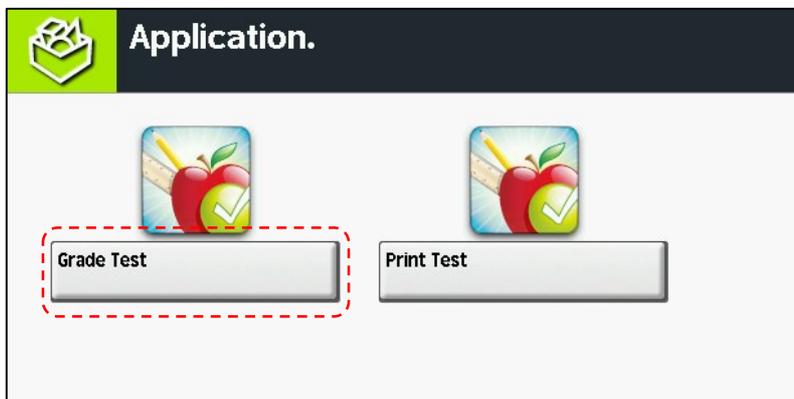
3. Press 'Grade Test' button.
4. Arrange the test sheets so that they are all (a) facing the same side, (b) aligned the same way.
5. Place answer key on top of the stack. Note: Teaching Assistant will recognise the answer key no matter where it is placed in the stack.
6. Place all the test sheets and answer key page in the document processor:
    a. Printed side face-up.
    b. Long-edge of the paper in the document processor. Pages must be fed in "portrait" position for processing.
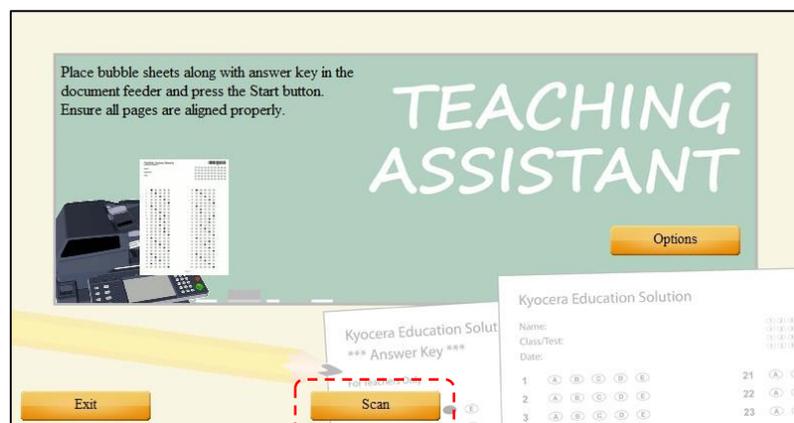
7. Press the Green button (or, the Enter key on the keypad, or the Scan button on the panel).

8. After scanning is completed, press the 'Finished' button on the panel (or press the enter key on the keypad). Once you have selected 'Finished', Teaching Assistant will begin analysing scanned data.
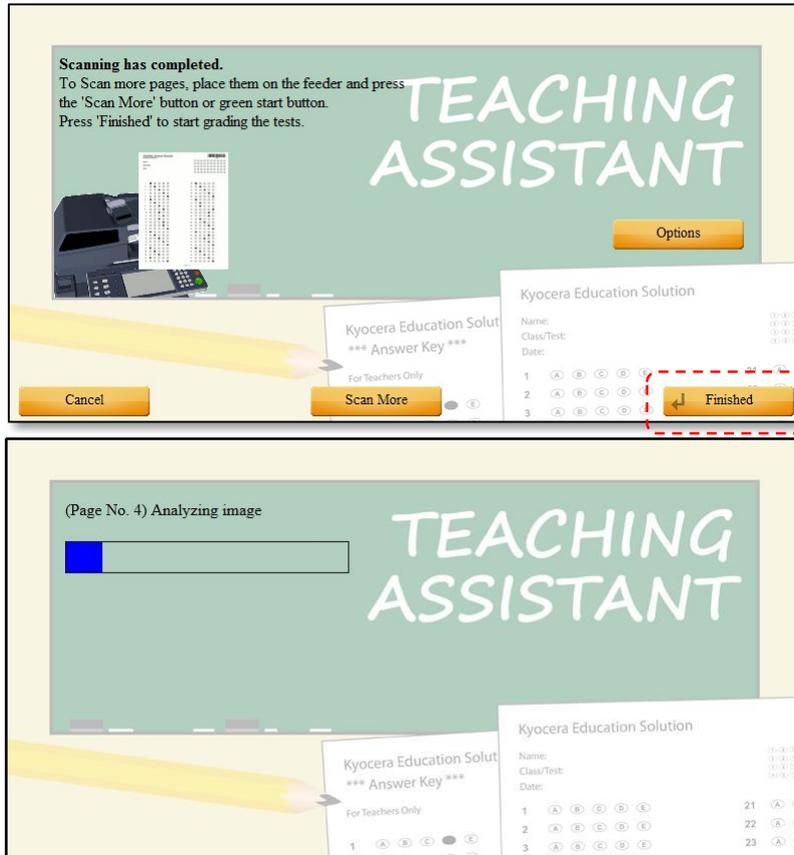
9. After analysis and grading is completed automatically, four options are presented for report generation.
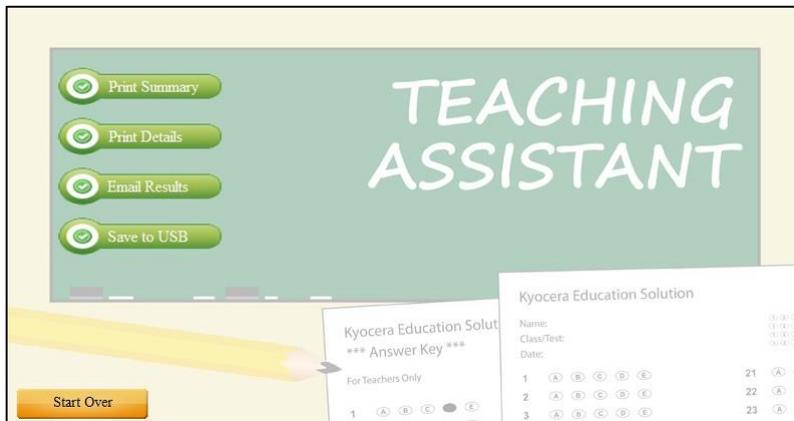
10. The Four Choices include: Print Summary; Print Details; Email Results; Save to USB.
    a. Press 'Print Summary' button to print result summary. This report will provide key information on student scores.
    b. Press 'Print Details' button to print a detailed summary. This report will include the graded tests with incorrect answers marked.

       Note: Additional information about the summary and detailed reports is in Section 4.
    c. Press 'Email Results' button to send the report to an email address. The MFP will prompt to enter the destination email address.
       (Note: SMTP settings must be configured as described in section 6.1 for this feature to work.)
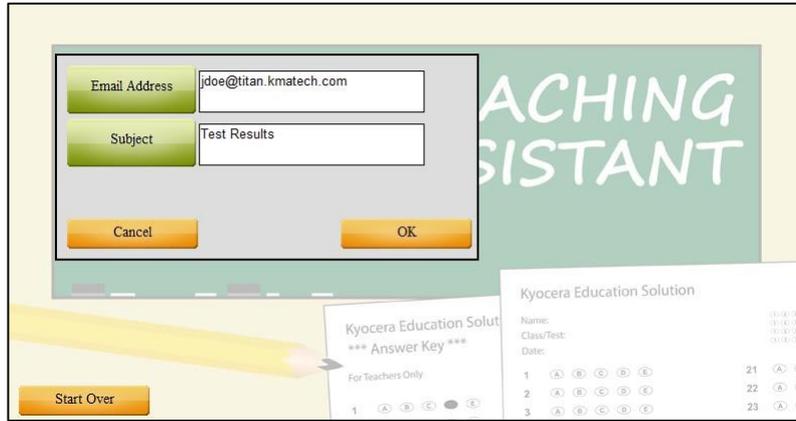
d. Press 'Save to USB' to save the results (as a PDF) to a USB flash drive. The USB drive must be inserted in the MFP prior to pressing the Save to USB button. After the files are saved, the drive must be 'cleanly-ejected' by pressing the 'Remove' button on the *Job Status/cancel* screen *Removable Memory* tab.
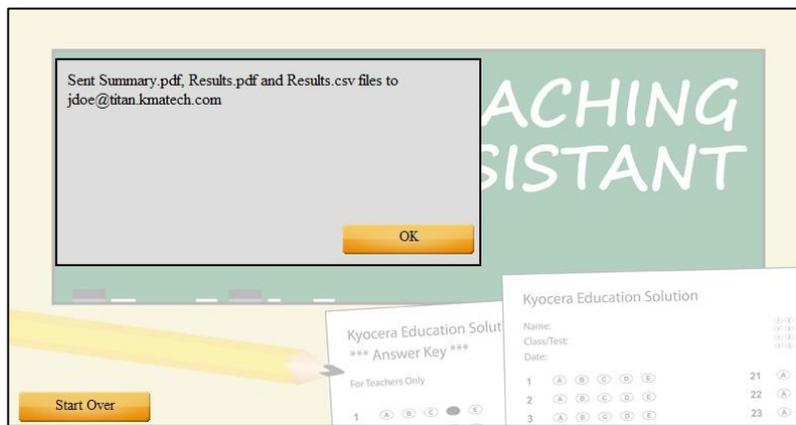
Grading Options

Note: Changes made to these options are temporary and will revert to defaults each time Teaching Assistant is launched. To make permanent changes, refer to section on Configuring Grading Application. To disable printing the correct answers on detailed reports, uncheck the "Print Correct Answers" check box. If grade letters are not required, uncheck the "Print Grade Letter" check box in the options screen. To edit the percentage threshold for each grade letter, press the grade button and edit the numeric value.
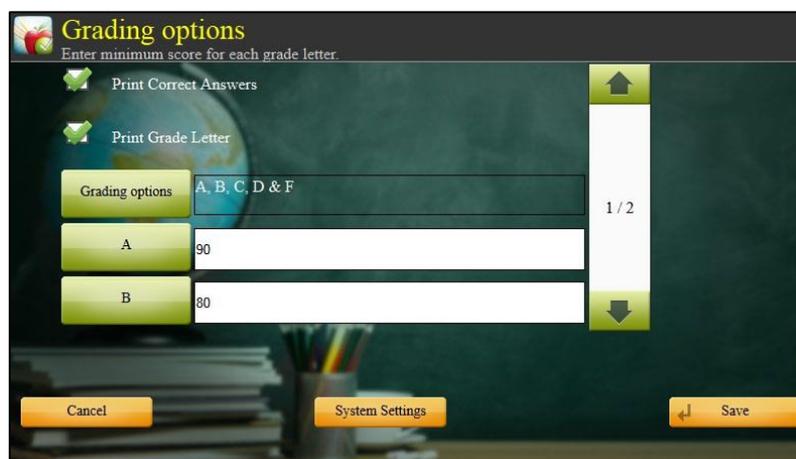
4. Reports

After the grading process is complete, Teaching Assistant will allow the instructor to either print the reports at the MFP or export them in PDF format. Exported reports can be sent directly to an instructor as e-mail attachments or saved to USB flash drives.

4.1   Summary Report

The Summary Report enables an instructor to tell at a glance how the students fared, the difficulty of the overall test and identifies the easiest and hardest questions for the students. Summary reports consist of the following elements.

Test Scores Table

Lists each student's score as points, percentage and percentile.

- The 'No.' column contains the student ID as marked on the ID bubbles.
- The 'Name' column contains student names as written by each student - in the student's own handwriting.
- The table is ordered by score, ranking the highest scoring student first.

Test Scores Chart

Bar-graph of student scores ordered by student performance. Instructors can easily review opportunities for extra assistance and which students performed very well.
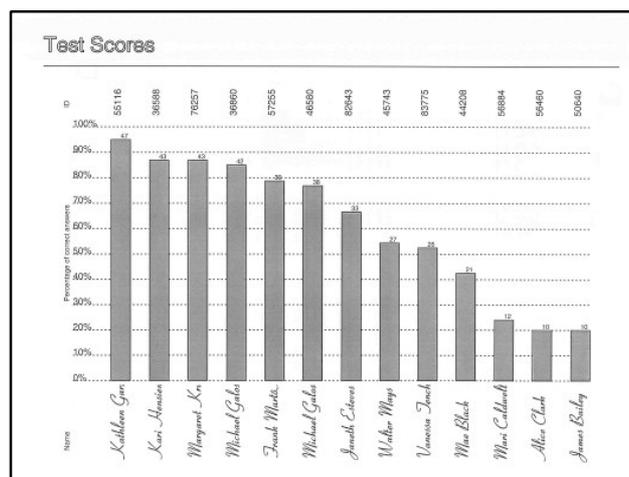
Histogram of grades

Shows the number of students who scored each grade letter: A, B, C, D and F. (Note: Grades in the histogram report will be based on the thresholds for each letter grade set at the device.)
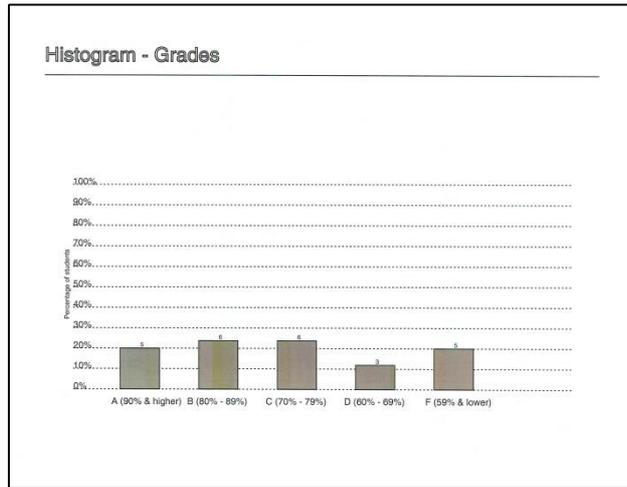
Test Statistics

Statistics on test questions help the instructor focus on areas of the test where most students had difficulty.
- Lowest and highest scores.
- Average and Median scores.
- List of 10 hardest and 10 easiest questions, based on actual cumulative test results.

Statistic	Value
Lowest score	21
Highest score	47
Average	36.56
Median	37

10 Hardest Questions

Question#	Correct responses
26	13
39	14
15	15
16	15
34	15
47	15
5	16
6	16
9	16
20	16

10 Easiest Questions

Question#	Correct responses
18	23
31	22
48	21
46	21
30	21
23	21
19	21
17	21
3	21
2	21

Response Frequencies

Table showing the percentage of students selecting a particular answer choice, for each question. This information is useful to analyse patterns in student responses.

Q.No.	A	B	C	D	E	F	Blank
1	75%	10%	5%	10%			
2	10%	90%					
3	15%	5%	70%		10%		
4		20%	65%	10%			
5	10%		5%	10%	65%	10%	
6		5%	10%			85%	
7	65%		15%		10%	10%	
8	15%	60%	10%	5%		10%	
9		5%	90%		5%		
10		5%		85%	10%		
11	5%	15%	5%		75%		
12	5%	5%	5%		5%	80%	
13	70%	20%				10%	
14	15%	60%	10%	10%	5%		
15	10%	15%	60%	5%		10%	
16		5%	10%	80%		5%	
17	10%				85%	5%	
18	5%		5%	5%	5%	80%	
19	85%	5%			5%	5%	
20	5%	75%	5%		10%	5%	
21		10%	65%	10%	10%	5%	
22	10%	5%		80%		5%	
23		5%		5%	85%	5%	
24		5%	20%		5%	70%	
25	85%			10%		5%	

4.2   Detailed Report

The Detailed Report is a copy of each student's test sheet with incorrect responses highlighted. The total score is printed at the top of each page.

Note: On Color MFPs, the highlight boxes will be shown in red; on black and white MFPs, the highlight boxes and grade will show in grey.
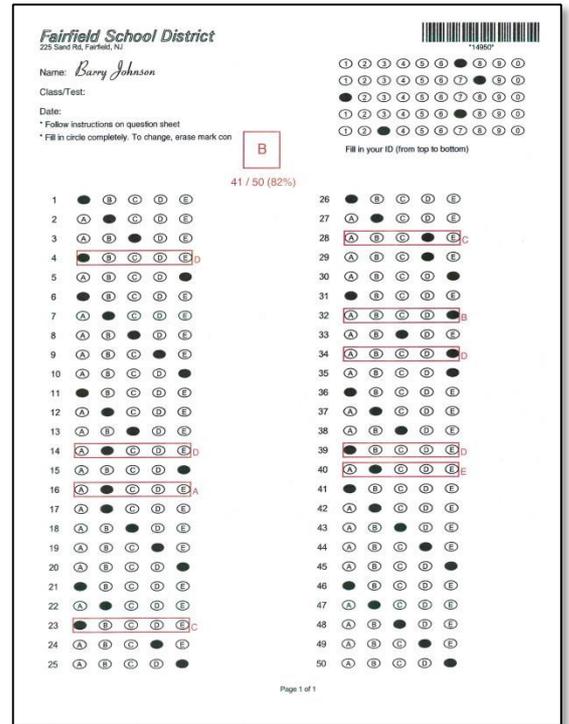
4.3   CSV Files

In addition to PDF reports that are formatted for viewing and printing, the grading results are exported to a CSV (Comma Separated Values) format file. CSV files can be imported into spreadsheet applications such as Microsoft Excel for further tabulation and processing.

Grading Results

Following fields of information are saved in results.csv:

- Barcode number
- Student ID
- Correct answers
- Incorrect answers
- Percentage score
- Grade letter

Student responses

Student responses recognised by teaching assistant are exported as details.csv:

- Answers marked in answer key
- Answers selected by each student, one per line

5. The Microsoft Excel Plug-In

5.1 File Required
- Teaching Assistant Setup.exe

5.2 How to begin

1. Open up Microsoft Excel and click on 'New'.

   ☐ Office 2010 - Click on the 'KYOCERA Teaching Assistant' folder under Custom Templates.
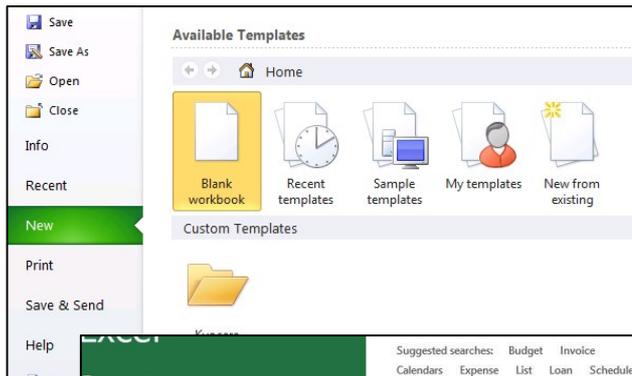
   ☐ Office 2013 – Click on the 'KYOCERA Teaching Assistant' link at the top of the list of templates.

2. Click on Exam Template to create a new test.
   The first time you load Teaching Assistant Workbook, you will be prompted to install the software. Click 'Install' to continue.
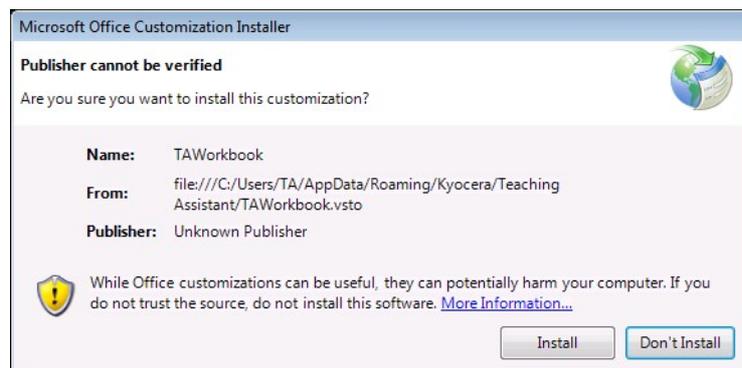
3. Install the print driver that corresponds to the Kyocera printer you plan to print bubble sheets using the Excel template. For Microsoft Windows users copy the appropriate link below, click Start > Run, paste the link and click OK. Note: the printer list will be updated as more licenses are acquired.

Remember to select this printer whenever you print bubble sheets using the Excel template.

5.3 Step 1 - Printing a new test

In order to print a new set of test sheets, fill out the Class, Test, number of Questions, and number of choices. You may also specify the number of essay questions, but it is not required.

Fill in student names and/or ID numbers. (Note: Barcodes must range from 1001-9999) If you don't fill in the barcodes, the Excel template will create them automatically starting with a randomly generated number.

If you would like a specific set of sequential barcodes, you can enter the first barcode and Teaching Assistant Workbook will automatically complete the rest.

Select the MFP you want to print to and click on the 'Print Test Sheets' button. If your default printer is populated on this list, it will automatically be selected. If your MFP has Job Accounting enabled, you must enter it in the field provided. Now that you have your empty test sheets printed out, you may save this file and exit Excel.

5.4 Step 2 – Importing Data

After your test is administered and graded on the MFP, you can re-open your saved TAWorkbook file with the class information filled out.

☐ Import directly from the MFP:

Select the correct MFP and click "Import Results from MFP" (Note: If you use a new template or your student list has changed since grading the test, there will be an error.)

☐ Import from file:

You may alternatively save these results to your USB or e-mail them to yourself and Import the results from the Details.csv by clicking "Import Results from file" button. (Note: If you use a new template or your student list has changed since grading the test, there will be an error when importing from the CSV file.)

Once the results are imported, you will be brought to the

Results worksheet where the raw test data is displayed. Here you can change the weight of each question from the default of 1.

If you set a number of essay questions on the first page, the essay questions will be added at the end of the data. If you did not specify a number of essay questions, you can manually add them by clicking the "Add essay" button.

You can fill in each essay question weight and the points each student earned.

When your test data is filled out, you are ready to generate your reports.

5.5 Step 3 - Generate

Click on "Generate Reports" after you finish editing your test data on the 'Results' Sheet and multiple new sheets will appear with information about the test.

☐   <u>Sheet 3 - Grading</u>

This sheet contains the grading thresholds for your test. Here you can personalize how your test will be graded. There are three customisable grading options in the drop down menu.

                  -Letter grades with (+/-)

                  -Letter grades

                  -Custom

Each option allows you to change the names of each grade as well as the thresholds. Letter grades and Letter grades with (+/-) are provided as a default and have a set number of grade levels. While you can change the names, you cannot change the amount of levels.

By default, the custom grades are numeric based, and fully customisable. You can choose the number of grade levels in addition to each grade name.

Grade	Value entered at the panel	Meaning
A	90	90 % and higher
B	80	80 % to 89%
C	70	70 % to 79%
D	60	60% to 69%
F	0	Lower than 60 %

Select an option and fill in your thresholds. The letter grades have default values set. Each number in the threshold is the lower bound.

Meaning that the corresponding grade includes that number and includes every grade to the number directly above it (exclusively).

This sheet also gives you two options of default charts to show your grade distribution. A bar chart is set by default, but you may also choose a pie chart. These charts are both editable and customizable. If you would like to choose another type of chart, you can right click the chart and click 'Change Chart Type'.

Grade	Range	Number of Grades	% of Grades
A	90	4	20.00%
B	80	3	15.00%
C	70	7	35.00%
D	60	3	15.00%
F	0	3	15.00%

When you have chosen your grading options, you can click the "Go" button to update the charts.

☐ <u>Sheet 4 – Test Scores</u>

This worksheet contains a table consisting of the student list and their corresponding test scores. The table also includes the student ID, Name, points earned, score percent, and percentile. You may sort this table by any of the fields. To sort the table, right-click the column you wish to sort by. Click on Sort, and select the order in which you wish it to be sorted.

☐ <u>Sheet 5 – Test Scores Chart</u>

This worksheet contains a chart of the grades. Based on grade percent, this chart is ordered from highest to lowest. It is as wide as it needs to be to fit every student on. When you print however, Teaching Assistant Workbook will split up into multiple charts to neatly fit them on one piece of paper.
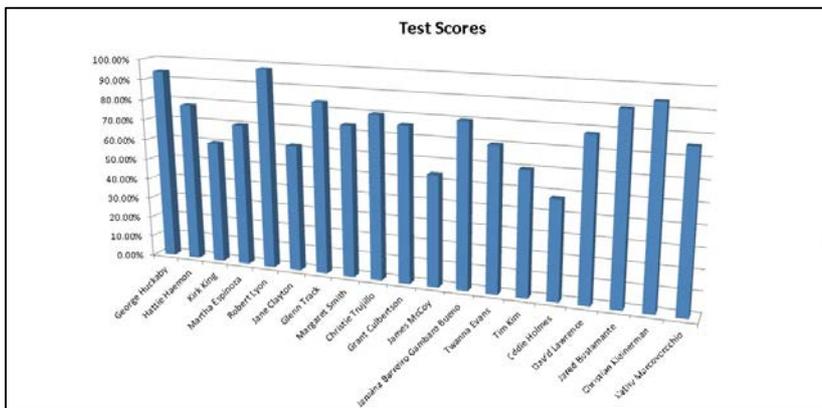
Like the chart on Sheet 4, this chart is also editable and customisable. You can easily chose how the data is plotted by sorting the table on the 'Test Scores' worksheet 'Test Scores' worksheet.

☐ **Sheet 6 – Statistics**

Much like the Statistics page that you can print out from Teaching Assistant on the MFP, this sheet contains test statistics. This includes the lowest score, highest scores, average score, and median. The top ten hardest and easiest multiple choice questions are displayed as well. If the test contains essay questions, there will also be a list of the top 10 hardest and easiest essay questions

Test Stats	
Lowest Score:	89
Highest Score:	133
Average:	110.15
Median:	109.5

Top 10 Multiple Choice Questions

Hardest			Easiest	
Question #	Correct		Question #	Correct
47	11		9	18
27	12		41	18
8	12		2	18
15	12		25	17
26	12		6	17
34	12		23	17
38	12		10	17
14	12		37	17
4	13		17	17
5	13		40	17

Top 10 Essay Questions

Hardest					Easiest			
Question #	Weight	Average Grade	Average %		Question #	Weight	Average Grade	Average %
54	5	2.8	57.00%		55	5	4.1	81.00%
52	5	3.0	59.00%		60	15	12.1	81.00%
53	5	3.0	60.00%		59	15	11.9	79.67%
51	5	3.3	66.00%		61	20	15.9	79.50%
57	10	6.7	66.50%		56	5	3.8	75.00%

Teaching Assistant Worksheet / Results / Grading / Test Scores / Test Scores Chart / Statistics / Answer Frequency /

☐ **Sheet 7 – Answer Frequency**

This sheet contains a list of each question and answer possibility. It calculates the percentage of each answer circled per question, including questions that weren't answered. The correct answers are highlighted in this table.

Question #	Correct Answer	A	B	C	D	E	F	Empty
1	A	75%	10%	5%	10%			
2	B	10%	90%					
3	C	15%	5%	70%		10%		
4	D	5%		20%	65%	10%		
5	E	10%		5%	10%	65%	10%	
6	F		5%	10%			85%	
7	A	65%		15%		10%	10%	
8	B	15%	60%	10%	5%		10%	
9	C		5%	90%		5%		
10	D		5%		85%	10%		
11	E	5%	15%	5%		75%		
12	F	5%	5%	5%		5%	80%	
13	A	70%	20%				10%	
14	B	15%	60%	10%	10%	5%		
15	C	10%	15%	60%	5%		10%	
16	D		5%	10%	80%		5%	
17	E	10%				85%	5%	
18	F	5%		5%	5%	5%	80%	
19	A	85%	5%			5%	5%	

5.6 Step 4 – Printing

Teaching Assistant Workbook offers the option to print from the Control Pane.

The "Print" button will print everything in the workbook except the 'Results' sheet. It will remove all of the black headers with white ones in order to save toner. This button will also split up the chart from 'Test Scores Chart' into multiple charts which will neatly print onto paper. The 'Print Details' button will only print the 'Results' sheet.

Note: Any changes you make in appearance or formatting could affect the print functions. Any changes that you make can cause the application to act in an unexpected way.
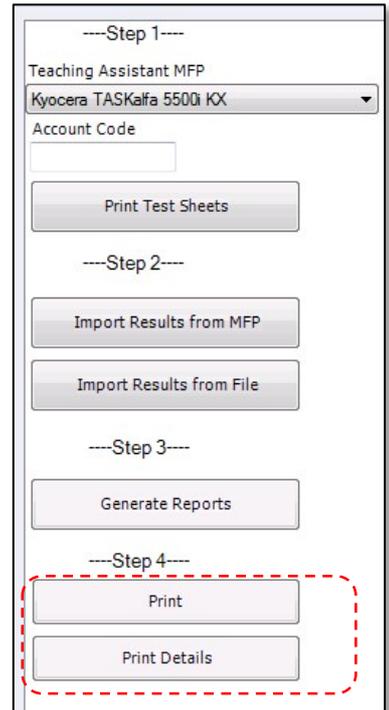
6. Troubleshooting

6.0 Unable to print tests

Symptom:

In the Print Test application, when 'Print' button is pressed, no output is produced and the panel displays "Creating bubble sheets, please wait" message.

Check:

Ensure the network cable is connected and link lights are active.
Ensure MFP has an IP address assigned to it.
Job Status screen to ensure no other jobs are queued.

6.1 Unable to scan tests for grading

Symptom:

In the Grade Test application, when 'Scan' button is pressed, MFP displays "Error occurred while scanning" message.

Check:

Ensure the network cable is connected and link lights are active.
Ensure MFP has an IP address assigned to it.
Ensure test sheets are placed properly on the document feeder.
If authentication is enabled on the MFP, ensure the values for *Scan User* and *Scan Password* (in Application Settings) are correct.
Ensure WSD-Scan and WSD-Print are enabled
If SSL is enabled, ensure both "HTTP and HTTPS" protocols are enabled.

6.2 Unable to grade test

Symptom:

In the Grade Test application, after scanning is completed, MFP displays "Error occurred during grading" message.

Check:

Are any of the pages soiled or damaged?
Are all pages placed correctly in Document Processor?

6.3 Grading Errors: Some marks are not read correctly

Symptom:

Test reports are incorrect because some marks are not recognised.

Check:

Density setting on the MFP may be low. Try again after adjusting scanning density to a higher level. This can be done at the MFP panel, under:
System Menu > Adjustment / Maintenance > Density Adjustment > Send / Box.

6.4 Grading stops abruptly

Symptom:

When grading a large test, copier abruptly stops grading and returns to the copy screen.

Check:

This could be caused by automatic panel reset that occurs periodically. To avoid this problem, either extend the time interval (System Menu > Date/Timer > Panel Reset Timer) or disable automatic reset (System Menu > Date/Timer > Auto Panel Reset).

6.5 Barcode detection error

Symptom:

In the Grade Test application, after scanning is completed, MFP displays "Unable to read barcode" error.

Check:

Is the paper placed correctly? Paper must be placed printed side up. On A3 MFPs, the pages must be **Rev. 1.0** placed 'long-edge' as shown on the panel. On A4 MFPs, paper must be placed with 'barcode edge first' as shown on the panel.

Is the test sheet contents shifted to the right causing the barcode to be cut-off? Printing system parameters must be adjusted by a KYOCERA dealer to correct the shift in printing.

6.6 Print Test application does not start

Symptom:

When Print Test application is launched, the panel displays a message "Teaching Assistant is not installed or activated".

Check:

Grade Test application must be installed and activated on the same
MFP. If Grade Test was installed as a trial, is the trial period expired?

6.7 Incorrect Account ID error

Symptom:

When printing test sheets from Print Test application or, when printing reports from Grade Test application, the MFP panel displays an error screen with the message "Incorrect Account ID, Job has been cancelled".

Check:

Ensure Account Codes are setup in both the Print Test and Grade Test application.

6.8 Excel - "Test data not found"

Symptom:

When trying to import from MFP, there is an error saying 'Test data not found'

Check:

1. Make sure the information you specify on Sheet 1(Teaching Assistant Workbook) is correct.
   - Number of questions
   - Number of choices
   - Number of students
   - Barcodes

   If you have changed any of these fields since printing or grading the test sheets, this error could pop up.
2. If the MFP has been turned off since you graded your tests, your test data will no longer be available. You must grade the tests again.
3. If you have already imported the test data from MFP, the test data will be deleted. You must grade the tests again.

6.9 Excel – Unresponsive Action Pane

Symptom:

When trying to click on one of the buttons on the Action Pane to the right, there is no response.

Check:

Make sure that a selected cell is currently being edited. Excel will not allow a user to click on the buttons while editing a cell. Try pressing the Enter key and click another cell in order to deselect the cell that is currently being edited.

6.10 Excel – MFP is not listed

Symptom:

The MFP is not being displayed in the drop down list on the Action Pane.

Check:

Make sure your machine is installed on your computer through a TCP/IP port. Teaching Assistant Workbook does not support machines connected through a WSD port.

6.11 Excel – Saved Excel file will not load

Symptom:

I have moved my populated Excel file to another computer and it will not load.

Check:

Teaching Assistant Workbook will only work on the computer it has been installed on. If you wish to use your test on another computer, you must install Teaching Assistant Workbook on that computer, select a new template, and import the results again.

6.12 Excel – Setting a preferred MFP on the Action Pane

Symptom:

The MFP that has Teaching Assistant installed on it is not automatically selected on the drop down list.

Check:

Set the MFP to your default printer. Whenever you load Teaching Assistant Workbook afterwards, your default printer will automatically be selected. This is provided that it is already populated in the list.

If issues persist, please contact the computer helpdesk (helpdesk@dawsoncollege.qc.ca) for assistance.