

Smart Exam Setting with Quickset_Exam

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Article Information

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The setting of examination papers is a chore that teachers need to do from time to time. Although some institutions provided specific guidelines to ensure the typography of the examination papers is adhered to, these guidelines never make exam setting easier nor do they assist the test setters in simplifying the task of typesetting. In order to reduce the typographic problems faced by test setters, a more user-friendly template is needed. In this paper, a brief description of such a template is presented. This template, named QuickSet_Exam, is a Microsoft Word template that contains a customized ribbon that test setters can use to easily customize the typography of the test. Since test setters only need to click on the relevant icons to get the desired results, the amount of time spent on customizing the typography is greatly reduced. For institutions that do not have any guidelines or are having problems on the layout of examination papers, this template could be indispensable.

INTRODUCTION

Among the duties of a teacher is to set examination papers – on-going assessments or final examinations or both. In the course of setting the examination papers, the teacher's focus is mainly on the content rather than the typography of the examination papers. Typography, in general, refers to the setting and arrangement of texts and graphics on a page (Itkonen, n.d.). As a result, a well thought out examination paper may be too cluttered or difficult to read due to inappropriate use of items such as font type, font size and line spacing. This in return may have impacts on the students' performance (Spalding, 2011).

In order to prevent this injustice to students, test setters, whether they like it or not, have to ensure that they have some knowledge of typography and how to use word processing software such as Microsoft Word to format the layout of the examination papers. This is, however, easier said than done. Although most test setters have used and are familiar with some features of Microsoft Word, they often have problems when they are asked to customize the typography of the examination papers. Among the problems commonly faced are being unable to use consistent number or multi-level list, font styles, page breaks and pagination. The inability to master these skills result in wasted time and effort. This eventually leads to frustration and stress.

To overcome the problem of customizing the typography of examination papers, various attempts have been made. Among the earlier efforts was to utilize the LaTeX document preparation system to produce PDF documents that have high typographic qualities. LaTeX, which utilizes TeX typesetting engine, is a favorite system that is still used today to produce documents that contain complex structures including those that contain

a lot of mathematical symbols. The main drawback of these systems is users are required to learn and familiarize themselves with LaTeX. This is often a 'steep learning curve' for many (Boon & Lim, 2014).

Recently, many attempts to develop systems that are more user-friendly can be seen. These systems (Guang et al., 2010; Naik, Sule, Jadhav, & Pandey, 2014; Boon & Lim, 2014) are mostly developed as question banks that can generate the required question paper according to a set of parameters. Before the question paper can be generated, test setters, from time to time, will need to log onto the system to feed the test items into the database. When a question paper is needed, test setters will have to log onto the system again, set the desired parameters and then generate the required question paper. Even though most of these systems free the test setters from the work of typography, it is time consuming and costly (Guang et al., 2010). Some of these systems only generate randomized question paper without paying any attention on the typography or formatting details (Boon & Lim, 2014). For these, test setters will have to go through the headache of typography again.

PROBLEMS OF EXISTING EXAMINATION GENERATION SYSTEMS

As mentioned in the earlier section, the existing examination generation systems have their own weaknesses. Those that are based on TeX engine require the users to have the know-how of using LaTeX. This by itself is a problem to many users. To use LaTeX, users will need to learn and remember specific commands similar to those used in computer programming. Designing and customizing a new layout with LaTeX is extremely time consuming (Eagle, n.d.). Another disadvantage of LaTeX is users are unable to see the actual layout of the document they are creating. This is very different from the WYSIWYG (What you see is what you get) feature of Microsoft Word which they are accustomed to.

The other more user-friendly systems that are developed with a GUI (graphical user interface) interface and come with a question bank have their own weaknesses too. Among them is the difficulty of coming up with a common structure that can be used for all subjects. This is because the structure of an examination paper is often subject-specific (Spalding, 2011). For instance, the structure of a question paper for Mathematics is rather different from that of English language. Apart from that, as time goes by, the items stored in the question bank might be outdated in terms of immediacy. To prevent the use of outdated questions, users will have another task of deleting them. This means another addition to their long list of duties.

A POSSIBLE SOLUTION

To address the weaknesses of the existing examination generation systems that have been discussed, this paper attempts to present a familiar and user-friendly alternative. The proposal is to come up with a solution that users are familiar with and can be used to help users deal with typography.

The process taken to solve the problem involved the following:

- a. Conducting informal interviews and discussions with test setters to identify the common problems faced in dealing with the typography of examination papers.
- b. Identifying and deciding on the possible solutions.
- c. Creating the exam template.
- d. Developing the desired customized ribbon to be placed in Microsoft Word.
- e. Piloting the template to identify weaknesses.
- f. Finalizing the template.

With that, a customized ribbon that can be placed in Microsoft Word was created. The following section provides a brief description of what users can do with the customized ribbon.

The Customized Ribbon

Figure 1 shows the customized ribbon that is created.



The Customized Ribbon in QuickSet_Exam

As can be seen, the customized ribbon contains four groups of icons. Each of the icons in each group is used to perform specific task that will ensure the typography of the question paper remains the same irrespective of who the user is. This means the test setter can focus on the content of the examination paper. However, if there is a need to edit the typography that has been created by the icons, the user has the freedom to do so.

A Description on the Function of the Ribbon

To begin, the user will go to the first group (named Main) in the customized ribbon. In it, there are four icons. The first icon – Customize Cover – allows the user to customize the main cover of the question paper. This includes inserting the name and emblem of institution as well as the details of the examination such as the subject name, duration of examination and name of assessment (e.g. Test 1, Mid-Semester Test, etc).

The next icon – Type of Assessment – is used to customize the type of examination and its sections. To exemplify this, let's imagine that the user needs to create a mid-semester test which contains two sections – Section 1 for a reading comprehension with ten MCQs and Section 2 for essay writing. So, in the dialog box that appears after Type of Assessment is clicked, the user will need to click on the Mid-Sem Test button. Next, the user will need to type '2' for the number of sections to create. Then, the user will need to key in the instruction for each section. After that, the user will be asked to supply the information for Section 1. For this, the user will need to click on the Reading button to create the reading comprehension section, key in '1' for the number of passages needed and then type in the instruction to candidates. Once done, a space for the reading passage and the spaces for 10 MCQs will be created automatically. The instruction supplied by the user will also be inserted before the space for the reading passage. In the ensuing dialog box, the user can choose to copy and paste a ready reading passage onto the space that has been created. The user can skip this step and type the reading passage manually too. Irrespective of whether the reading passage is copied and pasted into the readied space or typed manually by the test setter, the font type, font size and line spacing will be customized automatically.

The third icon – Populate Sections – is used to create the sections in the question paper. In our example, if the user has not created Section 2 when prompted earlier, the user will now need to click on this icon to create the desired Section 2 for the essay writing question. After clicking on this icon, the user will need to click on the Writing button in the next dialog box. Then the user will need to supply the instruction to the candidate. Upon clicking the OK button, the instruction will be inserted into Section 2 of the question paper followed by 20 blank lines for the candidate to write the essay on.

The last icon in this group - Answer Key - is used to create the template for the user to prepare the answer key. The information on the cover such as the name of the subject and the subject code will be inserted on page 1 of the answer key.

The second group named Create List is used to create various number and multi-level list. The user can create a list with lower case letters, roman letters or multi-level list. The multi-level list icon allows user to create four different lists as shown in Figure 2.



The types of multi-level lists that can be created

The third group on the customized ribbon comprises eight icons. The first icon – Replace Passage – is used to copy and paste an existing reading passage into the question paper. The passage that is pasted will be formatted automatically. The Count Lines icon is used to insert the line number (at an interval of 5) to the right of the reading passage. The next icon is used to insert two types of tables. The first type is a table with one row and

three columns. The second type is a table with four rows and one column which can be used for True/False questions. The fourth icon – Questions – is used to insert spaces for a question as shown in Figure 3.

Choose an item. Click here to enter text.

Choose an item.

Fig. 3. The space for a question

The first "Choose an item" is a dropdown list from which the user can click and choose the relevant question number (e.g. Question 10). The "Click here to enter text" is a placeholder for the user to type in the question stem. To create the options for the MCQ, the user can use the "Alphabetical" icon in group 2. The next "Choose an item" dropdown list on the right is used to choose the relevant mark for the question. Here again, the typography will be done automatically, and users need not do anything to customize it. However, if there is a need to change anything, for example, the font type and size, the test setter has the freedom to do so.

To create an open-ended question, the same procedure can be used. The difference is after typing in the question stem, the user will need to click on the next icon -2 Lines – in the group. This will automatically insert two blank lines into the question paper.

The next icon -20 Lines - is used to insert 20 blank lines that can be used as the spaces for essay writing. The last icon in the group when clicked will insert the words "END OF QUESTION PAPER" into the question paper. These words will be in bold and center-aligned on the page.

The last group in the ribbon consists of 4 icons. The first of these is named Instruction. Upon clicking this icon, the user will be able to read brief notes on how to use the ribbon. The next icon – Save As – is used when the user want to save the document for the first time. The user will be prompted to key in a password which he/she needs to use in the subsequent opening of the document. The next icon is used to save the document as and when needed. Finally, the Remove Watermark icon is used to remove the word "Draft" which will be inserted as watermark into the question paper when the document is closed. The password and watermark are two features that help to safeguard the question paper. Without the password, the document cannot be opened by an unauthorized person. And if the unauthorized person managed to open the document, he/she will need another password to remove the watermark.

CONCLUSION

This paper puts forward a method that helps to simplify typography for test setters. All that the user needs is to click on the relevant icon and supply the necessary information. The information will be inserted onto the question paper and formatted accordingly. This removes the headache of typography that often haunts test setters.

There are also many advantages of having such a customized ribbon. Firstly, it removes the need to learn something new and/or complex such as in the case of using LaTeX. This is because users are already familiar with the features and functionalities of the ribbon in Microsoft Word. Next, the cost of having such a ribbon is low. There is no need to engage a system developer to develop an examination generation system just because we want to standardize the typography. The third advantage is since the test items are not stored in a question bank but are only created as and when needed, there are no worries that the test items may be outdated. Another advantage is the user has the freedom to change the features if there is a need to do so. The user can made the changes as easy as making changes on a normal Microsoft Word document. Hence, with this user-friendly customized ribbon, test setters will have fewer problems in typography and can save a lot of their precious time.

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