

# Online Tests with Google Drive

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## Abstract

This paper demonstrates how test marking and grading can be conducted, utilizing Google Drive, available on Google.com. It also shows the efficiency of the system using basic spreadsheet functions on Google Drive. Although this approach has a number of issues, including the potential for cheating, it is applicable for a number of purposes, which are discussed along with feedback from students.

**Key words** : Google Drive, marking and grading, online test

## 1 . Introduction

More and more academic and educational works concerning technical and practical applications of ITC have been reported. A major academic society, the Japan Association for Language Teaching (JALT) features presentations and workshops at its annual conference each year on Moodle, Hot Potatoes, Google Document, and SNS as software. There have been an increasing number of studies on teaching English using hardware, such as cell phones, Smartphones, PCs and tablet PCs.

This paper deals with online testing with cloud computing, particularly Google Drive. Recent views of online testing in educational fields will be briefly reviewed. How to make online tests using Google Form, a part of Google's online office suite Google Drive and mark with Google Spreadsheet, also another part of Google Drive, will be discussed. Feedback from those who actually have taken online practice tests at the university level will be included and discussions presented.

## 2 . Online learning/testing and achievement

Instructional and practice applications of computer and Internet technology have been analysed and discussed, showing the effectiveness of online learning and achievement. Derouza and Fleming (2003) state that learners using online practice tests performed academically better than those using traditional paper based written tests. Dobson (2008) shows that online quizzes were associated with improvements in summative tests and learning and also asserts online quizzes can validly predict learner performance in terms of summative exams. Johnson (2006a) also found that online short answer quizzes were associated with academic achievement.

Although there was no significant difference between learners who experienced online true or false quizzes and those who did not, this study shows that certain activities have potential effects on improving language skills. There are also reports that the number of those who rated online learning as either the same or superior to face-to-face is increasing slowly and the number of those who rate online learning as somewhat inferior or inferior is steadily decreasing (Allen and Seaman, 2010a, 2010b).

The success of online learning or e-learning largely depends on learners' involvement, just as with traditional learning styles. Without their participation in actual activities or testing, nothing will come out of it. Johnson (2008) writes that online practice tests were preferred to online study groups, which indicates that learners preferred learning alone in this study. Kauffman, Zhao, and Yang (2011) found that learners using self-monitoring were affected in their note taking and achievement. Kerr, Rynearson, and Kerr (2006) also found academic skills, internet self-efficacy and overall metacognitive reading strategy use are related and asserted online learning was effective for language achievement. They conclude that "the successful online student is self-directed, independent, personally responsible for her learning, and has self-competence, proficient reading and writing skills, time management skills, and motivation to learn" (102). Self-directed learning is considered to be one factor for successful learning with online learning as well as traditional learning.

Online tests also can be used as a predictor of learners' language levels. Harrington and Carey (2009) found that placement level decisions correlated with yes and no test results. This indicates that online yes and no vocabulary tests may be good enough to access learners' language ability rather than written tests with difficult and complicated questions and which take time to carry out, mark and get scores.

The application of computer technology and its variations will be increasing, or at least will be steady, but not be decreasing for educational purposes. Shi (2011) introduces online test and training for students and writes that its appropriate use may potentially cut down the amount of work for educators. In the US, more than twenty five percent of students at higher education levels now take at least one online course (Allen and Seaman, 2010b). At academic conferences, on second or foreign language education like JALT and JACET in Japan, more workshops and presentations about online tests or online learning have been presented in recent years, suggesting there will be opportunities for students to use of online learning in the future.

There is also empirical evidence showing no statistical relation between online learning and learners' achievement. For instance, Johnson (2006b) wrote that "perception of the value of the virtual study groups in mastering course content was not significantly related to any measure of student achievement" (684) and discussed whether those questions are what motivate and support learners' online learning more effectively.

Clearly, there is not enough empirical evidence concerning online learning and learners' achievement and it is premature to draw any conclusion regarding the effectiveness of online

learning. Even if online learning is not correlated to learners' achievement, if learners' language skills do not deteriorate and there is no burden on the educator, it is worth using.

### 3 . Making an online test with Google Drive's Form

Among Google Drive applications, Form is the best choice to make an online test or survey. Especially, where a large number of learners will answer the form, this can help as long as it is set up appropriately by automatically generating a spreadsheet to calculate scores and/or give grades more efficiently.

Google Drive, which contains Google Document and Spreadsheet, is a web-based application software which does not rely on a particular operation system. Google Document is a word processing software like MS Word or Apple's Pages, and Google Spreadsheet is like MS Excel, Apple's Numbers, Open Office's Calc. Google Doc Offline, or Google Drive, can be installed in the HDD in a PC, but here online application software will be explained.

Google Form can create forms, like surveys or tests, and can be used with cloud computing. One can keep it only to him/herself, open it to certain people only or to the general public. If anyone answers or enters a response, the result shows up on the Google Spreadsheet concerned automatically. With the use of a few formulas, scores or grades can be almost automatically elicited.

- 1) At the top of the Google site, there is an icon Drive, which leads to the Drive top page.
- 2) Click the red CREATE button, and choose which application software to use, word processing, spreadsheet, presentation, form, painting, and so forth. To create an online test, click Form.
- 3) Type in the title of a test or survey, and its directions or messages to learners in HELP TEXT.
- 4) For the first question, the form is already there to enter the questions. Choose the question type from a list which includes simple short texts, paragraphs, multiple choice, checkboxes, and choosing from a list, scale, and grid. If MAKE THIS REQUIRED QUESTION is checked, the respondent must answer it or else will not be able to send back the completed form.
- 5) Click on DONE, then, the first question is made. Click question 2 and do the same procedure. Type in the question and choose the question type.
- 6) To make more questions, click an ADD ITEM button and choose the question type.
- 7) Every time the test is modified, Form saves it automatically.
- 8) Click EMAIL THIS FORM to send this form to any email address and also copy and paste this URL to a blog, SNS, or email.

Going back to the original Google Drive page, there is the form in the list, looking like a mail inbox.

There should be another file with the Google Spreadsheet file, too, which shows the results.

Google Spreadsheet has many functions like standard spreadsheet software. You can also go to a page to edit a form by clicking Form. With EMAIL THIS FORM, or SEND FORM you can send it to any email address. You can download this file and use other spreadsheet software such as MS Excel.

After completion of a test, it is recommendable to answer the questions to have the correct answers at the top of the spreadsheet. Learners' responses will be shown after that. It is not necessary, though, and in fact, correct answers can be inserted directly to the spreadsheet afterwards, too. But you can still learn what it is like to respond to the form as a test taker.

To make this form a little more elaborate, you can choose THEME, with which, you can change the form background. This way, you can identify the form visually, too.

By unchecking ACCEPTING RESPONSES from the Form's pull-down-menu in the spreadsheet file, you can block any further responses, something which makes it possible to set up a date due for submission.

For more detailed procedure, go through the help section of Google Drive.

#### 4 . Marking and Grading with Google Drive's Spreadsheet

Responses from learners are automatically filled in by Google Drive on a spreadsheet, being put in order of arrival, vertically from top to bottom, with the information for each question answered by each individual being entered horizontally from left to right. At this point, insert a new column immediately to the right of the learner name column for the purpose of entering a total score for each learner, thus making it easier to refer to student names and scores at a glance.

Enter a formula containing the IF function in a cell in order to add up a score for each question and show the learner's total score. The formula, for instance, looks as follows: =IF(F3=\$F\$2,1)+IF(G3=\$G\$2,1)+IF(H3=\$H\$2,3)+IF(I3=\$I\$2,1). The formula begins with an equal sign and ends with a closing bracket, and is supposed to be typed in the cell where the total score needs to be shown. What this formula indicates is that if the value in cell F3 is the same as the one in cell F2, the concerned learner gets one point. This applies to the cases of cell G3 and G2, H3 and H2, and I3 and I2 in the same way. Moreover, if the learner answers incorrectly, he or she will get a zero for the question. Then, the total score of the four questions will be shown. The cells designated with dollar marks are the ones that have correct answers in them and always get referred to so as to determine whether the answers are correct or not. This designation is called absolute reference.

When everything is typed in and finished by pressing the ENTER button, the score of the respondent will be shown in the targeted column. Since it is desirable to calculate the scores of all the respondents at once, you just need to place the cursor onto the corner of the lower right of the cell that already has the complete formula. Then the cursor becomes a cross. The next thing to do is to drag the cross, while pressing the left click, down all the way to the end of the

list. Once you release the left click, you get all the scores of the respondents calculated and shown.

It is worth noting here that rearranging the order of the list is easy. The initial order of the list is according to the time of arrival. Instead, you could always change the order by, for example, student numbers, alphabetical order of the respondents, and so forth. To do so, one first needs to select a column as a basis of reordering, and goes on to click on DATA, then SORT.

## 5 . Online test takers' feedback

We conducted the online exercise three times a semester, utilizing Google Form, in the 2013 school year. Participants were the first year students at a private university in Tokyo, Japan, taking English language courses as general education units. No more than five questions were included in one exercise, and students were instructed to answer questions such as vocabulary meaning and comprehension check based on a single short passage. They were also instructed to answer the questions with one word, if possible, and not more than a few words at most. At the end, the opportunity to give feedback on this online test was given to each respondent, generating comments (left untouched below), such as :

Pros

1. Listening is my weak point, so I think this is good for me to training listening skill.
2. But it's good for practicing English.
3. It's difficult for me. But good for practicing my English skill.
4. This is nice homework.
5. I like English very much...
6. It is interesting!

Cons

1. I don't have the PC. It is difficult for me to answer the question on the Internet.
2. This is very interesting, but I don't want do it always.
3. Please don't do like this always...
4. It is very interesting... but it makes me boring.
5. Don't use e-mail system to announce us homework.
6. 手書き手渡しの提出を望む

## 6 . Discussion

As there are pros and cons in any learning methods, we received comments from students for and against this online test. Some liked the online test because it seemed to them that it was “good for practicing English”. Others liked it simply because it was “nice homework”, because they like English very much, or because “it is interesting!” On the other hand, some were unhappy about the test. For example, it was difficult for those who do not have free access to

computers to answer the questions on the Internet. This also brings up the problem of using email to inform students not always being fair to all. Others found it boring, or OK if it is only once in a while.

If one assumes that learner satisfaction is a key factor in effectual language learning, then teachers have responsibility for learner satisfaction, a topic which has been long and widely discussed. In any case, teachers should not be the ones who diminish it, but should be the ones who enhance it. This being the case, it is one of the tasks on the teachers' side to provide motivating and satisfying materials or methods for language learning such as online learning and practice tests.

However, learner satisfaction is not always the primary factor of successful language learning, and teaching methods or materials which learners find satisfactory do not always contribute to maximizing the learning effect. Teachers should bear this in mind not only when planning and conducting lessons but also when giving learners advice on how to design learning strategies by learners themselves. Having noted that there is not necessarily a correlation between learner satisfaction and learning effect (Johnson, 2006b), it also must be emphasized that learner satisfaction oriented teaching methods or materials have not been proved to be ineffective or harmful either. For that reason, to regard learner satisfaction oriented teaching methods or materials as ones which are worth trying in classroom is a plausible one.

Using online learning and testing methods may not necessarily have a direct influence on learning effect, but it still remains useful to teachers in marking and grading students' work. Some benefits of online testing adopted in this study should be noted for their convenience from a teacher's point of view. First of all, the process of test making, distributing, collecting, marking, and grading can all be done with a computer. Teachers can shorten the entire process and become much quicker and more efficient going through it. Second, online testing introduced here could be used as preparation for actual face-to-face lessons, being a means for teachers to find out what will be easier for students to understand and what will be less so. This allows teachers to design better teaching plans based on the results and the outcome of online learning/testing since it presents what students need for better comprehension rather than what teachers believe students need beforehand. If one includes open-ended questions, furthermore, teachers can get to know more clearly about their students' characters or needs which cannot be detected by multiple choice questions because students can freely write about their own ideas. Also, teachers can use this online method as a part of a student evaluation. Online testing can be another opportunity for students to demonstrate their academic achievement as well as by other more conventional methods, such as paper-based tests and verbal tests.

Online testing does not solve every issue in language learning, but has potential as a teaching method. When integrated with current methods, it has considerable application that will impact on teaching.

Works Cited

- Allen I.E., & Seaman, J. (2010a). *Class Differences Online Education in the United States, 2010*. [http://sloanconsortium.org/publications/survey/pdf/class\\_differences.pdf](http://sloanconsortium.org/publications/survey/pdf/class_differences.pdf) (Retrieved on July. 23, 2013 from the Sloan Consortium website).
- Allen I.E., & Seaman, J. (2010b). *Learning on Demand : Online Education in the United States, 2009*. <http://sloanconsortium.org/publications/survey/pdf/learningondemand.pdf> (Retrieved on July. 22, 2013 from the Sloan Consortium website).
- Derouza, E., & Fleming, M. (2003). A comparison of in-class quizzes vs. online quizzes on student exam performance. *Journal of Computing in Higher Education*, 14, 121-134.
- Dobson, J.L. (2008). The use of formative online quizzes to enhance class preparation and scores on summative exams. *Advances in Physiology Education*, 32(4), 297-302.
- Harrington, M., & Carey, M. (2009). The on-line Yes/No test as a placement tool. *System*, 37(4), 614-626.
- Johnson, G.M. (2006a). Optional online quizzes : College student use and relationship to achievement. *Canadian Journal of Learning and Technology*, 32. <http://cjlt.csj.ualberta.ca/index.php/cjlt/article/view/61/58> (Retrieved on Aug. 19, 2013).
- Johnson, G.M. (2006b). College student psycho-educational functioning and satisfaction with online study groups. *Educational Psychology : An International Journal of Experimental Educational Psychology*, 26(5), 677-688.
- Johnson, G.M. (2008). Online study tools : College student preference versus impact on achievement. *Computers in Human Behavior*, 24, 930-939.
- Kauffman, D.F., Zhao, R., & Yang, Y.S. (2011). Effects of online note taking formats and self-monitoring prompts on learning from online text : Using technology to enhance self-regulated learning. *Contemporary Educational Psychology*, 36(4), 313-322.
- Kerr, M.S., Rynearson K., & Kerr, M.C. (2006). Student characteristics for online learning success. *The Internet and Higher Education*, 9(2), 91-105.
- Shi, D. (2011). Online test and simulation training based on three-tier structure. *Procedia Engineering*, 15, 4147-4151.