

# A study on the implementation of online assessments in college English teaching

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**Abstract.** With the development of information technology, online assessments have been widely adopted in College English. Up to date, the majority of studies pertaining to online assessments have been about assessment environments and invigilating, as well as the benefits deriving from online assessments. However, there is a lack of studies with regards to the candidates' experience and views on online assessments and the impact of online assessments on their grades. After collecting the data from results of three tests taken by 126 candidates, a questionnaire survey was designed for all of them and 20 relevant candidates were interviewed, it was thus found that online assessments do have a negative impact on the performance and the candidates prefer traditional testing on paper.

## 1 Introduction

Tertiary level English learning requires the students to have a firm understanding of words, grammar, sentences and paragraphs, etc. and memorize vocabulary, phrases from learning materials and their respective applications. Both professors and learners need to have a clear picture of their teaching and learning process in order for such an outcome to be achieved. Thus a multidimensional and progressive assessment system was formed in order to gauge the learning process. Subsequently, concerns were raised with respect to the logistics and costs, as the assessments were to be made a regular practice.

The wide application of online assessments in college English teaching helps to save different resources and relieve financial burden. When we adopt such a form of assessment, it is also important for us to take the opinions and preferences of candidates into consideration to create a fair testing environment. This research focuses on the opinions and preferences of test candidates when online assessments are implemented.

## 2 Online assessments

It is pointed out in College English Teaching Guide (2020 edition) that evaluation and assessments are important means to check teaching achievements, ensure teaching quality, and catalyzing the development of college English courses. Colleges and universities should give out more progressive assessments in the teaching process. For a better learning

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outcome, both professors and students are expected to make full use of the feedback information of the tests.<sup>[1]</sup>

Online assessments are mostly based on computers and the internet. New technologies, such as computer science, internet applications, database technology and data encryption, etc. help to complete the processes of the test registration, the selection of questions, test-taking and submission.

The test candidates read and answer the questions on the computer. Next, the testing system marks the test answers automatically or the professors can opt to grade the answers manually.<sup>[2]</sup> Online assessments have the following advantages over traditional testing on paper : saving manpower and material resources, reducing the workload and expenses of test administrators, the invigilation process becoming more effective and scientific, reducing the probability of cheating, breaking the time and space constraints, helping the implementation progress evaluation <sup>[3]</sup>, providing more feedback information to professors and students to help both of them improve their performance.

So far, there are a number of web-based college English test platforms and assessment software in China, such as Rain Classroom, iTest Test Platform, and Composition Correction Network. Many foreign language teachers in colleges and universities have started to adopt online assessments in their teaching process and carried out related research in this field: Industrial and Commercial College, Hebei University introduced online assessments in their college English teaching in 2018<sup>[4]</sup>; Jin Pei-yu from the School of Foreign Languages in Jilin Engineering Normal University has conducted a research on the effectiveness of iTest paperless testing System in college English teaching.<sup>[5]</sup> However, currently very few researches have carried out on the personal opinions and experiences of candidates in online assessments. The research below is thus dedicated to the topic.

## **3 Research**

### **3.1 Method**

Both quantitative and qualitative research are adopted. Quantitative research is three tests and a questionnaire survey used for the evaluation of the impact of online assessments on the performance of the candidates and collecting data on respondents' views on different question formats of online assessments. Qualitative research is applied to interview the respondents to get more details of their views on online assessments.

### **3.2 Sample and procedure**

The sample within the quantitative research, ie. the tests and the questionnaire survey consists of 2 groups, group A with 63 members and group B with 63 members. The two groups are both freshmen from the same major. The two groups have the same learning materials and are under the same professor.

When the new term started, an English test on paper (Test I) was held for the two groups to find out if there is a significant difference between the two groups in English proficiency. Then the second English test (Test II) with the same set of questions was taken by both group A and group B, with group A doing a traditional paper pencil test and group B doing online. Then another English test (Test III) was taken by the two groups. This time group A was doing the test online and group B doing the test on paper. The English tests covered questions on reading comprehension, multiple choices on vocabulary, blank filling, writing, translation, etc. The answers to standardized questions were graded by a computer system automatically whereas essays and translation parts were graded by their professor.

After the tests a questionnaire was given out, as well as an interview to collect data and more information on personal opinions and experiences towards online assessments.

### 3.3 Results

#### 3.3.1 Tests

##### 1) Test I

After collecting grades of the two groups in Test I with both groups doing test on paper and analyzing them with SPSS, the following results are shown.

**Table 1.** Group Statistics (group A,B: test on paper).

	VAR00002	N	Mean	Std Deviation	Std Error Mean
VAR00001	1	63	73.1429	14.81919	1.86704
	2	63	73.4286	16.54292	2.08421

Table 1 shows Mean of Group A is 73.1429 and its Std Deviation is 14.81919 whereas Mean of Group B is 73.4286 with Std Deviation 16.54292.

**Table 2.** Independent Samples T (group A,B: test on paper).

	Levene's Test for Equality of Variances		t-test for Equality of Means							
			Sig.				95% Confidence Interval of the Difference			
	F	Sig.	t	df	1-tailed P	2-tailed P	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	1.592	.209	-.102	124	.459	.919	-.28571	2.79818	-5.82409	5.25266
Equal variances not assumed			-.102	122.528	.459		-.28571	2.79818	-5.82474	5.25331

Table 2 shows  $F=1.592$ ,  $P=0.209 > 0.05$  then  $t=-0.102$ ,  $P=0.919 > 0.05$ , which means there is no significant difference between the grades of the two groups. Std. Error Difference is 2.79818 and 95% Confidence Interval of the Difference is from -5.82409 to 5.25266.

##### 2) Test II

After collecting grades of the two groups in Test II and analyzing them with SPSS, the following results are shown.

**Table 3.** Group Statistics (group A: test on paper; group B: online test).

	VAR00002	N	Mean	Std Deviation	Std Error Mean
VAR00001	A	63	69.5238	16.44331	2.07166
	B	63	63.4444	15.71190	1.97951

Table 3 shows Mean of Group A is 69.5238 and its Std Deviation is 16.44331 whereas Mean of Group B is 63.4444 with Std Deviation 15.7119.

**Table 4.** Independent Samples T(group A: test on paper; group B: online test).

	Levene's Test for Equality of Variances		t-test for Equality of Means							
							Sig.			
	F	Sig.	t	df	1-tailed P	2-tailed P	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.864	.354	2.122	124	.018	.036	6.07937	2.86535	.40803	11.75071
Equal variances not assumed			2.122	123.744	.018	.036	6.07937	2.86535	.40791	11.75082

Table 4 shows  $F=0.864$ ,  $P=0.354 > 0.05$  then  $t=2.122$ ,  $P=0.036 < 0.05$ , which means there is a significant difference between the grades of the two groups. Std. Error Difference is 2.86535 and 95% Confidence Interval of the Difference is from 0.40803 to 11.75071.

### 3) Test III

After collecting grades of the two groups in Test III and analyzing them with SPSS , the following results are shown.

**Table 5.** Group Statistics (group A: online test; group B: test on paper).

	VAR00002	N	Mean	Std Deviation	Std Error Mean
VAR00001	A	63	70.6984	20.23462	2.54932
	B	63	78.7778	12.98183	1.63557

Table 5 shows Mean of Group A is 70.6984 and its Std Deviation is 20.23462 whereas Mean of Group B is 78.7778 with Std Deviation 12.98193.

Table 6 shows  $F=18.570$ ,  $P < 0.01 < 0.05$ , then  $t=-2.667$ ,  $P=0.009 < 0.05$ ,  $P=0.036 < 0.05$ , which means there is a significant difference between the grades of the two groups. Std. Error Difference is 3.02888 and 95% Confidence Interval of the Difference is from -14.08465 to -2.07408.

From the above data analysis, the following conclusions can be drawn: when all controllable factors are taken into account, such as students' English proficiency, professor, learning material, teaching techniques adopted, etc., students doing tests on paper are performing better than those doing online, entailing online assessments having a negative impact on the performance of its candidates.

### 3.3.2 Questionnaire survey

After the tests a questionnaire was designed and an online survey was conducted. The online survey includes a set of questions on the respondents' (positive or negative) perceptions of online assessments. 126 members of the two groups answered the questions. The following are the five questions of the questionnaire.

**Table 6.** Independent Samples T (group A: online test; group B: test on paper).

	Levene's Test for Equality of Variances		t-test for Equality of Means							
			Sig.				Mean Difference		95% Confidence Interval of the Difference	
	F	Sig.	t	df	1-tailed P	2-tailed P	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	18.570	<.001	-2.667	124	.004	.009	-8.07937	3.02888	-14.07437	-2.08436
Equal variances not assumed			-2.667	105.645	.004	.009	-8.07937	3.02888	-14.08465	-2.07408

① When writing an English essay which one do you prefer, online assessments or traditional testing on paper?

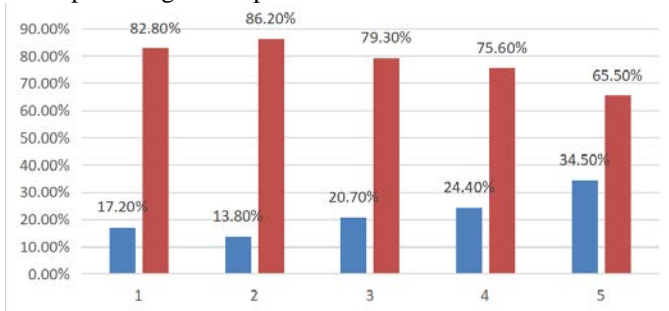
② When doing English reading comprehension which one do you prefer, online assessments or traditional testing on paper?

③ When doing translation which one do you prefer, online assessments or traditional testing on paper?

④ When doing blank filling which one do you prefer, online assessments or traditional testing on paper?

⑤ When doing multiple choices on vocabulary, online assessments or traditional testing on paper?

Here we will present the answers of respondents in the form of graph, and the results in the graphs refer to the percentage of respondents.



**Fig. 1.** Online assessments vs traditional testing on paper.

In Fig. 1. for each question marked with 1, 2, 3, 4 and 5, the left column refers to the respondents' percentage choosing online assessments whereas the right column refer to the respondents' percentage choosing traditional testing on paper. The graph shows that for all the question formats, namely, writing, translation, reading comprehension, blanking filling and multiple choices on vocabulary, the majority of respondents prefer tests on paper to tests online. In particular, when doing reading comprehension 86.2% respondents would like to do it on paper rather than online.

### 3.3.3 Interview

20 samples chosen randomly from the 126 members of the two groups were interviewed to find out their personal experiences and opinions on online assessments. For each respondent, a transcript of responses was compiled. 17 of them answered definitely that they preferred traditional testing on paper to online assessments and 16 mentioned that they might get lower grades in online assessments. It is noticeable from the transcript of the interview that the majority of the 20 respondents held a negative view of their experiences in online assessments though they admitted the benefits derived from online assessments, such as the dominant answer would be:

“Personally, I think the main advantage of online assessments over traditional testing on paper is that it simplifies the testing process and makes it more convenient to be held. ‘Online’ means saving natural resources and protecting the environment. But when we answer the questions online, especially when we are doing reading comprehension, translation or writing, we can not make marks on the screen which is really disturbing and we don’t have this problem when we are doing paper pencil testing with which we can underline, draft on paper. Besides, I am not good at typing which takes me more time to finish my answers. This is also frustrating for its is distracting if I have to take trouble typing in all my answers. So though online assessments save various resources, I still prefer paper pencil testing.”

“To me, though paper pencil testing sounds not so advanced, in comparison with doing tests on computers and mobile phones, we don’t have to look at the screens for a long time which may do harm to our eyesight. What’s more, if the network is not working properly, we may fail to submit our answers successfully. How horrible it is when we finished all the answers and find that all of them disappeared. But we have to admit that when we type in our answers, the characters are clear and beautiful and will never be illegible. In short, both online assessments and paper pencil testing have their own pros and cons.”

## 4 Conclusion

Though all the respondents mentioned that online testing is convenient and helps save resources, they still prefer paper pencil testing to online assessments and believe that when answering questions on computer or mobile phones they might not perform as well as writing on paper which was confirmed with the two tests results. To the candidates doing test online, the factors leading to their poor performance include typing speed, not being able to make marks on screen, failure to submit successfully because of network problems, etc. Hence, it is suggested that when doing tests online, desktops with big screens are expected to avoid eyesight problems and more training on computer skills be offered to students to get them more familiar with computer operation. Last but not the least, it is also important to improve on the testing technology and testing environment thus avoiding technical problems.

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