

## **Application of Computer Distance Education in Practical English Writing Teaching**

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**Abstract**—With the continuous convergence between computer technology and on-line education in promoting the reform of traditional teaching and learning style, and updating the educational idea and method, this paper takes the application of computer distance education (CDE) into the practical English writing (PEW) teaching as object of study, adopts the research methods of literature survey, questionnaire and experimental comparison analysis, and studies the application of flipped classroom instruction model into the PEW teaching; the flipped classroom, based on the on-line video, has become popular in the education world now. According to survey of the teaching situation in PEW, the teaching scheme of flipped classroom has been designed; also, this paper evaluates the teaching effect of this teaching scheme by means of Jukuu web-based teaching platform as well as the questionnaire survey of the students about the learning effect, to validate the teaching effect of this teaching scheme on PEW, and prove that the CDE can promote significantly the PEW teaching.

**Keywords**—computer distance education (CDE); practical English writing (PEW); classroom instruction; flipped classroom; Jukuu Pigai.org (Jukuu)

### **1 Introduction**

With the continuous development of information technology, the education informatization has been further strengthened; the integration of technology and education has been changing the education model and learning style, and motivating the reform of PEW teaching [1]. Flipped classroom, formed in the process of information technology development, is one new model of teaching. This instruction model is developed based on the mastery of learning and learning style, constructivism and humanistic learning theories.

Originated in the United States in 1990s, flipped classroom was once popular in American Colorado K12 school with emergence of many wonderful cases [16]. Since 2012, China has involved large-scale practices of flipped classroom, and has made innovations in the design of didactical activities, methods and technologies and inter-

action between teachers and students with good results. The flipped classroom was originated in America, and there were extensive practices about flipped classroom in China. Currently many scholars at home and abroad have still been devoted to the teaching research of flipped classroom. The flipped classroom reverses the traditional learning model, enabling the students to learn the teaching content by watching the organized resource by the teachers in the pre-classroom phase, and to discuss the learnt knowledge in classroom [2].

In order to inquire the CDE effect on PEW teaching, enrich the PEW theory, and then provide a good teaching model, this paper, based on current PEW situation, combines the domestic and foreign flipped classroom theories and practical research results, designs the teaching scheme of PEW flipped classroom, and analyses the practical effect of teaching scheme by means of Jukuu web-based teaching platform as well as the questionnaire survey of the students about the learning effect [3], verifying the feasibility and validity of this scheme, and providing new teaching model for PEW.

## **2 Investigation and analysis of practical English writing (PEW) teaching situation**

### **2.1 Data source**

To analyse the problems with the current PEW teaching and provide better teaching scheme, select the college students among four universities with the course of practical English writing, and then conduct the questionnaire surveys about the pre-class preparation, in-class learning and after-class learning [4]; issue 400 pieces of questionnaires, and take back 362. The analysis was made to obtain the related results.

### **2.2 Survey results and analysis**

**Analysis for pre-class preparation.** Fig 1 and Fig 2 show, although 78.5% students think that the pre-class preparation is very important or important, only 31.1% would often or more often make pre-class preparation by searching for the related information on line or in other ways, indicating the students haven't developed the autonomous learning habit; 67.8% students prefer going online for information, indicating that the internet may be the new means for students' autonomous learning.

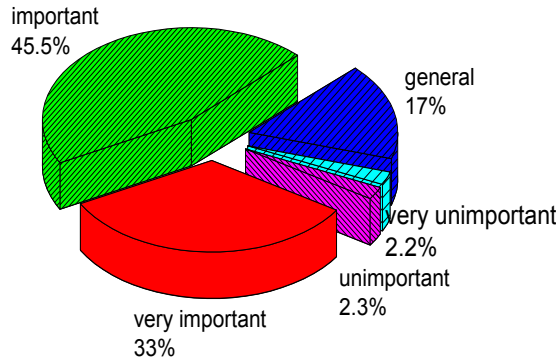


Fig. 1. The importance of pre-class preparation

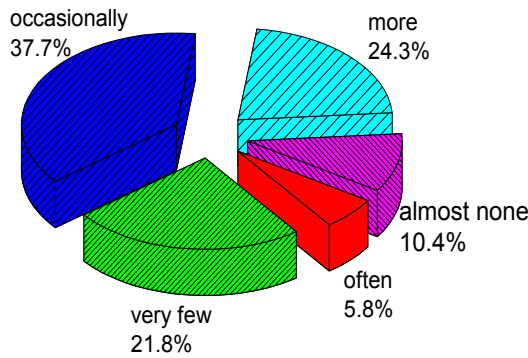


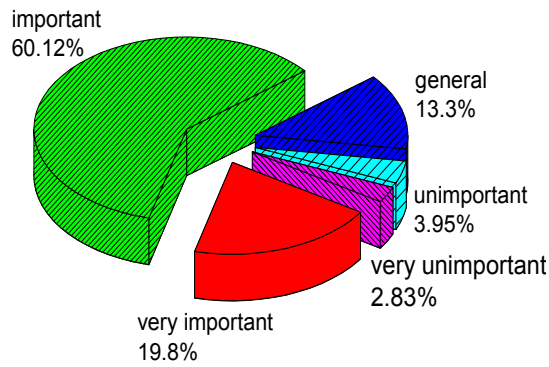
Fig. 2. Whether to go online to find information before class

**Analysis for in-class learning.** Table 1 lists the survey results of in-class teacher-learning: 46.7% students aren't interested in the teacher-centred teaching-learning interaction in the classroom, and for half students, compared with the current passive learning, they prefer the autonomous learning and interactive model, and the teachers cannot give guidance and support for their problems with the PEW writing during the teaching process.

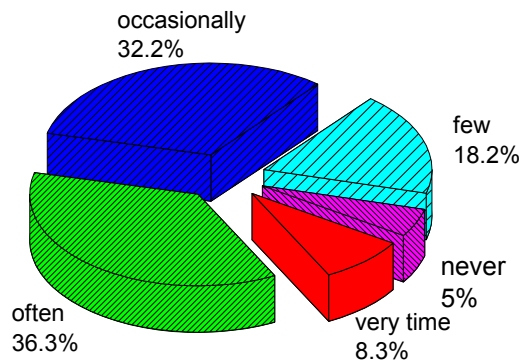
Table 1. Analysis of Teaching Learning in Business English Writing Course

Option \ Question	Interested in teacher organization activities?	Affect the classroom because of passive acceptance	Like independent, interactive learning	Whether the teacher directed the problem
Very much agree	23.3%	34.6%	22.3%	15.9%
Agree	23.4%	16.4%	38.8%	34.1%
General	37.8%	40%	21.9%	35%
Disagree	13.5%	7%	7.3%	12.1%
Strongly disagree	2%	2%	9.6%	2.9%

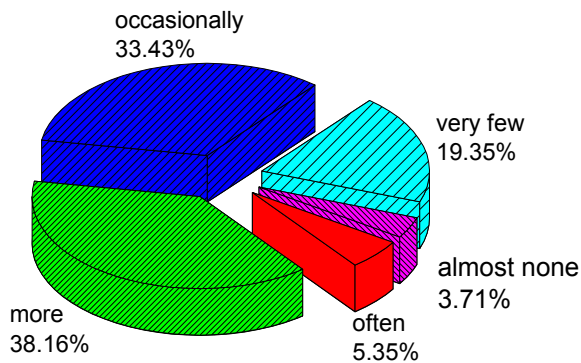
**Analysis for after-class knowledge distillation.** Fig 3, 4 and 5 shows, although 80% students think that the after-class review is important, only 8.3% make after-class review every time, 36.3 often make after-class review; 43.51% students prefer to correct their practical English writings mutually with their peers often or more often.



**Fig. 3.** After class to expand the importance of learning



**Fig. 4.** Review the classroom knowledge



**Fig. 5.** After class and students criticize each other homework

Above all, now for the students, their autonomous learning should be further enforced, and one new teaching model is expected to get the students more involved into the classroom instruction and interaction, because the teacher-dominated teaching model wasn't appreciated by the students [5]; the teacher cannot also make timely response to their writing problems. Besides, in survey, it's seen that the internet might become the new means for the students' autonomous learning; hence, this paper proposes the flipped classroom instruction model on the basis of CDA.

### 3 Teaching design and experiment result of PEW flipped classroom

#### 3.1 3-stage flipped classroom model

As for the flipped classroom, there have been no uniform definition, but with similar concept, i.e. the 2-stage flipped classroom model of “pre-class teaching + in-class internalization” [6], which means to flip the traditional model of “in-class teaching and after-class homework”: the teacher distributes the related resources such as learning courseware and video etc. to the students in advance, the students learn these knowledge before the class, and the students' problem in pre-class learning will be discussed between the teacher and students in the classroom, so as to realize the knowledge internalization and distillation. In this process, the students shift from the passive receiver of knowledge to the active inquirer, while the teacher shifts from the single lecturer of knowledge to the instructor for learning [7], further embodying the students' dominant role, and improving their initiative.

To improve the teaching effect of PEW and the students' writing competence, this paper, on the basis of 2-stage flipped classroom, combines the study, research and use of related literatures [8], refers to the survey results of PEW situation, and designs the 3-stage flipped classroom model conforming to the actual requirements of PEW teaching [9] as shown in Fig 6; it divides the model into three stages: pre-class stage, in-class stage and after-class stage, and also elaborates on the teacher and student activities respectively.

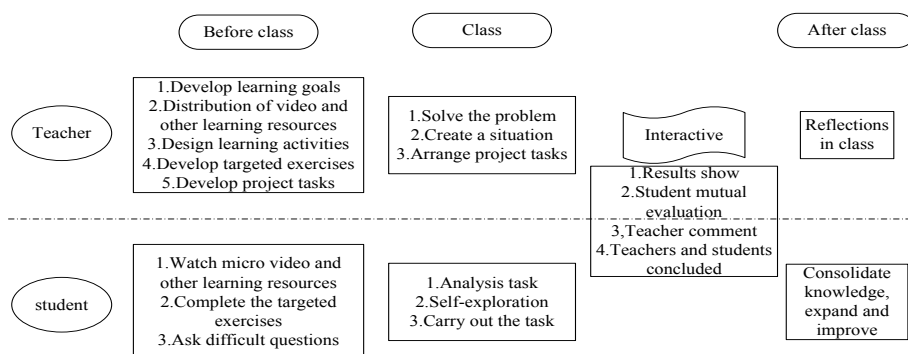


Fig. 6. Three stage flip classroom instruction model

### 3.2 Teaching design of PEW flipped classroom

This paper selected the writing unit “Business Report” in the course “Practical English Writing” of Class 1 students of 2015 in applied English major in one certain university as the experimental course, and adopts the Jukuu as the computer-aided teaching platform for PEW; the on-line correction can be realized on this platform, so as to both improve the teacher’s work efficiency and the student’s writing competence.

**Pre-class preparation.** The pre-class preparation consisted of two parts prepared by the teacher and student respectively. The teacher and students should register and log on the Jukuu before class, and with the on-line class created by the teacher, the teacher can then release the writing task and requirement by the function “Arrange one new composition” on the on-line Jukuu platform. After informing the students of the task ID, on the platform, the teacher could browse the students’ compositions and also the corrections of the Jukuu, monitor the task completion status, inform the students of the related information by the function of information releasing, and make topic discussion and interaction with the student user [10].

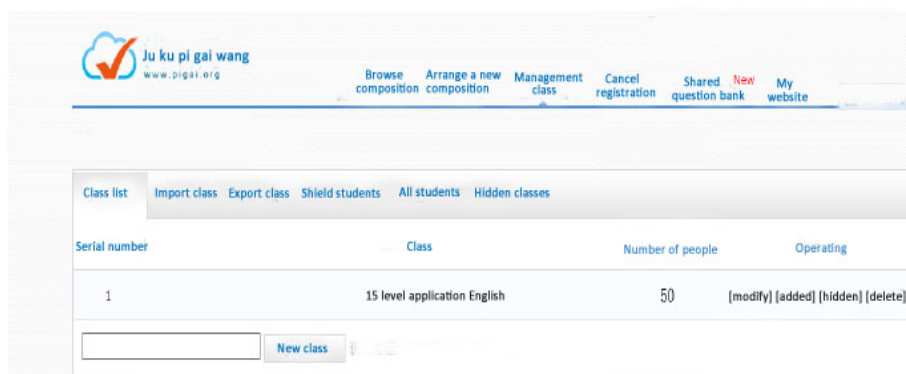


Fig. 7. Create a class, layout new composition



Fig. 8. Business Report video capture

As for the students, after receiving the learning task, they downloaded the learning task and related video materials; as shown in Fig 8, they needed to take pre-class autonomous learning, learn about the basics of business report writing, and finish the targeted exercised by the students; besides, they made records of the problems and doubts, for in-class discussion with the teacher and peers.

**In-class knowledge internalization.** To fully and properly utilize the classroom instruction time and realize good teacher-student interaction, the detailed teaching scheme of PEW flipped class was designed for in-class knowledge internalization [11] as shown in Fig 9. In the classroom, the teacher summarized the students' questions and the business reports submitted on Jukuu, then classified them into different group and allocated the task for the cooperative discussion between the students; after the discussion, the students, based on the teachers' explanation and mutual discussion, corrected their business report, and made uploading of the 2d version; the score of the modified report was obtained by the Jukuu, student's self-evaluation, group mutual-evaluation and teacher's evaluation altogether [12], and then the teacher made conclusion for the corrected parts and the performance of every group. In the whole process, the students play the dominant role, for mobilizing the student's learning enthusiasm, and promoting their writing competence.

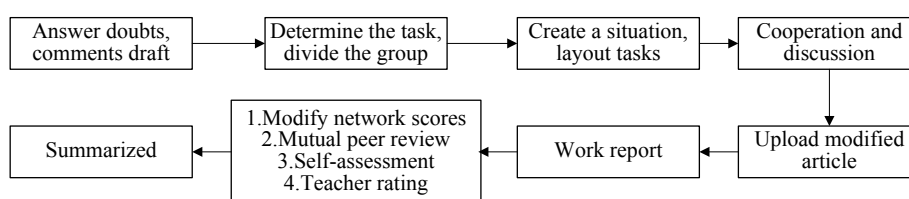


Fig. 9. Business English Writing Flip Classroom Instruction Program

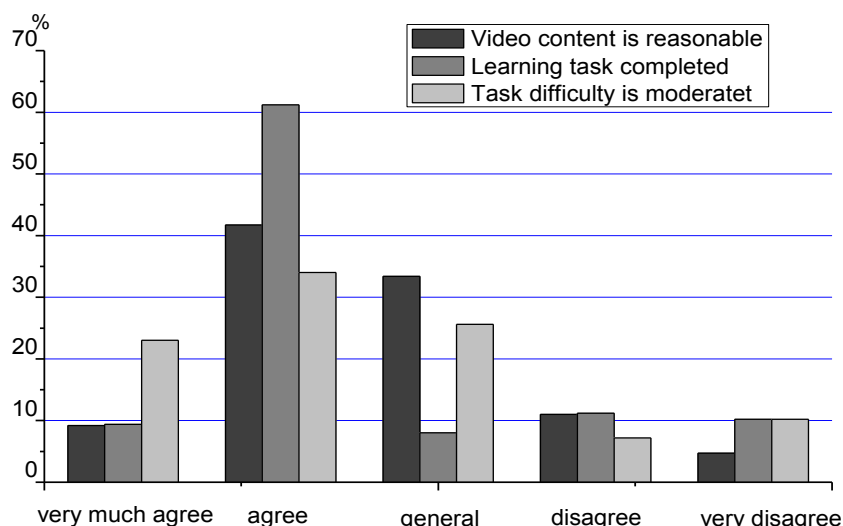
### (3) After-class knowledge distillation

After two-round learnings of pre-class self-study and in-class discussion with the teacher and peers, the students re-modified the business report, then upload the 3<sup>rd</sup> version, and started the learning for next unit after they communicated with the teacher and peers about their learning experience by Jukuu or Live Chat-QQ Group etc. This learning style of flipped classroom could deepen the students' memory of knowledge, and train the students' abilities in terms of self-study, team work, and problem analysing & solving [13].

### 3.3 Experiment result analysis

**Survey results and analysis of flipped classroom instruction effect.** To understand the teaching effect of flipped classroom, the questionnaire survey was made for the 50 students in flipped classroom learning in three aspects: pre-class, in-class and teaching effect; 45 questionnaires were collected. Refer to the survey results as follows:

*Evaluation for pre-class learning.* Pre-class learning is the key part in the flipped classroom instruction model. Fig 10 indicates that over 50% students agree or very much agree about the pre-class video; for over 80% students, the pre-class learning task released by the teacher is helpful for self-study; about 29% students agree that the task difficulty is moderate, to be needed for further improvement.



**Fig. 10.**Pre-class learning activities evaluation

*Evaluation for in-class learning.* Table 2 shows, 50%-60% students think that classroom discussion and evaluation list can facilitate their learning, while over 84% think the Jukuu can help to promote their writing competence, indicating that most students pose a positive attitude towards the flipped classroom instruction model.

**Table 2.** Classroom activities program evaluation

Question	Very much agree	Agree	General	Disagree	Strongly disagree
Class discussion helps to learn	12%	42.70%	29.50%	8.10%	7.60%
Evaluation form to help me learn better	13.50%	48.20%	16.70%	11.50%	10%
Ju ku pi gai wang a lot of help for my writing ability	48.50%	35.70%	10.60%	2.50%	2.60%

*Evaluation for teaching effect.* Fig 11 shows, for 60%-70% students, the flipped classroom instruction model can enhance their interest in English writing, reduce the writing anxiety and improve their performance [14], but it cannot be ignored that for some other students, the flipped classroom instruction model doesn't help well, mainly because these students have worse learning basis, and requires more extra attentions by the teachers in the class teaching.



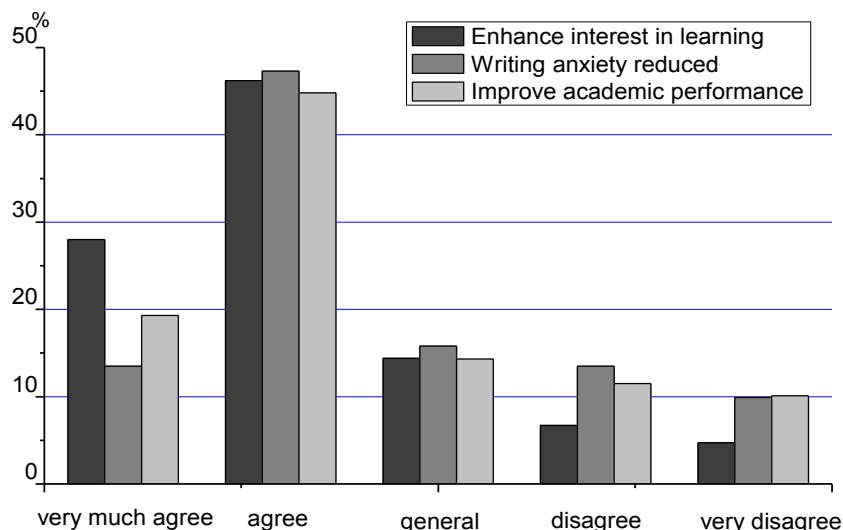


Fig. 11.Evaluation of Teaching

**Comparison of experimental results.** To avoid the influence of the students’ subjectivity on the questionnaire survey results, the contrast experiment was made in this paper by selecting two classes of 2015 in Applied English major as the object, where class 1 (50 students, the experiment class) adopted the flipped classroom instruction model, and class 2 (54 students, the contrast class) followed the traditional teaching model. After the teaching experiment, the exam, with full marks 100, was taken for the learning effect of practical English writing [15]; the exam score is the average of the two scores by the Jukuu and the teacher respectively, to ensure its reliability.

Table 3 lists the final score of experimental class, where 2 students are over 90 points, and 1 student fails; 84% students are over 70-100, with the top score 92, and 98% pass rate.

Table 4 lists the final score of contrast class, where none is over 90 points, and 4 students fail; 57.2% students are over 70-100, with 85 the top score, and 92.6% pass rate.

Table 3. Experimental class scores

Score distribution	Score segment	<60	60-69	70-79	80-89	90-100
	Number of people	1	7	30	10	2
Percentage		2%	14%	60%	20%	4%

Table 4. Comparison group scores

Score distribution	Score segment	<60	60-69	70-79	80-89	90-100
	Number of people	4	19	24	9	0
Percentage		7.4%	35.2%	42.6%	14.8%	0.0%

Table 5 shows the results comparison between the experiment class and contrast class, and obviously, the experiment class is superior to the contrast class.

**Table 5.** Results comparison

Sample	Number of people	The average score	Standard deviation	Z	Difference level	
Experimental class	50	76	8.27	2.230	P<0.05	Significant
Control class	54	72	8.08			

#### 4 What do we need to concern

The above findings show that the flipped classroom in practical English writing is feasible and will be bound to develop students' self-learning abilities and improve students' enthusiasm for learning English, thereby the preset instruction objectives can be achieved. It should also be noted, however, that flipped classroom, as a new model, greatly differs from the traditional ones in terms of teaching processes and methods. Teachers and students need to gradually adapt to it and cannot do it at one stroke. Teachers should also notice those who are poorly expressed or cannot actively participate in the discussion, and pay attention to the control of the classroom process, otherwise it is difficult for them to achieve the instructional objectives of flipped classroom fundamentally.

#### 5 Conclusion

Regarding the application of CDE in PEW teaching as object of study, this paper studies the application of flipped classroom into the practical English writing; the conclusions have been drawn as:

Based on the survey results of PEW situation, it is necessary to adopt the flipped classroom instruction model in PEW.

The 3-stage flipped classroom instruction model and PEW flipped classroom scheme were designed, and then verified for promoting the teaching effect and writing competence in the two methods: questionnaire survey and contrast experiment.

The experiment shows that the Jukuu can satisfy the teaching requirement of flipped classroom, to be the auxiliary teaching platform of PEW flipped classroom instruction.

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