

Study on Integrating Diagnostic Assessment into College English Reading Teaching Practice

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Abstract: This study examined how Udig reading assessment improved English teaching and learning at college level. With the help of the Udig feedback reports and a reading strategy questionnaire of students, teachers were able to identify the strength and weakness in students' reading ability and deliver the follow-up remedial activities based on the targeted needs for ability development. Students learnt to understand their reading deficiency and adjusted their learning activities. Results show that students' performance of reading ability improved and their scores of reading subskills rose after the remedial teaching practice and students' efforts. Students' response to the remedial instruction and learning activities was generally positive.

Keywords: Udig assessment, Remedial teaching, Reading subskills, Udig feedback.

1. Introduction

Recent years witnessed two important events in the Chinese foreign language education. One is the release of China's Standards of English Language Ability (CSE) in 2018. In the movement towards deepening educational assessment reform in the new era, CSE may be used as a unitary and consistent standard for summative assessment, formative assessment, and value-added assessment in English language education (Liu Jianda, 2021). CSE has been supporting learners' self-assessment and self-adjustment. The second event is the release of College English Teaching Guidelines in 2020. The guidelines stress the importance of establishing a comprehensive testing system made up of formative assessment and summative assessment. In accordance with the teaching objectives and teaching requirements specified in the guidelines, the English abilities of college students are measured with different test modes, offering a positive washback of tests on teaching. Those tests provide diagnosing information and feedback for classroom activities and improve the overall English abilities of college students. (P29). The Udig system is developed in respond to such challenges.

Udig intelligent diagnostic evaluation system for higher education (shortened as Udig in this paper), is an online assessment system developed by language testing experts in China. It is a system for diagnosing English language ability of college students in China. Based on China's Standards of English Language Ability (CSE) and College English Teaching Guidelines 2020, Udig provides individualized and whole-class diagnostic feedback report for all the university undergraduates about their weakness and strength of English language ability. The assessment system consists of six separate modules: reading, listening, speaking, writing, and grammar. There are four proficiency levels: Udig 4, 5, 6, 7. Udig level 4 refers to the level of non-English major college freshmen. Level 5 is at CET 4 (College English Test) level; level 6 is at CET 6 level; level 7 is at the advanced level.

Udig assessment is a diagnostic test in the Chinese EFL context. Diagnostic tests have received a great deal of attention from teachers, researchers, and language testing experts. "Diagnostic tests are used to identify students' strengths and weaknesses. They are intended primarily to

ascertain what further teaching is necessary (Arthur Hughes, 2000). "DLA (diagnostic language assessment) seems to be linked with increasing needs and demands for tailored assessments that pinpoint the source of the students' problems in language learning (or use) and provide means for the learners and teachers to deal with the root causes of the problems effectively" (Lee, 2015). Udig diagnostic assessment measures and reports on students' language subskills and gives test users detailed feedback for remedial learning and teaching. It is believed that Udig has the potential to serve as a suitable formative assessment tool in the classroom to inform teaching and learning in the Chinese EFL context (Sun Hang, 2020). Ever since it is put into use, how to make best use of the Udig system to establish a teaching-learning-assessment-research model is becoming a hot topic among Chinese scholars (Fan Tingting 2016; Wu Zunming 2017; Li Jiuliang 2021). Reading, as a major language skill, is an important channel for English learners to derive information and language knowledge. Improving reading ability by reading skill training is an important task in College English Curriculum requirement. Currently, there is an increasing interest in Udig reading assessment but there is insufficient research on its application in the college context. Therefore, the writer attempts to explore how Udig increased the teachers' effectiveness in conducting the follow-up teaching design and improved the reading ability of college students.

According to researchers, the basic three elements of diagnostic evaluation includes: ability diagnosis; diagnostic feedback and remedial instruction and learning (He Lianzhen & Zhang Juan, 2021). In this paper, the writer attempts to conduct one-semester experiment on two classes based on the Udig assessment. The research questions are:

1. What are students' weakness and strength in reading comprehension according to the Udig test?
2. How effective are the follow-up teachers' remedial instruction and learning activities?
3. What are students' response to the remedial instruction and learning activities?

2. Research Methods

Two classes of non-English freshmen from a university in Hangzhou have taken part in the research. They are computer

science majors(n=46) and pre-education majors(n=36). Among the students, 30 have passed the CET-4 English exams but the rest are still struggling for that level. About 15 students are veteran soldiers who received basic high school education. Those students are expected to finish their bachelor program within two years.

The research is divided into 2 phases. In the 1st phase, the teacher investigates students' reading ability by conducting a diagnostic test. The test will help the teacher identify the weakness of reading subskills so as to design the course to cater for the needs to develop their reading ability. Next, a reading questionnaire is given to know the reading strategies the students are using. In the 2nd phase, remedial instruction and learning activities are conducted to the participants of the study. After 3 months, a 2nd diagnostic test was given and feedback from students was collected about the remedial instruction and learning activities.

2.1. Phase 1 Students weakness and strength as shown in the Udig tests and reading questionnaire

The 1st diagnostic test of Udig was given to the two classes

two weeks after they entered the college. Results show that the two classes differ greatly in reading abilities. For the computer class, 83% of students are below to Level 4; 17% belong to Level 5; For the pre-education class, 83% of students are in Level 4, and 17% of students belong to Level 5. See Table 1. Note that each reading level scores 100 points.

Table 1. Reading ability of two classes

Reading ability	Computer class	Pre-Education Class
Level 7	44(N=1)	0
Level 6	48.5(N=2)	56(N=1)
Level 5	46.4(N=5)	58.8(N=5)
Level 4	55(N=38)	74(N=30)

From Table 2 we can see scores of reading subskills (Level 4 students) in both classes are not satisfactory. Since each skill item is given 30 points in total, most of the computer class fails to reach half of the requirement. For education class, there is still much room for improvement for reading subskills in terms of making inference, getting general ideas and details.

Table 2. Reading subskills of the two classes

Reading subskills (Level 4)	Computer class (N=38)	Pre-education class (N=30)
Making logical inferences	13	21
Understanding the general idea and key points	14	20
Extracting details from the text	16	19
Understanding different opinions	18	25
Understanding the logical relationships between ideas	22	26

Next, a reading strategy questionnaire was conducted to give more information of the participants. This questionnaire consists of two parts: motivation of English learning and the use of reading strategies. According to the questionnaire, 34% students of computer class say that they are "very interested" in English but for this question the percentage of respondents in pre-education class accounts for 47%. However, 70% students in both classes say that they want to learn in order to find a good job or achieve a good grade. It is clear that students in both classes are instrumentally motivated.

According to the questionnaire, 74 percent of students in preschool education class say that they will make use of their background knowledge in reading; 72 percent of students will make guesses about the meaning of unknown words in the reading passages or make inferences for the next paragraph. Students in computer class made a similar answer, but the percentage is only 65 percent. As for the question of making inferences or making guesses in reading, only 57 per cent say they will use the strategy in reading.

2.2. Phase 2: Remedial instruction and learning activities

The feedback reports of Udig plus questionnaires and class observations provide teachers with information to design the class activities to target at identified needs of ability development. As seen from the tables, students' weakness is reflected in the skill column of inferences, general ideas and details; therefore, attention was given to develop those skills. The teacher conducts a cycle of Udig-feedback-remedial instruction plus learning activity-Udig-feedback-further remedial teaching. A three-month text-based skill remedial teaching was conducted. Here are the following details.

Since the textbook is New Horizons English Book I, published by Beijing Foreign Language Teaching and Research press, the teacher organizes the schedule into a reading skill-training module. The details are as follows.

Week	Text	Skill training
Week 1-2	Unit 1 Fresh Start	Prediction; understanding the key idea and major details for a passage summary; understanding key idea in a sentence
Week 3-4	Unit 2 Loving Parents, Loving children	Understanding the title of the passage and choice of words to make inference; How to read in thought groups to read faster
Week 5-6	Unit 3 Digital campus	Summary skills by looking for key words and key ideas; Distinguishing facts and opinions
Week 7-8	Unit 4 Heroes of our time	Analysis of the text structure by looking for key words and signal words; Scanning
Week 9	Unit 5 Winning is not everything	Skimming for the major details
Week 10-11	Unit 6 Earn as you learn ?	Understanding signal words - understanding the relationship between ideas
Week 12-13	Unit7 Hoping for the better	How to make inference about word meanings by its context

During the first 2 weeks the teacher prepared a micro lesson on the reading skills of finding the key words and sentences before working out an outline of a passage. Then the students were required to write an outline of a similar passage. When the students turned in their work, the teacher found some students simply copied down the whole sentence without bothering to understand what it really meant. A few wrote more comments rather than an outline. In the following weeks the teacher spent more time on the discussion of the basic structure of passages students are reading and designed exercises of multiple choices, comprehension questions, blank-filling exercises, mind maps, and information matching. All those activities are designed to improve the ability to summarize, to make inference, and to extracting details.

As the two classes differ in English level, students are divided into two groups. Low-proficiency students are encouraged to take light reading to increase their vocabulary. Better students have to do more follow-up exercises designed by Udig for specific weakness in reading subskills. In the classroom, lectures of prefixes and postfixes are offered and online reading tasks are provided to enable students increase their vocabulary and practice their reading skills.

3. The Effect of Remedial Teaching and Feedback from Students

3.1. Results

After three months of instructions and learning activities, another diagnostic test was given to the two classes. Here are the following results.

Table 3. Reading ability development for computer class. Note that each level scores 100 points.

Reading ability	Test 1	Test 2
Level 7	44(N=1)	48(N=1)
Level 6	48.5(N=2)	53(N=2)
Level 5	46.4(N=5)	62(N=5)
Level 4	55(N=38)	61.4(N=38)

From Table 3 it is clear that the computer class has made substantial progress in reading ability. Level 4 students achieved 6 points more than the 1st test. Level 5 students earned 16 points more; Level 6 students earned 5.5 points more.

Table 4. Reading sub-skills development for computer class. Each subskill item scores 30.

Reading subskills (Level 4: N=38)	Test 1	Test 2
Making logical inferences	13	18
Understanding the general idea and key points	14	19
Extracting details from the text	16	22
Understanding different opinions	18	18
Understanding the logical relationships between ideas	22	19

It is clear from Table 4 that level 4 students have made obvious progress in the first three skills(making inferences; general ideas; details). However, no progress has been made in skill items such as understanding different opinions and logical relationships between ideas.

Table 5. Reading ability development of preschool education class. Each level is given 100 points.

Reading ability	Test 1	Test 2
Level 6	56(N=1)	71(N=1)
Level 5	58.8(N=5)	62.4(N=5)
Level 4	74(N=30)	75(N=30)

It is clear that the preschool education class has a much higher English level than the computer class because the average score for level 4 is 74. After our remedial teaching practice level 4 students are able to make some progress(one point more than the 1st test). For Level 5 students, the progress is obvious: 4.6 points; Level 6 student: 15 points.

Table 6. Reading subskills development for preschool education class. Each subskill item scores 30 points.

Reading subskills(Level 4:N=30)	Test 1	Test 2
Making logical inferences	21	21
Understanding the general idea and key points	20	22
Extracting details from the text	19	24
Understanding different opinions	25	25.4
Understanding logical relationship between ideas	26	23

It is also clear that level 4 students have made some progress in the reading subskill items such as the general idea and details, but not in those reading skills such as inferences, different opinions and logical relationships.

3.2. Students' feedback towards the remedial instruction and learning

After the 2nd diagnostic test, students are asked to write a reflective journal about the remedial teaching and learning. Here are 4 typical journals.

I found that I still have to work hard at the subskill of understanding the logical relationship between ideas and I have to pay more attention to academic English. I have tried to do some relevant exercises on provided by Udig and achieved some success. I learnt to improve my vocabulary by practicing writing. (Student A)

I have been very serious about English course ever since this semester and improved my score at the 2nd test. I think my progress can be attributed to my increase of vocabulary and the teachers' instructions both in and after the class. The follow-up exercises have improved my reading sub-skills quite a lot. (Student B)

I did more practice of long passages after I took the Udig test and improved my vocabulary. Udig tests enabled me to get better scores in banked cloze, fast reading exercises and long passages. I began to understand my weakness in English and will do more make-up tests. I found myself poor at grammar and planned to do more remedial exercises. (Student C)

I did not do a very good job at the 2nd test. The reason for this is that I was very careless and submitted my answer 20 minutes before the due time. I did not work hard as much I did at the beginning of this semester and did not have a serious attitude towards the test. (Student D)

In their journals, two of the education majors say there are "a lot of pressure from the professional courses and a lot of homework". They also complained about the computer-based

tests and claim that they can do better on paper tests. When they are doing the paper tests they can take notes and underline the difficult parts, but when they are doing the computer-based tests, they can only read the screen and remember what they read.

3.3. Discussion

The above results from those tables and students' journals demonstrated that the diagnostic tests and our remedial instruction helped students to make progress to a certain extent. The computer class made obvious progress in the reading ability development and reading subskills of general ideas, details and while the pre-education class made smaller progress in their improvement of reading ability and reading subskills.

It is interesting to note that the two classes differ in the rate of their progress. The preschool education class appears not to make as much progress as the computer class does. One of the reasons is, according to one education student in the reflective journal, that the education majors have been very busy attending lectures, and visiting kindergartens to improve their professional skills ever since they came into college. Hence, they have little time for their English course. Plus, students who are accustomed to paper tests have to learn to do computerized tests. They still need time adapting to those tests.

In addition, as found in the reading questionnaire, most of the students are instrumentally motivated in learning English. Having just graduated from a junior college or returned from the army, students entered a totally different environment. The Udig test, as a means of low stake examination, does not create as much test anxiety as final examinations. Without any examination worries some of them are not likely to make efforts to do more reading practice.

The researcher also notices from the Tables that the remedial activities and learning do not make a significant difference in some skill items as expected. For those low-proficiency students like veteran soldiers, without sufficient language knowledge, skill training alone does not help much (Dong Lianzhong, 2022). Therefore, for higher-level skills such as understanding different opinions and logical relationship between ideas, those students have not made any progress in 2nd diagnostic test. Their language problems are not solved within 3 months of training.

4. Implication and Conclusion

The experiment proves the practical value of Udig tests. It strengthens the teacher's ability to collect, interpret and use the feedback to adjust their teaching plan to learners' need. Udig tests help teachers to know the weakness and difficulties of the reading subskills in the whole class. The teacher in the experiment started a text-based remedial instruction and encouraged students to make use of the skills they learnt in doing extracurricular English reading. The activities are in line with the basic elements of diagnostic tests: diagnostic tests; feedback; remedial teaching. As a result of remedial instruction, the teacher improved the ability of evaluation and assessment.

On the part of students, the diagnostic report not only enabled them to identify deficiencies, understand their reading level, but also learn to monitor and evaluate their

learning needs, set achievable goals and plan their learning activities. In this process, students learnt to be responsible for their learning. Therefore, they not only improved ability of self-assessment and self-monitoring but also their reading ability.

Although both teachers and students benefitted from the remedial instructions and learning activities it is obvious that much more work needs to be done to make sure that everyone can benefit from them. For low proficiency learners, they need to have more individualized assistance in their language learning strategies and overcoming their language deficiency. For advanced learners, they need to be pushed to practice higher-level language tasks in order to improve their language competence. Further empirical research needs to be conducted in other classrooms and in other contexts.

Acknowledgment

This research is supported by the School Level Teaching Research Project of Zhejiang International Studies University.

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