

# A construction of an autonomous vocabulary self-study system aided by the web pages

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## Abstract

The thesis conducted a survey to confirm the hypothesis that vocabulary is the stepping stone in English Study to have an innovative application of modern educational technology to enrich the ways, methods and devices of enlarging the students' vocabulary. From the survey, it is easy to see that the hypothesis is true and the most students of the researcher felt vocabulary affected their motivation and interest in English study. So it is necessary to enlarge the vocabulary of the students in order to promote their application ability of foreign language. Vocabulary study is a process of self-study, and based on the theory of English study, the researcher has designed an autonomous vocabulary self-study system aided by the web to give flexible help for the students. The research is at its designing period and needs further assessments with a case study.

*Keywords:* construction, vocabulary, autonomous, system, web

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## 1 A survey

English teaching and studying is comprehensive and it ranges from listening, speaking, reading, writing to translating. How to deal with the relations among the preceding five aspects in language skill improvement is what an English teacher should consider [1]. A survey was carried aiming to the question--“What is the most overwhelming element that affects your motivation and interest in English study, listening, speaking, reading, grammar or vocabulary?” Interviews of 123 students were made by the research to decide the teaching emphasis in the following term. The result shows 64 persons (48.12%) thought vocabulary was their big headache; 21 persons (17.07%) listening; 18 persons (14.63%) speaking; 13 persons (10.57%) reading; 7 persons (5.69%) grammar. From the investigation it can be easily seen that most of the students felt vocabulary was the impeding element in their English study. According to the interview result, the emphasis would be put on vocabulary study in the following teaching. However, memorization in most cases needs autonomous completion, and the teacher's task is to provide students environments and guidance. Technology is the productive force of education. Modern technology means the application of modern educational theory and the results of modern science and technology, especially the information and Web technology on the basis of the computer. Modern educational technology is the re-modification, reformation and derivation [2]. In this research the vocabulary study automation is designed based on the web pages, the integration of the teacher's personal web pages and online dictionary web pages.

## 2 The cutting point of the vocabulary source

According to *the General Requirements of College English* the College students should at least have a vocabulary of 4,795 words and 700 phrases, among the 4,795 words, 2,000 words are active words which are required to be applied skill fully in speaking and writing. *The Requirements* also gives the standard which the students should achieve in listening, speaking, reading, writing and translating. It means the vocabulary *the Requirements* regulate is reasonable for certain English level. For example, the regulations for writing in *the requirements* like the following:

1. To be able to complete the general writing task and give a description of personal experience, feelings and happenings etc.
2. To be able to give common practical writings.
3. To be able to write a complete coherent composition of not less than 120 exact words within half an hour based on the outline and general topic, which has a clear theme.
4. To be able to master the basic writing skills [3].
5. From teaching experience of many years, many students cannot even remember the words in the text, let alone the flexible application. So the research designs vocabulary tasks from the actual conditions of the students. In the textbook, *Experiencing English*, there are 16 passages containing 8,320 words. In the 8,320 words, about 600 words are the new words [4]. From *youdao* software the 600 words can be enriched with large amount of information for the student's reference. The teacher will design practice which will be sent to

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the teacher's personal Web Pages. Generally there are two kinds of practice, multiple choices and gap filling. In the practice the stem is from the text, and the choices are from the word lists of the text book. The students are advised to do multiple choices before the text study and do gap filling after the text study. When they do practice on the platform of the teacher's personal Webpage, they are suggested that *youdao* software be used.

### 3 Theoretical background

Human recognition is closely connected with context. In broad sense context indicates the social atmosphere of humans and the physical environment of survival, and in narrow sense it indicates the structure of the passage and the relationship between words. The contextual elements are connected with the target study materials in a meaningful way. When the target information is coded, the contextual information is also coded in the same way, so the contextual information becomes the explicit clue. According to the theory of context dependent memory, the environment of memory occurrence has a big effect on the effectiveness of memory [5]. A word can be remembered alone in one second and forgot in one minute. If the context of the word occurrence is provided, the time spent to memorize it is a little longer, but it can be changed into long-term memory, so the effectiveness of word memorization would improve. Because the students know the context of the word occurrence which serves as the explicit clue in memory, they can always associate the context with the target word. Thus what the students remember is not the single word, but the context which is coded in the same way in reminiscence. In this research, the design of the vocabulary tasks is based on the theory of context dependent memory and the contexts of the new word occurrence are offered via the teacher's personal Web Pages and *youdao* software.

### 4 The construction of an autonomous vocabulary self-study system aided by the Web Pages

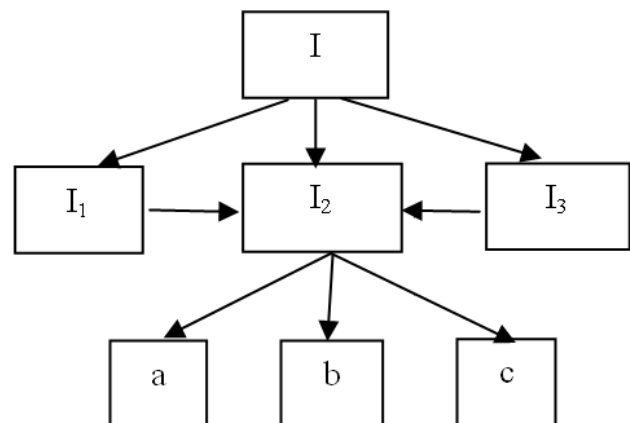
Vocabulary study automation in this research means students study vocabulary aided by automatic Web Pages without the supervision of the teacher. The rapid development of the Web provides the powerful tool for language learning. In vocabulary study Web serves as both information carrier and information source which is a platform that information can be put on and gained from. The research catches the characteristic of Web to design a system to assist the students to remember vocabulary in and out of the text book. In this system two kinds of Web Pages are involved, online dictionary Web Pages and the teacher's personal Web Pages. The employment of the online dictionary can be used directly, but as for the

teacher's personal Web Pages, the technical problem is still needed solving.

#### 4.1 THE PERSONAL WEBPAGES ARE CONNECTED

Not all the people can have a construction of personal website, but they can have their own Personal Web pages which depend on the whole Web system. With the popularization of the Web, the personal Web Pages can reach everyone. Personal Web Pages are popular, convenient, and flexible which provide good conditions for their application in teaching. It is easy to have an account of your own Personal Web Pages; however, there are technical problems, too. The personal Web Pages cannot be altered freely to suit your own needs. For example, the layout of it cannot be freely adjusted. This is why some teachers just use them to send e-mails or talk with the students via QQ. Therefore the glaring problem is that the personal Web Pages are scattered, and apparently they are not in a system.

Teaching and learning are interactive which are in a system [6]. How to make the scattered Web Pages into a system is a point in case to solve the technical problems. The personal Web Pages are in fact in a system, too, which escape the people's eyes because their apparent scattered traits. The following figure shows the connection among the Web Pages.



Connections among the WebPages

FIGURE 1

I=QQ account passageway; I<sub>1</sub>=contact list page;  
I<sub>2</sub>=Q zone homepage; I<sub>3</sub>=email-box page;  
a=the owner's words; b=the message board; c=QQdiary

From the above figure, we can see the personal Web Pages are interrelated that construct a recessive system that needs to be discovered the technical connections. In the recessive system, we cannot change the general layout, but we can make a creative use and add items.

4.2 YOUDAO ONLINE SOFTWARE  
AUTOMATICALLY PROVIDES NEEDED  
INFORMATION

*Youdao* translation is China's largest free online translation which carries 23 million examples and 1.8 million encyclopedia articles with one-stop knowledge inquiry platform [7]. *Youdao* translation provides new video examples, including international prestigious public class and America and European classic film video examples make users to experience pure English. The recurring audio examples are from the English original radio recording are authoritative.

It is the first time that *Youdao software* supports IE9 browser bingmuquci function. Cross word definition function in the software is strengthened comprehensively, and, you can easily get translated results and more information with the mouse choosing paragraphs, long sentences and phrases. It is more helpful that there are bilingual examples with explanations word by word and controls sentence by sentence. *youdao* translation provides an ocean of information.

4.2 THE DESIGN OF THE VOCABULARY STUDY  
AUTOMATION SYSTEM BASED ON THE  
INTEGRATION OF THE TEACHER'S  
PERSONAL WEBPAGES AND YOUDAO  
ONLINE TRANSLATION SOFTWARE [8]

The scattered Web Pages can be built into a recessive system which is built the further connection in some way with the online dictionary Web Pages into a vocabulary study automation system.

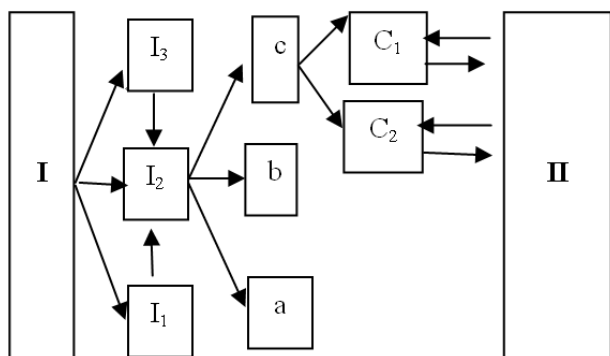


FIGURE 2

I=QQ account passageway; I<sub>1</sub>=contact list page;  
I<sub>2</sub>=Q zone homepage; I<sub>3</sub>=email-box page;  
a=the owner's words; b=the message board; c=QQdiary;  
C<sub>1</sub>=multiple choice; C<sub>2</sub>=gap filling;  
II=*youdao* online dictionary interface

In this system the personal Web Pages and *youdao* online dictionary Web Pages can all be clicked. According

to the concrete demand the needed Webpage is shown and restremain inactive. The teacher's personal Web Pages are the main part of the system and *youdao* online dictionary Web Pages are ready for use as assistance. Web Pages Qzone can serve as a center, and the column of "the owner's words" can serve as a notification board which provides vocabulary practice information; the message board for communication or left message. QQdiary for the vocabulary practice carrier. On the contact list page, communication and submission can be done. Email-box page submission and off-line communication.

In this system C<sub>1</sub> (multiple choices) and C<sub>2</sub> (gap filling) are concrete practice contents sent by the teacher. Multiple choices should be done by the students before the text study. The disturbance terms are from the new word list in other texts, so the students can consult *youdao* online dictionary to find out the equivalent meaning of the choices and choose the best one responding to the sentence context. Gap fills for enhancement of the new words after the text study. The students are supposed to master the words in the text, but it is possible that the students still need to consult the online dictionary for enhancement.

5 Assessment of the design

The research aims to exploit the Web technology to innovatively enrich the ways, methods and devices of enlarging the students' vocabulary. The scientific, practicability, efficiency and popularization of the design of the vocabulary study automation system based on the integration of the teacher's personal Web Pages and *youdao* online translation software should be checked in the practical study. In order to prove the value of the study, questionnaires, observations, visits, diaries, comparisons, and the analyses and summaries will be done through the device of materiallization and quantization. The scientificity of the design of vocabulary tasks will be analyzed by using social science statistics software.

6 Conclusion

The present research is going to be carried out in the following term. The subjects are the freshmen the researcher will teach. During the process of implementation it is possible that the necessary improvements of the design will be made, though the proof materials haven't been made. However the expected effects are in following aspects: The English vocabulary of subjects is enlarged much; Vocabulary expansion indirectly promotes students' language application ability; the original application cases of the online vocabulary study automation system resources are formed; the results of the study can be shared and discussed with the fraternity. With the implementation of the study, the research will provide further reports.

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