



# English Teaching Design in Language Learning from Pascal's Error Checking Function

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**Abstract.** Because the computer has a strong logical judgment function, it is completely possible to use the computer to realize the selective self-test function. English self-test system is a kind of application software. Designing application software on computer is to write application program with computer language. There are many kinds of computer languages, such as basic FORTRAN, COBOL, C, P/1 and APLF. The computer languages configured on different machines are not the same. But most machines are equipped with basic, eortran and Pascal languages, among which Pascal is very suitable for writing application software.

**Keywords:** PASCAL · English · Classroom teaching · Teaching design

## 1 Introduction

At present, computers, especially microcomputers, have penetrated into all fields of human society. National defense, scientific research, culture and education, production, finance, health, management, transportation and even personal family life, such as financial management, stock market investment and Internet access, are inseparable from computer services. For non computer professional users, the current application platform such as Windows 98 and windows 2000 provides a very friendly interface [1]. The computer can provide the user with accurate information in the form of Chinese from the start to the operation. However, for students majoring in computer science and related majors, English is essential in the whole learning process, from DOS operation to reading of computer system configuration information, from learning algorithm language to reading application software tips and information, from reading prompt information in the process of hardware and software installation to visiting English websites, In particular, algorithm languages, such as basic, FORTRAN ALGOL, cobal, Pascal and C, are all native to English.

Take Pascal as an example, from programming to debugging menu operation, error message prompt reading to understanding of heip content, all are in English. Due to the characteristics of the computer itself, some of the information can't be translated into Chinese. At the same time, every command, every sentence and even every symbol of the computer need to occupy a certain space in the memory. Starting from the principle of saving, the computer usually uses the abbreviated form when storing and displaying the information. The statement is very simple and professional, Therefore, it is necessary

and beneficial to learn English well while mastering professional knowledge, even in the process of learning professional knowledge. This paper will take Pascal as an example to make a detailed discussion.

## 2 The Application and Understanding of English in Pascal

Pascal was proposed by N. Wirth of Switzerland, but it was written in English. Its most basic constituent units retain words, identifiers, standard functions and statements, all in English.

### 1. Reserved words

Pascal language has 35 reserved words. They are as accurate as possible, but they express their meanings in very concise or even abbreviated forms. The reserved words directly quoted from English original words are as follows:

If, in, Bel, nil, not, of, or, packed, procedure, program, for, repeat, Set, Then, to, type, until, when, with.

In these reserved words, except for with sentence and procedure, the meanings of the rest are completely faithful to the original English.

The abbreviations of English words are used as reserved words:

Const (constant), div (divide, divide), MD (mu remainder, correction) and Var (variable).

### 2. Standard Identifier

Like reserved words, standard identifiers use English original words or abbreviations to express their meanings.

Such as false (false), true (true), integer (integer), real (real number), text (text), input (input), output (output), OD (odd), round (four in five), Read (read), with (write) and so on:

For example, char (character character), abs (absolute value), EOF (end of file), eoln (end of line), RD (ER order), PRD (padding leading), C (OD following), Sr (square), SGPT (square root square root), writeln (write line to write line skipping) are the abbreviations of English words to express the exact meaning.

It can be seen that reserved words and standard identifiers are basically based on the original English words, and these words are the primary common vocabulary of English. Therefore, if learners have a certain foundation of English, they can master these important elements in a short time, achieve twice the result with half the effort, and lay the foundation for learning complex procedures.

### 3. Statement

Pascal's program sentences express the idea of program design with very concise and accurate English syntax. The better the English grammar foundation of the learners is, the more accurate they can grasp the writing method of the program.

First of all, taking various loop statements as examples, let's look at three examples:

(1) for i:=s 1 to 10 do

Read from English, that is, "for the (for) loop variable I from 1 to 10 (1to10) do (do) loop". Simple and clear.

(2)while n<=100 do

When (will) n <= 100, do (d) loop

(3)repeat

.....

until n > 100

Repeat the loop until (UIL) n > 100. Some beginners don't understand why the while statement makes a loop when the condition is true, while the CPE statement does a loop when the condition is false. This shows that they do not have a good command of the English original meaning of "when, especially uni". Until means "always do it at the time point or condition point after until" [2]. Therefore, when the condition after UMT is false, that is, when the condition is not met, the loop must continue. Only when the condition is true can the loop "stop here", that is, "end cycle".

The mathematical formulas used are as follows:

Mobius function  $\mu$ :

$$\sum_{d \setminus n} \mu(d) = [n = 1] \tag{1}$$

Euler function  $\phi$ :

$$\sum_{d \setminus n} \phi(d) = n \tag{2}$$

The relation between Mobius function and Euler function is as follows:

$$\sum_{d \setminus n} \mu(d) \frac{n}{d} = \phi(n) \tag{3}$$

The approximate number of functions is d:

$$d(ij) = \sum_{x \setminus i} \sum_{y \setminus j} [\gcd(x, y) = 1] \tag{4}$$

Using the properties of Euler function 1:

$$\gcd(i, j) = \sum_{d \setminus \gcd(i, j)} \phi(d) \tag{5}$$

However, this formula is rarely used. When gcd appears, it is usually enumerated directly, rather than converted into Euler function. 2:

$$[\gcd(i, j) = 1] = \sum_{d \setminus \gcd(i, j)} \mu(d) \tag{6}$$

### 3 The Special Importance of English in Computer Field

Through the above description of the functions of English in Pascal and other algorithmic languages, the importance of English in the whole computer field can be seen. A computer major student, in addition to the algorithm language, but also contact such as DOS operation, hardware and software installation and debugging, object-oriented programming language, network and some important application software such as AutoCAD, Photoshop and so on. In this process, the ratio of prompt information and sentence input in English is the same [3]. For example, the configuration information of the computer system is given in the form of a table in English culture.

If you don't understand English, you can't read or modify the configuration. For example, in AutoCAD, although there are Chinese culture drop-down menus, because there are hundreds of menu columns, it will be very cumbersome if the input of each command depends on the menu command, it is much more convenient to use the quick input method of English word abbreviation for common commands; in the process of in-depth mastering the function of application software and when encountering problems, it is necessary to read English prompts and consult help content, which requires students to have solid English skills. Without good English, it is unimaginable to master an application software and use it freely.

### 4 Simulation with Learning Methods of Computer English

1. For the commands and information composed of various abbreviations or original English words, we should not only memorize their Chinese meanings in the computer field, but also trace the source words and accurately grasp their original English meaning and derivative meanings in the professional field, so as to firmly grasp and grasp their usage [4]. When necessary, we should also use the method of root and affix to discuss. For example, a simple command like del in DOS comes from the English word delete, meaning "delete", so del means "delete". Deltree can be seen as delete the tree, that is, delete the tree (of course, not a tree, but a tree graph, branch graph) and delete, and more complex, such as the pred command in Pascal, comes from the English word "pre", meaning "before", With the root DCE, it means "guide, guide". Therefore, in Pascal, reduce is simply PRED, which means "leading". Therefore, in Pascal, it means "seeking the meaning of the previous variable of an ordered variable". However, there is no word "produce" in English dictionaries, which requires learners to infer based on their knowledge of English root affixes [5].

2. In the process of language learning, combined with its own grammar and morphology, analyze the meaning of sentences in programming language, and grasp its usage logically rather than memorize it [6].

3. Extensive reading of computer English textbooks, covering the professional vocabulary of various fields of computer, from the basis of computer software and hardware, to design methods, to operating systems, to computer applications, such as office automation, computer-aided design and manufacturing, multimedia, artificial intelligence, computer graphics, The network and other aspects of the article should read more, master professional vocabulary at the same time, but also familiar with the writing methods

and characteristics of professional English, such as in order to emphasize objectivity, strictness and conciseness, passive voice, analysis of sentences and a large number of abbreviations and so on.

The simulation of learning effect is shown in Fig. 1 and Fig. 2.

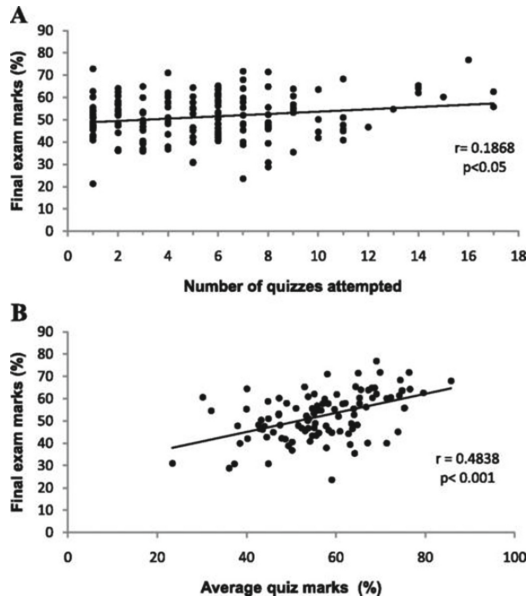
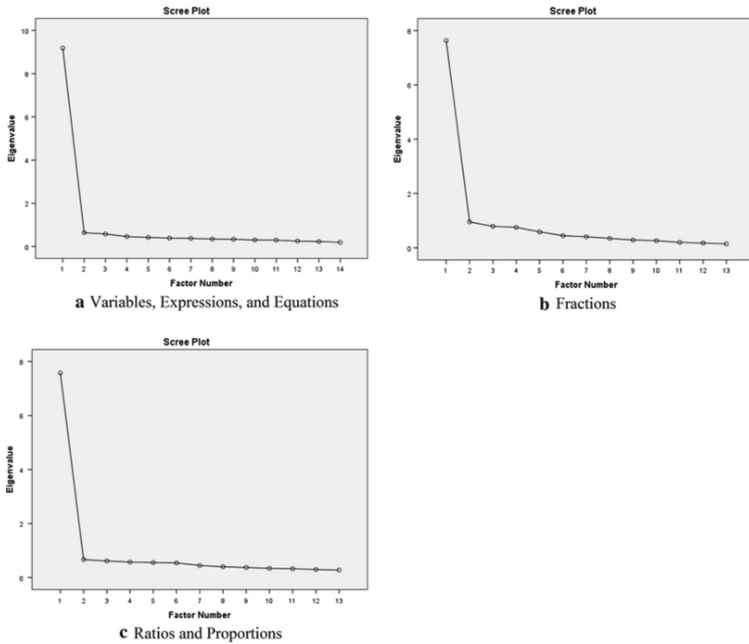


Fig. 1. Quiz simulation results

## 5 Quantitative Research on the Feasibility of Integrating Network Resources and Mobile Technology into Oral English Course

Integrating network resources and mobile technology, this paper discusses the experimental feasibility, demand feasibility, acceptance feasibility and technical feasibility of integrating it into oral English course [7]. The specific research methods are questionnaire method in descriptive research method and natural teaching experiment method in experimental research method: mainly discuss the feasibility of integrating the language learning function of network resources and mobile technology into oral English course, and for the interactive auxiliary effect of communication function of mobile technology on oral English course, predecessors have done a lot of research [8]. It has become a consensus that the communication function of mobile technology has a great auxiliary effect on the interactive teaching. The mobile technology discussed in this part focuses on the multi-modal information display function, multi-modal information editing function and interactive function of mobile technology in oral English teaching and learning [9].



**Fig. 2.** Simulation results of factors affecting score

## 5.1 Quantitative Analysis of Acceptability Feasibility

Network resources and mobile technology assisted oral English course has its feasibility of acceptance. It is mainly reflected in the following aspects: first, the vast majority of contemporary college students affirm that the network resources or mobile technology can effectively assist oral English learning. Secondly, the course of spoken English assisted by network resources and mobile technology has a certain user base. Second, the network resources and mobile technology have been used to assist oral English learning, and the cognitive adaptability is high. Based on the above three points, the potential acceptance of fnmalls is already very high.

The feasibility of nma-usc is directly proportional to the acceptance of fnmalls, and nma-usc has its acceptance feasibility. The quantitative analysis of acceptability and feasibility is shown in Fig. 3.

## 5.2 Quantitative Analysis of Feasibility Based on Teaching Experiment Method

In order to avoid the influence of other factors in the pre-test, the students are not informed of the experimental situation in the classroom before the experiment, and in the early stage of the experiment in another parallel class that did not participate in the experiment to confirm whether similar experiments have been arranged in other courses. There are three research tools in this part of the feasibility study [10].

1) Objective oral test objective oral test is used to collect the learning effect after the end of oral English course, which is presented by the students'specific total score. There

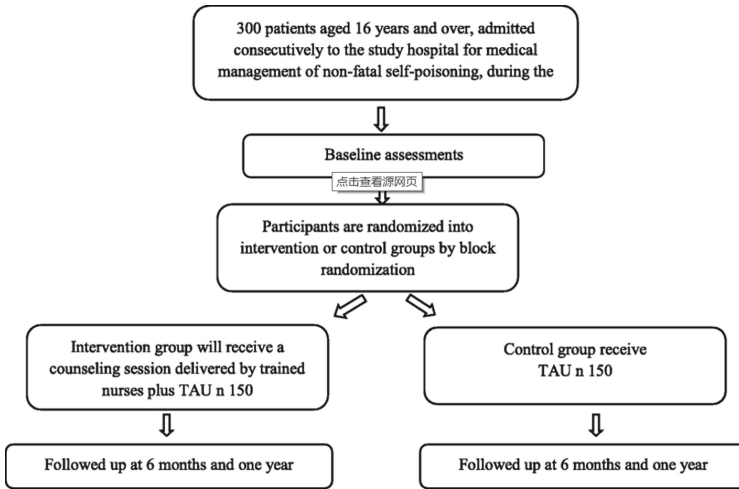


Fig. 3. Quantitative analysis of acceptability feasibility

are five questions in the oral test: the first is question and answer sentence reading, the second is declarative sentence reading, the third is long and difficult sentence reading, the fourth is situational question and answer, and the fifth is topic question and answer. In order to avoid the fuzziness of scoring, each scoring point adopts dichotomy.

2) According to Trifonov A and ronchetti, the time of single mobile learning should be controlled between 30 s and 10 min!. The previous NMA course content is aimed at the network resources, using mobile technology retrieval, after screening, 30 effective NMA course contents are obtained (the average duration of a single network resource is 58s, SD = 1.04).

3) The functions of cross tabulation, independent sample t-test and paired sample t-test of spss190 are used to analyze whether there are significant differences in the specific scores of the two groups.

## 6 Three Dimensional Framework of Oral English Course Design Assisted by Network Resources and Mobile Technology

### 6.1 Three Dimensional Framework of Oral English Curriculum Design

The three-dimensional framework of oral English curriculum design is based on the comprehensive summary of previous studies on oral English curriculum design from different perspectives [11].

It divides oral English curriculum design into “oral English curriculum principles, needs analysis, environment and teacher-student decision framework”, “four elements circulation framework of oral English curriculum design” and “factors framework of oral English curriculum design”, It also describes the relationship between the three categories and constructs the three-dimensional framework of oral English curriculum design.

These three categories have the characteristics of circulation, advance, decisive, integrity and dynamic. Circularity is reflected in the elements of oral English curriculum design, and the four elements are the dynamic process of circular design and continuous improvement; Decisiveness refers to the decisive role of the parallel framework in the whole process of the four elements of the round framework of oral English curriculum design elements; integrity and dynamism reflect that oral English curriculum design is a continuous cycle of development, revision, redevelopment and revision, in which all the contents of curriculum design are interrelated, Nonlinearity, mutual adjustment and adaptation are the norm [12].

## 6.2 A Cycle Framework of Elements in Oral English Curriculum Design

Oral English course objective design oral English. Curriculum goal design refers to the specific goals and intentions of oral English curriculum itself in the three aspects of “knowledge and skills”, “process and method” and “emotional attitude and values”, which is the most important criterion to guide the whole process of oral English curriculum design.

“Knowledge and skills” is not to be ignored in teaching, it is the premise for students to master the “process and method” of learning, but also the basis for students to form positive “emotions, attitudes and values”. Method is ability, and method is a tool for people to benefit for life. Process is the media that produces value. Without process, there will be no development of cognition [13].

Without process, there will be no sublimation of emotion, attitude and values. “Emotional attitude and values” refers to the cultivation of students’ correct learning attitude, high moral sentiment, positive attitude towards life and correct values based on the development of students [14, 15].

The goal design of oral English course should first clarify the general requirements of the country for oral English course, and the connection between oral English course and national English education, school English ability training objectives, so as to ensure that the oral English course design can reflect the general requirements of the country for English course teaching from the curriculum objectives, and combine the characteristics and advantages of the school with the training requirements [16].

## 7 Conclusion

Through the above examples, it is not difficult to find out the tasks that can be completed by using Pascal’s powerful big data processing function combined with Pascal, especially in the later data processing of instructional design, Pascal plays a more important role, greatly saving production time and improving data quality, which is due to the importance of instructional design in language learning.

The research on College Oral English curriculum design assisted by network resources and mobile technology has important guiding significance for oral English and curriculum design, oral English ubiquitous learning in the information age, and has important enlightenment for oral English teaching design and other English subjects teaching.



In theory, the research on College Oral English curriculum design assisted by network resources and mobile technology expands the source of knowledge and technical conditions of oral English curriculum design from online video courses such as MOOCs and micro courses and computers to the practice of completely open massive network resources. It describes and designs the focus and curriculum tools of oral English curriculum design at present, It is of guiding significance to the teaching practice of contemporary oral English. At the same time, it uses quantitative and qualitative research methods to demonstrate the auxiliary feasibility of integrating network resources and mobile technology into oral English course, and explores the constituent elements and improvement path of fragmented mobile language learning ability, It can be used for reference to the specific design of each component of contemporary oral English course, the organization of oral English teachers' teaching methods, and the choice of oral English learning strategies of contemporary college students.

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