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Computer-assisted business english teaching theory and practice exploration

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ABSTRACT

Computer-assisted teaching not only gets involved in information techniques but also is related to teaching method, contents, resources and environment, under the guiding of new pattern education, it explores how to apply computer in business English learning designing new pattern teaching in computer-assisted business English teaching. Based on this thought, the paper discusses computer business English teaching mode, by carrying out comparative analysis of traditional business English education mode with computer-assisted business English teaching mode, it gets that adopts such way will transform teachers-centered, books-based traditional education mode, let students to better understand and grasp business English linguistic characteristics and requirements, and by adopting fuzzy mathematics way, it makes evaluation and gets that traditional education mode is not fit for current social development, on the contrary, computer-assisted business English teaching mode is more popular among students and society, after that by traditional and computer-assisted business English teaching mode, it carries out experiment exploration, and gets good effects.

KEYWORDS

Computer-assisted teaching; Business english; Comparative analysis; Fuzzy evaluation.



INTRODUCTION

Medium occupational business English course is one of important courses in business English course, though many teachers have made many efforts, it is still not satisfying, just in such background, computer popularization lets business English teaching mode to being rapidly changed, computer-assisted business English teaching way is extensively recognized that has epoch-making historical significance.

Regarding business English's computer-assisted teaching utilization research, many people have made efforts and got certain achievements, such as Wang Xu-Zhong in business English multi-media adaptation applied effects, he proposed to establish four kinds of collaborative ways in multi-media computer-assisted teaching environment, and pointed out that adopted multi-media assisted business English teaching was beneficial to promote students' business English grasping ability, after that targeted at primary schools adopting multimedia computer-assisted teaching mode, he made analysis, and put forward that primary school could not fully abandon traditional teaching mode but mutual combine traditional teaching with computer-assisted English teaching so that could better fit for contemporary business English teaching; Yan Zhi-Ru in computer-assisted business English practice, he proposed the theories and significances of constructing business English computer-assisted teaching mode, and discussed business English teaching contents.

The paper just on the basis of formers research, targeted at computer-assisted business teaching mode, it makes further analysis and research, by applying questionnaire survey, comparative analysis, mathematical statistics and fuzzy mathematics as well as other methods, it researches, and finally gets reasonable results to provide theoretical supports for future researching business English multi-media assisted teaching research.

COMPUTER-ASSISTED BUSINESS ENGLISH TEACHING THEORETICAL RESEARCH

Contemporary business English teaching features

Business English, as its name suggests, it is a language that applies in business environment, it belongs to one kind of specialized business English, it was found in sixties of last century, due to second world war, many countries economy suffered serious recession, to get rid of miserable situation after war, pick up, develop economy, it should strengthen exchange and communication among countries, due to under circumstance of that time, America took the leading position in economy and politics in the world, the country language —English would become general used one kind of language in international business exchanging, and with economic rapidly development, English not only as one kind of discipline to learn but also more application of it is used as a media in business communication, before sixties of last century, English mainly focused on grammar and sentence pattern explanation, but after that, with development of science and technology, gradually converted grammar and sentence pattern into practical communication, because people recognized English expressed meanings were exactly different when confronting to same affairs in different occasions and occupations and so on, special usage English focused on teaching contents rather than teaching methods, highlighted occupation and language combination as well as learners demands and language practicability matching.

Traditional English teaching mode research

Traditional business English teaching features are taking teacher as main axis in the class, defining students' time and address such passive teaching mode, due to the passive passing on knowledge, it leads to great waste of knowledge.

Someone had every divided traditional teaching mode into several kinds, they were respectively social contact type, personality development type, behavior system type and information processing and so on, the teaching mode features is:

- ① By lots of learning, it can promote students technological level;
- ② By teachers' explaining, it can let students to fast enter into learning state;
- ③ In teaching process, traditional cultural science partial efficiency is higher that is convenient for teachers' organizing and management.

But it has many limitations:

① In lecturing process, teachers relative focus on knowledge application and summary, therefore it affects students' intelligence development, knowledge transfer ability cultivation, so that cultivated learners cannot adapt to future social development.

② In teaching process, lack of knowledge detection and feedback, knowledge information feedback link is not smooth, which causes purposes are not clear.

③ Carry out teaching by equal speeds, it causes students to appear bigger differences that is bad for implementing optimized teaching method.

④ Teachers always pass on in platform and ignore students themselves participation, and from which it will cause students' disconnection phenomenon occurrence and then affect students' learning effects and quality.

Contemporary computer information-based teaching mode research

Interact teaching's multiple factors and then forms into teaching mode, computer information-based teaching mode is established multiple factors mutual restricted and correlated stable theoretical teaching model in present modernized information technology, from which main influence factors are teaching sources, teaching environment, teaching objects and educators themselves, under rapidly developed computer information development supports, teaching confronts to whole

individuals, classes and groups, by information technological application, classify them into teaching, information and according to three kinds of teaching modes, from which computer-assisted teaching mode contains:

- i、Network collaborative English learning, features are carrying out business English learning in virtual business English learning community, explorative typed with groups as unit;
- ii、Computer-assisted learning, features are transferring imparted courseware to students by assisted way to propel to learning tools fully utilization;
- iii、Computer-assisted teaching, features are presenting courseware contents by multi-media way, and training by simulation.

COMPUTER-ASSISTED BUSINESS ENGLISH TEACHING THEORETICAL RESEARCH

Interactive teaching mode analysis

According to education objects amount difference, it can divide interactive education mode into learner and learning content, learner and learner, learner and machine three teaching modes, and it can many to one, one to one and many to many as well as others several types, computer-assisted business English teaching mode highlights independent and collaboration, interactive learning, individualized learning, as following Figure 1 shows:

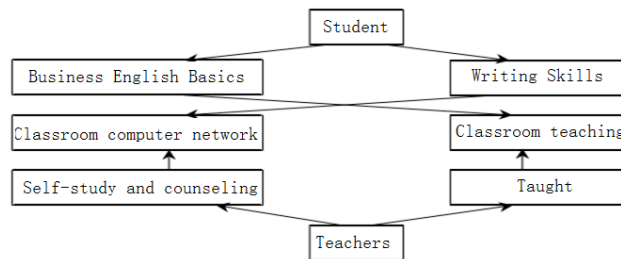


Figure 1 : Interactive teaching mode

The education mode is going on in the way of listening more and writing more, progressive controlling, and radio management.

Collaborative teaching mode

On the condition of computer-assisted, divide its teaching mode into collaborative learning, finding information, discussion and teacher guidance, corresponding relations are as following Figure 2 shows:

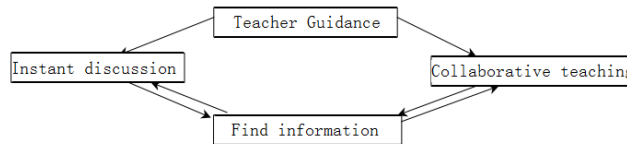


Figure 2 : Collaborative teaching model

The education mode puts students' learning in a kind of virtual environment, constructs a kind of learning business English way that uses business English to communicate, and then implements students and students as well as students and teachers interactive process.

For collaborative business English teaching mode, it adopts fulfilling homework, consult and answer questions, discussing issued and allocating homework and so on several parts, corresponding as following Figure 3 shows:

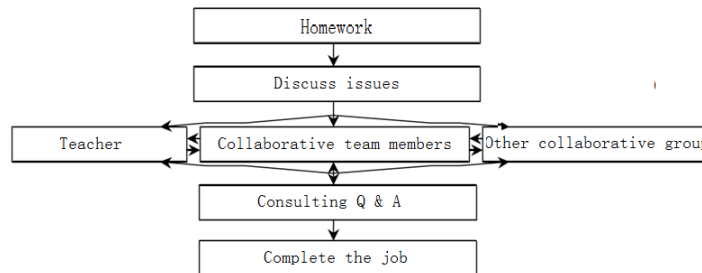


Figure 3 : Collaborative teaching model links

Except for above education mode, it also contains explorative education model that mainly contains process explorative education mode and resources explorative education mode, by online information, learners establish online searching mechanism in case possessing network communication technology so as to achieve higher learning effects.

BUSINESS ENGLISH EDUCATION MODE COMPARATIVE ANALYSIS

Concept of fuzzy mathematics was firstly proposed by American mathematician professor L.A.Zadeh, in the beginning, it was put forward for computer mathematics, through development, fuzzy mathematics have applied in each field. It can research on traditional business English education mode and computer-assisted business English education mode influences by fuzzy mathematics. Steps are as following:

Establish fuzzy matrix

For traditional business English education mode, computer-assisted business English teaching mode, interactive, collaborative and explorative teaching mode, it makes experts scoring and then sorts and gets three fuzzy matrixes that are respectively as following TABLE 1, TABLE 3, TABLE 3.

TABLE 1 : Collaborative

(Collaborative)	Very high	Relative high	High	Relative low	Low
P_1	0.38	0.21	0.19	0.14	0.08
P_2	0.45	0.17	0.2	0.12	0.06
P_3	0.4	0.18	0.13	0.28	0.01
P_4	0.28	0.24	0.25	0.17	0.06

TABLE 2 : Explorative

(Explorative)	Very high	Relative high	High	Relative low	Low
P_1	0.30	0.33	0.14	0.22	0.01
P_2	0.49	0.19	0.3	0.02	0
P_3	0.28	0.24	0.25	0.17	0.06
P_4	0.39	0.19	0.18	0.23	0.02

TABLE 3 : Interactive

(Interactive)	Very high	Relative high	High	Relative low	Low
P_1	0.26	0.32	0.15	0.19	0.08
P_2	0.18	0.48	0.13	0.17	0.04
P_3	0.29	0.16	0.22	0.21	0.12
P_4	0.50	0.21	0.16	0.11	0.02

Indicator weight calculation

Weight vector A , $A = (a_1, a_2, \dots, a_n)$, from which a_i represents business English indicators importance distribution. Weight can be obtained by hierarchical mathematical analysis method calculation.

Firstly use 1-9 numbers to construct judgment matrix, constructed judgment matrix is as following TABLE 4:

TABLE 4 : Judgment matrix

	P_1	P_2	P_3	P_4
P_1	1	2	1	3
P_2	1/2	1	1/2	2
P_3	1	2	1	2
P_4	1/3	1/2	1/2	1

Consistency test and weight vector

Judgment matrix consistency indicator CI , and judgment matrix consistency rate CR , their computational method is as following formula shows:

$$CI = \frac{\lambda_{\max} - n}{n - 1}$$

Among them, n represents judgment matrix order number that is also the number of comparison factors.

$$CR = \frac{CI}{RI}$$

When $CR \geq 0.1$, matrix inconsistency cannot accept, judgment matrix data needs to be adjusted. When $CR < 0.1$, judgment matrix can be thought to be consistency matrix, as TABLE 5.

TABLE 5 : Consistency test and weights result table

	P_1	P_2	P_3	P_4
w	0.356	0.194	0.325	0.125
λ			4.046	
CI			0.015	
CR			0.017	

Calculation result

By above method calculation, it can get vector A , fuzzy matrix. Compose A and R by utilizing composite operator $M(\bullet, \oplus)$, it gets vector $B = (b_1, b_2, \dots, b_m)$.

$$B = AOR = (a_1 \quad a_2 \quad a_3 \quad a_4)O \begin{pmatrix} r_{11} & r_{12} & \cdots & r_{15} \\ r_{21} & r_{22} & \cdots & r_{25} \\ \vdots & \vdots & \ddots & \vdots \\ r_{41} & r_{42} & \cdots & r_{45} \end{pmatrix}$$

Among them, fuzzy matrixes are totally five, and:

$$d_j = (d_1 \bullet_* r_{1j}) + (d_2 \bullet_* r_{2j}) + \cdots + (d_n \bullet_* r_{nj}), (j = 1, 2, \dots, m)$$

By calculating, it gets regarding reflection practice factor fuzzy evaluation vector

$$B_1 = (0.39 \quad 0.20 \quad 0.18 \quad 0.19)$$

Similarly calculate and can get other factors fuzzy evaluation vectors are respectively as following:

$$B_2 = (0.34 \quad 0.26 \quad 0.21 \quad 0.17)$$

$$B_3 = (0.28 \quad 0.29 \quad 0.17 \quad 0.18)$$

$$B_4 = (0.30 \quad 0.22 \quad 0.19 \quad 0.19)$$

$$B_5 = (0.2106 \quad 0.1973 \quad 0.2072 \quad 0.2059)$$

Set that in each education mode table, factor weight is:

$$\alpha = (0.2 \quad 0.2 \quad 0.15 \quad 0.15 \quad 0.15 \quad 0.15)$$

For factor whole vector matrix and fuzzy evaluation obtained evaluation vector matrix, carry on calculation; calculate business English teaching mode influence, result is as following:

$$B = (0.31 \ 0.23 \ 0.19 \ 0.19 \ 0.08 \)$$

By above result, we can see that in computer-assisted business English education mode, collaborative education mode recognized people amount is 31% of total number of people, according to fuzzy mathematics maximum membership principle, judgment result is very high, and traditional business education mode is relative lower. To further analyze, it carries out experimental research certification.

COMPUTER BUSINESS ENGLISH TEACHING MODE PRACTICAL EXPLORATION

Firstly make comparison of teaching ways, randomly find out 47 students from business English major classes as its experimental class, the class carries out assisted teaching by adopting computer, and then select 46 students as control class, the class adopts teacher traditional teaching mode, in addition the two classes students' business English levels are equal, contrast time is one term, in the final term, it carries out questionnaire survey on the two classes, every students from experimental class and control class engages in examination, total performance adopts hundred-mark system, obtained result is as following figure shows:

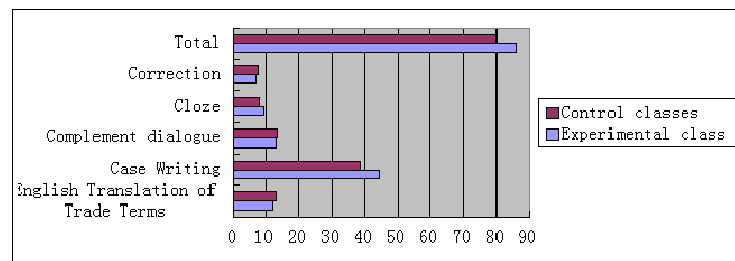


Figure 4 : Comparison of the average score map

By above Figure 4, we can clearly see that traditional business English teaching mode is weaker by comparing to computer-assisted business English, it shows computer-assisted teaching is well-received by most teachers and students.

CONCLUSION

The paper makes analysis and researches targeted at computer-assisted English teaching theory, gets that adopts such way will transform teachers-centered, books-based traditional education mode, let students to better understand and grasp business English linguistic characteristics and requirements, and by adopting fuzzy mathematics way, it makes evaluation and gets that traditional education mode is not fit for current social development, on the contrary, computer-assisted business English teaching mode is more popular among students and society, after that by traditional and computer-assisted business English teaching mode, it carries out experiment exploration, and gets computer-assisted business English teaching way can let students' learning efficiency to be great promoted, so author suggests to extensive popularize it.

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