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Effects of Cooperative Learning and Computer-assisted Language Learning (CALL) on the Performance of Cloze Procedure

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This study attempts to examine the effectiveness of computer-assisted language learning (CALL) and cooperative learning in the performance of cloze procedure. The CALL and cooperative learning are compared to the traditional worksheet and individualistic learning. Fifty eight Middle Six students were trained under four different learning conditions — (1) individualistic learning with worksheets, (2) individualistic learning with the computer, (3) cooperative learning with worksheets, and (4) cooperative learning with the computer — and underwent cloze procedure practices on two text structures — narrative and expository. An immediate post-test and a delayed retention test were given respectively.

No significant result was found on the post-test scores among all groups. However, in the retention test, it was found that the cooperative learning group performed significantly better than the individualistic learning group, and the computer group out-performed significantly those with worksheets in the individualistic learning group. Implications of these results were discussed.

本研究旨在研究電腦輔助語文學習（CALL）和小組合作式學習對英文填字測試表現的效果。本研究將傳統的工作紙式及個人式學習方法，與電腦輔助形式及小組合作式作出比較。58位中六學生被選派到以下四種不同的學習情況：(1) 利用工作紙作個人式學習，(2) 利用電腦作個人式學習，(3) 利用工作紙作小組式學習，及(4) 利用電腦作小組式學習，並進行填字測試練習。在練習之後，每位學生均接受一個即時的事後測驗及延時的記憶測驗。

分析的結果顯示四組學生在事後測驗的得分並無顯著的差異；但在記憶測驗之中，以小組合作式學習的組別之表現明顯較以個人式學習的為高。然而，在使用個人式學習之組別中，則使用電腦輔助學習的組別之表現，又較以工作紙學習的為佳。本文將會對這些研究結果（之含意）作出討倫。

Having large numbers of unmotivated students, traditional classroom teachers have discovered that regardless of how hard they try, it is difficult to maintain classroom order and enhance teaching effectiveness. Many have criticised the traditional mode of instruction as having contributed to the lack of motivation in capable students (Pratt & Moesner, 1990). In the traditional mode of instruction, the teacher is the sole instructor and controls all classroom activities, while students learn individually, independently of each other and do exercises competitively with paper and pen.

As it seems that the traditional mode of learning is less effective for students' learning nowadays, it is desirable to try out some other possible learning conditions that match the changing learning style of today's youngsters and to increase effectiveness. One of the major premises that educators agree on today is the need for developing effective methods and creating more productive learning conditions for young people. It was the purpose of this study to look at the effectiveness of traditional methods for the teaching of English as a second language and to provide valuable information regarding how other methods and learning conditions might as well be employed in the language learning of secondary school students. First of all, apart from the individualistic situation, in which there tends to be little communication and interaction among students, there are cooperative learning situations where group learning takes place, and where there can be frequent, meaningful and effective student-student interaction and communication (Deutsch, 1962; Johnson, 1980, 1986). So, cooperative learning is an alternative to individualistic learning .

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As said before, students are used to working with paper and pen in the classroom. With the development of technology, students become more and more familiar with the screen mode presented by the computer and so computer-mediated learning can provide an alternate learning condition in language learning.

In order to testify and justify the effectiveness of the above-mentioned learning conditions, a reliable task for testing has to be employed. In this case, the cloze procedure was used. The reasons for choosing the cloze procedure as the testing device are manifold. One of them is that the cloze procedure taps syntactic, semantic and socio-cultural meanings and can be most useful in measuring global skills in language. Therefore, the cloze procedure can be another technique for the teacher to use in finding out how well his students have comprehended a reading text (Li, 1986). In view of this, there is a continuing rise in the weighting of items for cloze procedure in the Hong Kong Certificate of Education Examination English Language Paper II (Syllabus B). Therefore, it is worthwhile to explore methods and learning conditions which can motivate better achievement in cloze performance. This study is to compare the efficacy of cooperative or individualistic learning conditions with or without computer assistance on cloze procedure performance.

The objective of this study is to investigate the effects of two learning methods, namely the Computer-Assisted-Language-Learning (CALL) and cooperative learning respectively, on English comprehension, as measured by the performance on cloze procedure.

Since the current research tends to investigate the effect of cooperative learning methods and CALL on language comprehension separately, it becomes difficult to compare the effectiveness of these two methods directly. Therefore, both cooperative learning methods as well as CALL were included in this study.

In this study, cloze procedures were used as a measure of students' language comprehension. Cloze procedure with narrative and expository text structure in both the traditional gap-filling as well as the multiple-choice format were used. All clozes were presented either in paper-and-pen (i.e. worksheet) or computerized manner.

The main concerns of this study were as follows:

1. To investigate whether subjects who have been exposed to computer-assisted training programme (i.e. CALL) perform better on cloze procedure than subjects who had practices with worksheets only.
2. To determine whether subjects trained with the cooperative learning method, where student-student interactions and group discussions are allowed, would perform significantly better on cloze procedures than those trained on an individual basis only.
3. To investigate the combined effectiveness of cooperative learning and CALL - whether the cooperative CALL is more effective than the traditional individualistic paper-and-pen mode of learning.

Method

Subjects

Fifty eight Chinese middle six students (24 males, 34 females) from the school where the first author taught served as subjects. Subjects were then classified into 3 groups, namely high, medium and low ability, according to their English proficiency with reference to their grades of Hong Kong Certificate of Education Examination (HKCEE) English language paper. Moreover, they were further classified according to their prior computer knowledge.

Design

This study was a 2 (computer vs. worksheet) $\times$ 2 (individualistic learning vs cooperative learning) factorial design with the following four conditions: (1) Individualistic learning with worksheets ; (2) Individualistic learning with the computer ; (3) Cooperative learning with worksheets ; and (4) Cooperative learning with the computer. Subjects matched for sex, English proficiency and prior computer knowledge were randomly assigned to the four conditions. The distribution of subjects is presented in Table 1.

Procedure

Subjects in all conditions were given five one-hour practice. During the practice hours, the computer groups did all kinds of cloze passages with the computer and readings on screen. For the individual-computer group, subjects were assigned a terminal and worked at their own pace. Subjects in the cooperative-computer group worked in groups of four, clustered around a terminal, with the highest language ability student as the group leader. Close observations were made to detect peer interactions. There was a training session of one hour to familiarise the CALL groups to the hardware and software.

For the other two groups, the treatment was similar to that of the two computer groups except

Table 1
Distribution of Subjects in Four Conditions

	Individualistic	Cooperative
Computer	N = 13 Female: Male 8 : 5 English Proficiency - High: Medium: Low 2 : 6: 5 Computer Knowledge - With : Without 9 : 3	N = 16 (4 groups) Female: Male 9: 7 English Proficiency - High: Medium : Low 3: 7: 6 Computer Knowledge - With : Without 9 : 3
Worksheet	N = 14 Female: Male 9 : 5 English Proficiency - High: Medium: Low 3: 5: 6	N = 16 (4 groups) Female: Male 9: 7 English Proficiency - High: Medium : Low 3: 6: 7

that, instead of working with a computer, they were all given worksheets with answers at the back to work with.

As subjects in the cooperative condition might not understand the rationale for learning in groups, they were given sufficient time to practise cooperative learning for the cloze procedure. Both groups held discussions over the choices for the deleted word. Three of them listened while one of them was explaining the suggested option for the cloze item. They exchanged ideas and were encouraged to elaborate the explanations with reference to the semantic and syntactic clues in the context.

Immediately after all practice hours were completed, a one-hour post-test was conducted. The post-test was similar to the pre-test in format (see Appendix A, B). When all subjects had finished, the teacher checked the answers in class with no explanation given. However, students were allowed to have a good look at their own worksheet. A sudden retention test of the post-test materials was administered three weeks later.

Results

The post-test and retention test scores were calculated by summing up the scores of all types of clozes tested. The means and standard deviations of the post-test and retention test scores were shown in Table 2.

Table 2
Means and Standard Deviations of Post-test and Retention Test Scores

Individualistic				Cooperative			
Worksheet		Computer		Worksheet		Computer	
Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Post-test							
35.00	8.88	36.58	6.78	37.56	8.16	37.44	10.04
Retention Test							
37.00	9.05	46.64	7.38	47.13	9.27	44.69	13.18

Analysis of variance (ANOVA) for the post-test scores and retention test scores (with pretest scores as covariate) was conducted for the two cooperative groups (i.e., the cooperative-worksheet group, and the cooperative-computer group) and the two individualistic groups (i.e., the individualistic-worksheet group and the individualistic-computer group) separately. No significant difference between the computer group and worksheet group on the post-test or retention test scores were found within the cooperative conditions.

Within the individualistic conditions, it was found that the computer group performed significantly better than the worksheet group in the retention test only [$F(1,21)=8.62$, $p<.01$], but not for the post-test [$F(1,21)=0.06$, $p>.05$].

In order to compare the overall effects between the individualistic and cooperative learning, the post-test scores between two individualistic conditions as well as those for the two cooperative conditions were combined into two new scores, with one representing the overall scores achieved under the individualistic conditions and the other for the cooperative conditions. ANOVA was then employed to these two scores. No significant difference between the scores was found, indicating that there was no differences in the scores between the cooperative and individualistic conditions.

Similar analysis was conducted for the retention test scores. Contrary to the findings for the post-test, significant difference was found between the scores for cooperative conditions and the individualistic conditions. On the whole, subjects in the two cooperative conditions performed better than those in the individualistic conditions in the retention test [$F(1,53)=4.60$, $p<.05$]. The means and standard deviations of the combined post-test and retention scores were shown in Table 3.

Table 3
The Combined Means and Standard Deviations of the Post-test and Retention Test Scores under Cooperative and Individualistic Conditions

	Individualistic		Cooperative	
	Mean	S.D.	Mean	S.D.
Post-test	35.79	7.77	37.50	9.00
Retention Test	41.42	9.61	45.91	11.28

When ANOVA (with pretest scores as covariate) was conducted for the two worksheet groups only, using the post-test and retention test scores as the dependent variable respectively, it was found that the cooperative group outperformed the individualistic group significantly in the retention test only [$F(1,26)=11.93$, $p<.01$], but not for the post-test [$F(1,25)=0.13$, $p>.05$]. As similar analysis was applied to the two computer groups, no significant differences were found.

In order to compare the performance among the four conditions, the post-test and retention test scores of the four conditions were subjected to a one-way ANOVA (with English proficiency as covariate) separately. Again, it was found that the four groups differed significantly only in retention test [$F(3,51)=4.89$, $p<.01$], but not for the post-test. However, as shown in Table 2, the means for individual-worksheet group were the lowest throughout in both post-test and retention test. In the post-test, both the cooperative groups scored higher means than the individualistic groups. This was not the case for the computer groups in the retention test, however, the individualistic learners outperformed the cooperative learners.

Discussion

The statistical results indicated that there was no significant difference for the performance on cloze procedure in both the post-test and the retention test between learning treatments with and without computer assistance when the individualistic and cooperative learning conditions were not analyzed separately. This implied that the CALL method was not effective on the whole. This result may be due to the following attributes.

Owing to the unavailability of the computer laboratory, the training sessions for the CALL groups had to be administered on Fridays late in the afternoon and on consecutive Saturday mornings. The experimental circumstances were therefore unavoidably artificial and inconvenient.

The next reason being considered for the unsatisfactory results in the CALL group was the lack of experience with the methodology and the limitations of the hardware and the software.

A wide variety of factors appear to be influencing the development of computer-assisted language learning. In this study, one influencing factor was derived from the inherent qualities of the programmes designed by the researcher, a language teacher. Frustrations and pain were experienced by both the researcher and the students when actually working at the stations. The Microstory was the best available software for the purpose of this experiment.

Research has consistently suggested that reading on a computer screen is problematic (Haas, 1987). Evidence exists to indicate that reading rate may be negatively impacted when computer screens are used (Gould, Alfaro, Barnes, Finn, Grischkowsky, & Minuto, 1987; Gould, Alfano, Finn, Haupt, & Minuto, 1987; Hansen, Doring, & Whitlock, 1978; Kruk & Muter, 1984; Muter, Latremouille, Treurniet, & Beam, 1982).

As Clausing (1988) indicated, if students were not experienced with reading text from a computer screen, reading rate would be affected and thus learning might not be as efficient as with printed text. The subjects in this research were mostly selected from computer literacy classes, the computer knowledge of these subjects had acquired was mainly programming and software applications. The knowledge had very little to do with screen text reading.

The non-significant results could be further explained in terms of the type of visual contrast on an electronic display. Print is usually displayed with negative contrast, dark text on a white background, while BBC screens have positive contrast, illuminated text on a dark background. Clausing and Schmitt (1990) reported learning with negative contrast displays, that is in the case of worksheets, improved performance. In addition, the screen could not accommodate the entire text of any one of the cloze passages and the divided presentation of the text could be very disruptive, lowering the overall understanding of the narrative or expository structure. Students in this experimental group reported this constraint and the medium received very unfavourable responses as far as the mode of presentation was concerned. Moreover, they were also unfamiliar with the function keys and the programme design. Since the programmes for cloze procedures to be conducted on the machine were different for gap-

filling passages and multiple-choice format, one possible harmful effect for the machine group was they had to combine machine manipulation and text completing at the same time. Each represented a different set of cognitive tasks that could easily overload memory and breed frustration when pulled together at the early experimental sessions. Only in the last two sessions when students became comfortable with the rudimentary commands, could the tasks be completed more effortlessly.

The implication here is quite clear that while students were still struggling with the new learning condition, the students were not able to internalise the procedures and as their attention was divided, the average performance was impeded and they could only grapple with the more fundamental linguistic aspects.

Apart from the possible overloading of short-term memory, another explanation for the insignificance of the CALL experiment can be an attitudinal factor. As students were very much aware that materials instructed by the computer would not be serious matters, they understood well that the materials were either for consolidation, or for experimental purposes, which was more likely in this case. They treated it with an informal gaming approach.

This does not mean, however, that technology may not supplement or enhance the instructional process in a useful way. The belief is supported by the findings of this research when the computer individualistic group is compared with the worksheet individualistic group. That means when students did cloze procedures individually, the computer group outperformed the worksheet group in retention test.

The finding that the cooperative worksheet group performed better than the cooperative CALL group when students worked collaboratively contradicted the general findings in the literature. It was generally found that when compared to solitary computer work, working in a small group at the computer could enhance learning and, in some cases, improve academic achievement (Hess, Ford, McGarvey, Bergin, Brawer, Okamoto, Meyer-Gaub & Mcdevitt 1986; Ford, Hess, McGarvey & Bergin, 1986).

Despite positive results indicating that cooperative learning with computer software could enhance learning, deepen understanding, and provide stronger motivation, it has to be noted that most CAI is designed to individualize learning (Brown, 1985; Lepper & Chabay,1985; Ross, 1984; Tennyson & Park, 1984). The implication is that the social setting for computer use and the size of the team can influence learning. Learning in pairs seems to be the optimal size for cooperative peer learning. In view of this, one possible explanation for the nonsignificant performance of the computer cooperative learning condition may be due to too large the size of the group. With four twelfth grade students clustering around a 12" screen to watch and talk together, it became difficult for the text to be readily accessible to all members of the group to facilitate interactive oral discussions. Such result could be reflected in the increase of the S.D. in the post-test and retention test (see Table 2) for the cooperative group of using the computer. The situation did not happen in the case of individualised group of using the computer. This added frustration may have had an adverse effect on the cooperative CALL group's performance. This did not happen to the cooperative worksheet group as each of the four in the group was given a hardcopy for text reading during oral discussion. The subjects in this group could actually try out their worksheet individually before oral discussions and constructive peer interactions. Therefore unless the computer can be hooked to a colour TV monitor to make the screen larger as suggested by Nathan (1990), for CAI settings cooperative dyads or pairs seem to be more appropriate and may be more effective than cooperative groups of four.

As there is no significant difference between the cooperative groups and the individualistic learning groups in the posttest on the whole, this study did not seem to agree with the literature that there would be a positive group-to-individual transfer of what was being studied to new problems of the same general class. The individuals, however, in the cooperative groups did not perform significantly differently from the individualistic treatment. This implies that the individuals within the cooperative groups did not manage to monitor the language skills acquired through the modelling processes demonstrated by the more skilful cloze readers at such a mastery level that they could transfer the strategies to the cloze text in the posttest when they were on their own.

The result replicates previous findings that cooperative learning was more effective than individual learning for the initial acquisition of descriptive text (Larson, Dansereau, O'Donnell, Hythecker, Lambiotte & Rocklin, 1985), whereas individual learning was as effective as cooperative learning in the acquisition of procedural information (Hythecker, 1984). Cloze procedure and reading comprehension were nearer to procedural information than descriptive text.

The group-to individual transfer only appeared to be powerful on the retention test taken three weeks later. This time, the texts were exactly the same as those being used in the posttest with only alterations

of the text order and layout. The findings in this study that the cooperative groups significantly recalled more in quantity and better in accuracy in the retention test provided empirical confirmation that cooperative training affected recall performance favourably (Lambiotte, Dansereau, Rocklin, Fletcher, Hythecker, Larson & O'Donnell, 1987). When a learner studies alone, he must depend on his own monitoring of his understanding. In the cooperative situation, the listeners facilitated that monitoring and the deep processing of learned information, thus leading to more accuracy or quantity of recall. Furthermore, unlike in the posttest, in the retention test a small but significant transfer effect was found; skills acquired during cooperative learning seemed to carry over to individual study situations (Mcdonald, Larson, Dansereau, & Spurlin, 1985).

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Appendix A

Pretest

Passage 1 — Modified Multiple Choice Cloze Procedure

Parents and teen-agers often disagree about the amount of freedom and responsibility that the young people are __1__ have. The teen-ager often wants to be __2__ to choose his own friends, select his own __3__ in school, plan for his own vocational __4__ , __5__ and spend his own money, and generally __6__ his own life in a more independent __7__ __8__ many parents are able to __9__ . Most problems between teen-agers and their parents __10__ best to __11__ planning and __12__ making. Within any __13__ family disagreements are __14__ and problems are solved when all of the persons __15__ interest in the situation, __16__ in working it out. __17__ parents and young people learn how to get through to each other and __18__ skills in understanding, and __19__ understood, even the most difficult problems are __20__ .

1.	A. should	B. to	C. ought	D. must
2.	A. like	B. likely	C. free	D. freely
3.	A. causes	B. courses	C. tests	D. grades
4.	A. future	B. season	C. succession	D. fight
5.	A. earn	B. go	C. come	D. hand
6.	A. walk	B. jump	C. kick	D. run
7.	A. fashion	B. nation	C. style	D. shape
8.	A. whose	B. how	C. than	D. where
9.	A. allow	B. appeal	C. disagree	D. worry
10.	A. bring	B. find	C. ride	D. yield
11.	A. join	B. joint	C. joins	D. joining
12.	A. deciding	B. decisive	C. decision	D. decide
13.	A. giving	B. gives	C. gave	D. given
14.	A. agreed	B. aroused	C. avoided	D. happened
15.	A. have	B. with	C. had	D. take
16.	A. settle	B. intend	C. share	D. suggest
17.	A. For	B. Despite	C. Hence	D. As
18.	A. think	B. develop	C. engage	D. argue
19.	A. being	B. are	C. is	D. be
20.	A. doubled	B. maintained	C. necessitated	D. relieved

Passage 2 — Traditional Gap-filling Cloze Procedure

Old Ben the caretaker __1__ nearly always late for __2__ at the factory. All __3__ workers teased him about __4__, but he worked hard, __5__ as he was getting __6__ , they made excuse for __7__. When Ben retired, they __8__ a party for him, __9__ the manager presented him __10__ a gold watch. He __11__ a speech thanking him __12__ his years of service, __13__ even made a joke __14__ his lateness. Ben held __15__ watch to his ear __16__ listened to it ticking. __17__ was delighted. "I've never __18__ a watch that goes __19__ ,' he said. "Pity it's __20__ now when I don't __21__ need it. You should __22__ given it to me __23__ ago. Then I 'd never __24__ been late for work.'

Passage 3 — Modified Multiple Choice Cloze Procedure

An antiquarian who was looking for acient __1__ discovered a blue bowl that looked very __2__ . The bowl was __3__ on the ground and a cat was drinking milk from it. In __4__ not to attract the attenetion of the peasant who owned it __5__ the value of the bowl, the antiquarian said to him in a __6__ voice: 'What a charming cat you have! __7__ you sell it to me?' 'How much would you give me for it?' said the other. 'Twenty frances. Would it be enough?'

After a few moments, the peasant accepted the offer. Then the antiquarian said to the peasant: 'My poor cat will certainly feel thirsty. May I take the bowl so that the cat may have milk?'

But the peasant replied: 'I'm __8__, but I cannot give it to you. __9__ to this bowl, I have already sold fourteen __10__.'

1.	A. objectives	B. object	C. objections	D. objects
2.	A. old	B. new	C. alike	D. beauth
3.	A. laying	B. lied	C. lying	D. lain
4.	A. fact	B. order	C. charge	D. case
5.	A. to	B. of	C. at	D. for
6.	A. casual	B. happy	C. polite	D. formal
7.	A. Don't	B. How	C. Won't	D. Why
8.	A. glad	B. grateful	C. poor	D. sorry
9.	A. Due	B. Thanks	C. Thank	D. According
10.	A. bowls	B. people	C. cats	D. francs

Passage 4 — Traditional Gap-filling Cloze Procedure

Friends play a very important __1__ in everyone's life. Friendship usually __2__ during childhood. New friends are __3__ when you progress through school. __4__ friends that you make as __5__ student can usually last long. __6__ influence your developmen, maurity and __7__ of responsibility. A familiar expression __8__ 'You can tell a lot __9__ a person by knowing who __10__ friends are.' Friendship is based __11__ common interests. If you like __12__ , most of your friends are __13__ to be athletic. If you __14__ reading and shopping, most of __15__ friends do the same.

True __16__ are most special. They are __17__ to find. You can consider __18__ very lucky if you have __19__ true friend, you best friend. __20__ friend is eager to help __21__ whenever necessary. He or she __22__ you would do the same __23__ them. A true friend is __24__ you can talk to about __25__ subject or problem. You and __26__ true friend have a good __27__ of each other. True friends __28__ you, take your side, and __29__ up your confidence.

Appendix B

Posttest and Retention Test

Passage 1 — Traditional Gap-filling Cloze Story

The lion heard that __1__ animals wanted to choose __2__ new king. So he __3__ a meeting and asked __4__ sort of king they __5__ like. And that was __6__ the argument began. The __7__ wanted a king with __8__ yellow coat. The deer __9__ a king should have __10__ crown on his head, __11__ the giraffe suggested he __12__ be tall. The monkey __13__ that the king must __14__ a good climber, but __15__ elephant wanted him to __16__ as large as possible. __17__ a roar from the __18__ made them quiet. "I __19__ he needs to be __20__ to control the animals," __21__ said firmly. "He ought __22__ have sharp teeth and __23__ and a ROAR!" The __24__ is still king.

Passage 2 — Modified Multiple-choice Cloze Story

A young couple that had received valuable wedding presents established their __1__ in a suburb. One morning they received in the __2__ two tickets for a popular show in the city, with a single line:

" Guess who sent them. "

The pair had __3__ amusement in trying to find who sent them, but __4__ in the effort. They duly attended the theater, and had a delightful __5__. On their return home late at night, still trying to __6__ the identity of the unknown host,they found the house stripped __7__ every article of value. And on the bare table in the dining room __8__ a piece of paper on which was written in the __9__ hand as the enclosure with the __10__.

"Now you know!"

1.	A. system	B. business	C. home	D. marriage
2.	A. surprise	B. letter	C. mail	D. booklet
3.	A. lots	B. many	C. more	D. much
4.	A. difficult	B. made	C. tried	D. failed
5.	A. film	B. time	C. dinner	D. journey
6.	A. guess	B. card	C. grope	D. find

7. A. away	B. of	C. by	D. down
8. A. lying	B. with	C. lied	D. was
9. A. big	B. same	C. open	D. human
10. A. tickets	B. words	C. letter	D. line

Passage 3 — Traditional Gap-filling Cloze Prose

The future uses of computers seem to _1_ unlimited. Computers may design spacecraft for travel _2_ other planets. There are already computers which _3_ respond to voice commands, and answer back. _4_ will instruct Robots to do dangerous jobs. _5_ can be used for bomb disposal, working _6_ dangerous chemical and diseases. Possibly mini computers _7_ inside the body will help fight disease _8_ cure illness. Your entire home may be _9_. It is almost frightening to think these _10_ someday may have a mind of their _11_ .

The next big target for large computer _12_ such as IBM, Apple and Commodore, is _13_ education field. The classroom computers are easy _14_ operate. They are responsive, colourful, and make _15_ fun. The computers can teach Maths, English _16_ possibly all subjects in the future. The _17_ is a teacher with endless patience. For _18_ children, learning from the computer is like _19_ TV. The computer generation is definitely here _20_ stay. They are the technology of today _21_ tomorrow. " No more homework, no more books, no _22_ teachers' dirty looks." This children's poem may _23_ a reality.

Passage 4 — Modified Multiple Choice Cloze Prose

One of the most important features that _1_ man from animals is the _2_ to laugh. People who have _3_ the phenomenon have offered many _4_ to explain human laughter. _5_ in the field of _6_ , have done research on the _7_ of what makes people laugh. But as usually happens, the _8_ disagree, and there is much _9_ in the field. Some people _10_ that human _11_ laugh at things which are _12_ to their experience. Others feel that people laugh at what they _13_ believe to be their own _14_ . Humour often depends on a _15_ of certain words, or even on an _16_ of a particular cultural _17_ . There are, of course, many different _18_ of humor, but the important _19_ is that all people _20_ the great pleasure of laughter.

1. A. produce	B. overcome	C. forbid	D. distinguish
2. A. ability	B. machine	C. soul	D. case
3. A. practiced	B. achieved	C. demanded	D.investigated
4. A. turkeys	B. tanks	C. theories	D. escapes
5. A. Miners	B. Scholars	C. Farmers	D. Marbles
6. A. economics	B. psychology	C. arch	D. engineering
7. A. subject	B. career	C. passage	D. adventure
8. A. followers	B. visitors	C. experts	D. hunters
9. A. fixture	B. alliance	C. nature	D. controversy
10. A. perform	B. exhaust	C. claim	D. experiment
11. A. beings	B. mankind	C. kingdom	D. millions
12. A. strange	B. capable	C. wealthy	D. patient
13. A. smoothly	B. secretly	C. punctually	D. savagely
14. A. witnesses	B. tenderness	C. weaknesses	D. usefulness
15. A. protest	B. crisis	C. mission	D. knowledge
16. A.understanding	B. intervening	C.advertising	D.entertaining
17. A. barnyard	B. background	C. blackmail	D. temperature
18. A. minerals	B. sources	C. forests	D. pounds
19. A. welcome	B. organ	C. found	D. fact
20. A. apply	B. attend	C. share	D. manage

End of the Test