CLOSING THE GAPS IN CLOZE LETTERS TO EDITOR: A VERBAL PROTOCOL STUDY

Awais Shafiq
Multan Postgraduate College, Multan

Abdullah Shafiq
Institute of Central Asia, Multan

Muhammad Shafiq
Emerson University, Multan

Email: mshafiq3448@gmail.com

Abstract

Cloze procedure was originally designed by Taylor in 1953 to measure L1 reading comprehension. The usefulness of cloze procedure has often been asserted as it is considered easy to administer and evaluate (Sadeghi, 2021) L1 and L2 reading comprehension. The present study was conducted to find out the impact of cloze instruction on the success in guessing abilities of L2 learners. The impact of function words and content words on the correct guesses of the deleted words was also explored. The theoretical framework given by Bengleil and Paribakht (2004) was adopted with some modifications. The study employed the texts of letters published in newspaper Pakistan Observer. Both control and experimental group were asked to verbalize their thoughts loudly while they searched for the deleted words in the pretest and the posttest. The instructional model CALLA designed by Chamot and O’Malley (1994) was used. While the experimental group received cloze instruction, the control group was taught in the traditional way. The findings have revealed after receiving instruction treatment the experimental group outperformed the control group in finding out the correct words for the blanks. Furthermore, the subjects of study made more successful attempts for the deleted function words than the deleted content words in the tests.

Key Words: Cloze Procedure, Guessing Abilities, Verbal Protocol, Reading Comprehension, Letters to Editorial, Cloze Instruction, Content Words, Function Words.
Introduction
The ever-increasing interest of language researchers and teachers in L1 and L2 assessment has made them look for the most reliable and practical methods (Kremmel & Harding (2020). Resultantly, various methods and approaches – including cloze procedure – have been introduced, explored and found valid and useful. Language learning can be accelerated via use of various activities in the classroom. Actually, learners always need conducive learning environment which helps them develop their understanding of language at target. When they are engaged in interesting and useful tasks like filling the gaps in cloze items, they try their level best to use known information for the unknown information. During cloze tasks learners search the deleted words that make sense, fulfilling the requirements of semantic, pragmatic and syntactic constrains provided in text.

The present study focuses on the impact of cloze instruction on learners’ strategic processing of text in figuring out the deleted words in the given blanks. Their hunt for the missing words acts like a game for the search of something lost. To the best of the researchers’ knowledge, the study is the first of its kind to use verbal protocols for cloze items in the letters to the editor. The study poses the following research questions:

1. To what extent does cloze instruction have impact on the success in guessing abilities of L2 learners?
2. To what extent do function words and content words have impact on the success in finding out the missing words?

Literature Review
The term ‘cloze’ is a reference to closure. Gestalt psychology applies this term to the tendency of humans to “complete a familiar - but not quite finished pattern – to ‘see’ a broken circle as a whole one by mentally closing up the gaps” (Taylor, 1953, p.415). It was suggested that leaving out every nth word is a standard technique. Originally, the cloze procedure was developed for measuring readability. In order to fill each blank with an appropriate word that is accepted syntactically, semantically, and pragmatically, learner needs “to pay attention to linguistic cueing systems, draws from his or her background information about the topic of a text” and develops a general understanding of the text (Barone et al., 2008, p. 231). As defined by Taylor, cloze is a method of intercepting a message for a transmitter (writer or speaker) mutilating its language patterns by
deleting parts and so administering it to receivers (readers or listeners) that their attempts to make patterns whole again potentially yield to a considerable number of cloze units. (Taylor, 1953, p.416)

Cloze procedure is often considered a common instructional strategy for language learning. Learners are asked to fill in each blank with suitable words. It means the word they choose should make sense. They start developing a general understanding of the text. They are fully involved in the process of searching for the missing words. As a result, cloze technique is recommended as a useful strategy for second or foreign language learners. The strategy enables them to develop their language skills (Chamot & O’Malley, 1994)

In the figure 1 it is shown that the encoder sends the message via text. He/she uses various strategies to convey his/her message to the decoder. It is the cloze procedure which allows deletions for the missing words. The gaps in the figure represent the blanks which are set for the decoder. The blanks have various constraints – semantic, pragmatic and syntactic.

Fig. 1: Encoder, text, and cloze text

Fig. 2: Interaction between encoder and decoder through text
The gaps given in the figure 1 are fulfilled in the figure 2. It means the thoughts of the decoder are in consistent to thoughts of the decoder. The words chosen by the decoder fulfill all the textual requirements. With the help of various constraints and contextual clues the decoder chooses the words which make sense.

As described before, cloze procedure involves the deletion of some words at regular intervals. Textual coherence is susceptible of measurement with cloze procedure. A cloze test provides the readers with opportunities to take notice of the meaning relations used in text. It is the writer who organizes relevant meanings in relation to each other. Through various discursive strategies the writer establishes chain interactions in the text. The more chain interactions, the more coherent a text will be (Dastjerdi & Talebiezhad, 2006). Language learners should be engaged in finding out the deleted items while keeping in mind the discourse constraints. According to Oller and Jonz (1994), cloze scores tend to fall when discourse constraints are disrupted.

Cognitive psychology considers learning as an active process. The process is the combination of learning knowledge and structures. It is true that stimuli controls behaviour. Behaviour is also controlled by the interpretation and interaction of people when they are in touch with their surroundings. The major purpose of cloze procedure is to give learners encouragement for linking unfamiliar with the familiar. While helping learners to link new information with schematic knowledge, a cloze test activity involves them to start thinking about the text they are reading. Put simply, cloze procedure provides the best opportunities for retention. It contributes to conceptual and systematic organization of information got from the text (Santa, 1988). It is also found effective in helping learners make conceptions with concepts which the context material has (Gauthier, 1990). Andrews (1991) has found that the participants preferred to read the cloze assignment completely and ignored skimming. van Dijk and Kintsch (1993) have stated that the cloze procedure has little effect on students in understanding the text as a coherent unit.

Letters to editors are “hazy reflections of public opinion” (Grey & Brown, 1970, p.450) in that letter writers do not represent the general population. The letter writers tend to be overwhelmingly male conservative and elderly (Sparks & Perez, 1991). Letter writers are the “custodians of the public sphere” (Wahl-Jorgensen, 2002, p.184).

The letters-to-the-editor section provides an arena for public discussion and can be seen as a key institution of the public sphere (Habermas, 1989). It is believed this specific section is

i. among the few outlets available to the public, for voicing opinion
ii. the community’s heartbeat, and

iii. a debating society that never adjourns

(Kapoor & Botan, 1992, p.5)

The letters page is considered a public opinion thermometer (Sigelman & Walkosz, 1992). The editors determine whose voice and concerns are systematically given privilege and whose voice and concerns should not be given the chance of being heard.

The “social geometry” (Simmel, 1950:21-22) of interaction in the letters needs to be explored. Perrin and Vaisey (2008) have described two characteristics of letters to editors: (i) the asynchronous nature of the communication itself, and (ii) the anonymity of the audience being addressed. In face to face communication, speakers are understood by taking various turns. But it does not happen in the letters to the editor section. Here the synchronicity looks like series of discrete broadcasts. Some letters are published while others are not. The given message is mostly un-directional. Feedback to the letters is not necessary in all the cases. The temporal distance is often noticed. The time when the letter is received is different from the time when it is written. It is impossible for any letter writer to meet the readers of his/her letter. It means the readers remain anonymous to the letter writer. Information is transferred from the writer to readers by the text of the letter. With very few exceptions no information is carried from the audience to the writer. Routinely, letter writers misjudge overall public opinion. The reason is that they are inclined to make inferences from a skewed sample of others with whom they have interaction. Perrin and Vaisey (2008, p.804) have remarked that the letters-to-the-editor section “provides writers with different kinds of discursive spaces based in part, on the kinds of issues they seek to discuss.”

Methods

Participants

The participants of the study were the students of BS-English, Semester 8, enrolled in Govt. Emerson College, Multan. Total participants of the study were 20 (10 males and 10 females).

As mentioned before, there were two groups – control group and experimental group. There were 5 males and 5 females in the control group. Five males and 5 females were in the experimental group.
Texts

In the study eight letters to the editor were selected from newspaper *Pakistan Observer* published in Islamabad, Pakistan. The rationale for choosing this newspaper is that it is not available in paper form in Multan. The major purpose was to give the participants the texts which had not been read by them before. The newspaper is available on the internet. The letters written to the editor are published in the column *The Voice of People* in the newspaper. The letters downloaded from the web-site of the newspaper were given to the participants with the deletion of each 5th word. Four letters – *Poverty and Corruption, Civic Responsibilities, Honour-Killing and Free Cancer Hospital* – were used in the pretest. Four letters used in the posttest were *Gas & Power Load-shedding, Kashmir Dispute, Mother Language Day and Peaceful Pakistan*.

Theoretical framework

As theoretical framework is considered indispensable for conducting research (Yasmin & Islam, 2021), the present study has employed the theoretical framework given by Bengleil and Paribakht (2004). Owing to its come comprehensive dealing with linguistic and non-linguistic knowledge sources the researchers (see Shafiq & Ahmad, 2021) prefer it to other frameworks.

The modifications in theoretical framework have been made on word level and tense level. Actually, Bengleil and Paribakht in (2004) introduced the model for dealing with the unfamiliar words in a text. They included word morphology in the framework. As far as cloze procedure is concerned, language learners are not given the difficult words for the exploration of their meanings. The analysis of the word-parts is made when difficult words are given. For the missing words, no analysis of word-parts is made. The knowledge sources of word morphology, word association, homonymy, and punctuation were deleted in the amended framework. As shown in the figure 3, The framework has two major categories knowledge sources — Linguistic and non-linguistic. Linguistic were further divided into L2 base sources and L1 based sources. L2 based sources dealt with word level, sentence level, and discourse level. While L1 based sources were L1 lexical knowledge and L1 word collocation. Non-linguistic sources consist in topic knowledge of the cloze letters and world knowledge of the learners.

*Taxonomy of Knowledge Sources and Clues in Cloze Procedure*

1. Linguistic sources
   a. L2 based sources
i. Word level
   a. Word collocation

ii. Sentence level
   a. Sentence meaning
   b. Sentence grammar

iii. Discourse level
   a. Discourse meaning
   b. Formal schemata (FS)

b. L1-Based Source
   a. L1 lexical knowledge
   b. L1 word collocation

2. Non-Linguistic sources
   a. Topic knowledge
   b. World knowledge

Fig. 3: Amended framework of knowledge sources and clues used for the deleted words

Verbal Protocols

Verbal protocols have usually been used by teachers to explore the learners’ thoughts when some task is assigned to them. These protocols help the teachers capture the thoughts processes of learners – making the processes more explicit. Learners are asked to think aloud their thoughts that are accessible to working memory (Cho et al., 2020). Such protocols reflect the reasoning underlying and give direct excess to thought processes of language learners. Verbal protocols analysis helps researchers determine how information is “acquired and verbalized in response to stimuli” (Schirmer et al., 2004, p.7). The present study used introspective verbal protocols which involve the verbalization of learners’ thoughts during the task of guessing the missing words in the blanks.

Procedure

The subjects of the study were unfamiliar to verbalize their thoughts. It was necessary to give them instructional treatment in thinking aloud. For one week they received training. They were allowed to speak either English or Urdu or both these languages at their case. It was done so that they might not face any hurdle in communicating their ideas about missing words in the blanks. They were
informed that their voices will be tape-recorded in the presence of the researcher. For it they gave then consent. They were even told that they names and results will not made public. It was all research work which had nothing to do with their examination. The researcher did not give them any information about the missing words. He just gave them prompts (e.g. ‘What do you think about the missing words’).

**Instructional treatment**

Haris and Sipay (1985) have also recommended cloze instruction in that students should do the task of cloze tests. As mentioned earlier only the members of the experimental group received instruction on reading cloze letters to the editors. Eighteen letters to the editor of *Pakistan Observer* were selected. The letters covered various areas e.g, *Gun Culture in America, Women Rights in Islam, Kidney Transplants, Pak Faces Issues*, and what *Azadi means*. The participants of the control group also read these letters in the traditional way.

The intervention lasted for eight weeks, four hours per week. An extra period was adjusted for instruction. It was planned after the regular classes. In order to ensure the validity of intervention two teachers from the English department were selected in the validity committee. They also helped the researchers when some difficulty was faced during the instructional programme.

The study used the Cognitive Academic Language Learning Approach (CALLA) designed by Chamot and O’ Malley in 1994. It was based on cognition, integrating content - area instruction coupled with language development activities. As shown in the table 1 The model gives step-by-step phases of its constituents. The responsibilities of both teacher and student are focused on three major concerns: (i) prepare and present, (ii) practice, and (iii) evaluate and extend. All linguistic and non-linguistic knowledge sources and clues in the amended taxonomy were taught via CALLA for the search of the missing words in cloze letters.

| Stages                  | Teacher Responsibility                      | Student Responsibility |
|-------------------------|--------------------------------------------|------------------------|
| Prepare and present     | • Activate background knowledge            | • Attend               |
|                         | • Explain model                            | • Participate          |
Practice

- Prompt strategies
- Give feedback
- Apply Strategies with guidance

Evaluate and extend

- Assess strategies
- Support transfer
- Assess strategies
- Use strategies independently

Fig. 4: The CALLA model of strategy instruction

(Source: Chamot & O’ Malley, 1994)

**Results**

The Control group and experimental group thought aloud while finding out the missing words in the blank. A coding scheme (see Appendix A) was planned to analyze the verbal protocols. What follow are some examples — selected from both groups in the pretest and posttest.

**Control group in the pretest**

*Poverty and corruption*

**Example 1**

**Deleted Word:** Balochistan

| Sentence meaning | Topic knowledge | World knowledge |
|------------------|-----------------|----------------|

P: (Pakistan) has been facing… plethora of problems.
I: So you decide that Pakistan is the missing word here.
P: Yes, Poverty and corruption… Look at the title. It clearly says poverty and corruption… we Pakistanis face the issues of poverty and corruption… the mothers of all evils… street-crimes, unemployment so and so, so, so.

At the very start of the passage, the participant selects the word ‘Pakistan’ and reads the rest of the sentence. When asked about her decision for the selected word, she alludes to the title of the letter. Thus, the attention of the researcher is brought to the heading. After making a pause she declares that the major issues of Pakistan are poverty and corruption. These are called ‘the mothers of all evils’. Through exemplification, she makes her point of view clear. Had she noticed that the...
letter writer is talking about Baluchistan, she would have made a successful attempt. It is the particularization, not generalization, which is talked about.

_Civic Responsibilities_

**Example 2**

**Deleted Word: Civic**  
**Collocation**

P: 

{(The) duties hm, hum… (the) is the word in the blank… but it hidden somewhere… O, deleted by you. Sir, I am here to hunt for it… I am a good hunter the deleted word. Me check and double-check it with the context… the sentence provides… But I…. am not sure… I am loosing… It is not everybody’s cup of tea… cloze procedure… it closes all our thinking power}.

The reader finds the deleted word given in the cloze reading of letters. It is the word ‘duties’ which helps the reader find out the word ‘the’. The definite article ‘the’ can be used with duties, but with condition of specific duties. The deleted word is ‘civic’, not ‘the’. Only the deleted word or its synonym may fit in the given blank. The participant declares that the deleted word is hidden somewhere. Like a hunter, he is in search of the word. He desires to check the selected word and double-check the word against the given context in the sentence. But he is uncertain of the guessed word. He is ready to lose the hunting game. All the claims end in fiasco. Cloze procedure is not everybody’s cup of tea as it may close the thinking of the reader.

**Experimental group in the pretest**

_Honour Killing_

**Example 3**

**Deleted Word: Reported**

**Sentence grammar**

**Sentence meaning**

**Word Knowledge**

P: _Being (done) from parts of — country._ Many cases are (found), (done) in the whole Pakistan…(Reported) will be more suitable. Yes, _are still regularly being (reported) from parts of country._ As we know, we all know, we read in newspapers. Everyone tells us honour killing a serious problem… (Reported) is the correct word. Tell me, sir.
The participant guesses the missing word ‘done’ without giving any reason for it in the very first expression. Then ‘found’ and again ‘done’ are guessed wrongly. After making a pause, he attends to the right word ‘reported’ while calling it ‘more suitable’. He fits it into the sentence and tries to find out whether it is a suitable choice. The expression ‘as we know’ means the world knowledge is activated. The allusion to daily reporting in the newspaper about honour killing is made. It is called ‘a serious crime’. He needs confirmation from the researcher.

**Free Cancer Hospital**

**Example 4**

**Deleted Word: Healthcare**

| Sentence meaning | Collocation |
|------------------|-------------|
| I: What are you thinking right now? | |
| P: Better (human) service… the surrounding words give me clue. (Service) is also possible here. No ,…. (Efficient) is also suitable but I am not some… it is not possible for me to find the same word….. | |

When asked to describe her online thoughts, the reader selects ‘human’ for the missing word. It is also read with its collocates ‘better’ and ‘service’. A pause is made. The backward clue ‘better’ and forward clue ‘service’ have made her say so. But these two guesses are rejected as the words ‘treatment’ and ‘efficient’ are selected. The participant does not muster up her courage when she finds no possibility to find the correct missing word.

**Control group in the posttest**

**Gas & Power Load-shedding**

**Example 5**

**Deleted Word: Prices**

| World knowledge | Topic knowledge |
|------------------|-----------------|
| Sentence meaning | |
| P: Rising (inflation)…, (Inflation) is the rise in prices. When there is dearness… ‘dear’ is not for someone dear to we… But dearness is the rise in price. Now I come to the blank. What have I said before?…(inflation) or (costs)… Why (costs)? Why not (prices)? Let me see it | |
in the sentence, *markets and rising* (prices). Yes, the title of the letter says it. All about *gas* and *power failure*.

At the very beginning of the verbal protocol, the participant considers ‘inflation’ the proper word for the blank. Then she starts defining the meaning of ‘inflation’. Her emphasis on the measuring of ‘dearness’ is worth-appreciating. She has no confusion with ‘dearness’ and ‘dear’. Inflation is replaced with ‘costs’ and ‘prices’. ‘Prices’ is found the correct option. The train of thoughts moves from one option to another one. Self-inquiry made in the verbal protocols leads the participant to correct word.

**Peaceful Pakistan**

**Example 6**

**Deleted Word: Ethnicities**

| Part | Sentence meaning |
|------|------------------|
| P:   | I have found the word here, the suitable word… The word I have found … I have guessed… I have guessed… I have guessed. |
| I:   | But say what you have guessed. |
| P:   | I think it is wrong…(dialects)...(dialects)... But at wrong… languages and dialects… the sentence meaning tells me no… It does not tell me the proper word. |

The reader states that the reader has found the missing word. It is worth-stating that he never describes the chosen word. Over and again, she describes success of ‘finding out the word.” When asked about the guess, she again remarks what she has guessed. Clearly, she refuses to tell the researcher the word she has found. She fears that she has made a wrong guess. Then she repeats the guessed word ‘dialects’. It is the sentence meaning which has led her to say this. She has doubt that her chosen word ‘dialects’ is the wrong choice. Fear, hesitation and doubts haunt her again and again. She fears that she has made a wrong choice. She hesitates to tell the researcher about the word she has chosen. At last, she has doubt over what she has selected. The phenomenon is noticed here. She musters up her courage when she tells the researcher about the guess she has made. But these are the clouds of doubts which cover here thoughts.

**Experimental group in the posttest**

**Gas & Power Load-shedding**

**Example 7**
Deleted Word: Where

Collocation

Sentence meaning

P: \[\text{electricity}? \text{ (when) electricity}? \text{ (Why) electricity}? \ldots \text{ hmm, hmm, (how) electricity}?\]

I: Then which one do you select?

P: Not even is I single one. I have mentioned. In the before words thermal \textit{power stations} are mentioned in which electricity may be …. Again a blank there. But (in which), no single word is required here. (In which) are suitable. But what single word? From where should I bring a single word? I give up.. It means I lose.

The participant uses four words which start with ‘wh’. He would have found the missing word ‘where’ if he had uttered other ‘wh’ words. Then the backward reference to power stations is made. The phrase ‘thermal power station’ leads him to ‘in which’. Although he has used ‘from where’ in the self-inquiry, he is ready to give up. The expression ‘I lose’ is indicative of his interest in the video games.

\textit{Mother Language Day}

Example 8

Deleted Word: Well

Topic knowledge

Sentence grammar

World knowledge

P: \{The title is \textit{Mother Language Day}. It is the UNO which gives importance, I mean celebrates its days… No Tobbaco day… Mother day… Why not Son’s day?… Daughter day?… hmm, hmm.\}

I: Tell me what comes in your mind.

P: Well, sir, I am telling… The world I have already told.

I: Which world have you guessed?

P: (Well)... sir, (well)... we says as (well) as… Well is not the well we get water from… (well) is OK… but as need well instead of and here\}.\}

The participant chooses Urdu for the verbal protocol. The title of the letter is noticed. The effort of the UNO for celebrating various days is mentioned. He is also in favour in celebrating. ‘Son’s day’ and ‘Daughters day’. When asked, the she chooses ‘well’ as the selected word. The polysemmous use of ‘well’ is clarified. ‘Well’ is described as ‘OK’. The participant’s response is
also well and ok.

Peaceful Pakistan

Example 9

Deleted Word: Culture

I: What is the missing word in the blank?
P: {This … has … a … rich… a rich… a rich man… Zardari or Nawaz … Who is the richer?… different languages… No man is rich… mentioning in the sentence… rich (civilization)… rich (civilization)… rich (culture)… No, rich (civilization), no rich man … ‘yes’, yes, rich (soil)… with minerals. Hills have eyes… no, it is movie title… a horror movie… rich (hills) with minerals.}

When asked about the missing word, the participant reads the part of the sentence where the blank occurs. The collocation ‘rich’ with the blank is noticed. Zardari and Nawaz Sharif are called the rich men. ‘Civilization’, ‘culture’ and ‘soil’ are selected for the blank. Then the movie ‘Hills have eyes’ is mentioned. A wrong inference is made at the end of the verbal protocol.

Kashmir Dispute

Example 10

Deleted Word: Has

P: (has) … hmm, hmm, (has) is the suitable word here.
I: How do you say it?
P: The state, I mean, the writer means. The state of Kashmir… (has) majority of Muslim population. Why should it not be given the right of voting? Join us or India. The next sentence gives clear-cut statement that it should join Pakistan… Both are Muslims. I mean in both sides. (Has) is in the sense of (keep), (own), (possess). But no other substitute instead of (has).

The participant chooses the correct word ‘has’ in the very beginning of the verbal protocol. Then he hedges and seems certain of the guess he has made. When asked, he starts reading the part of the sentence which contains the blank. Very skillfully, he inserts the chosen word ‘has’ in the blank. He seems angry why the Kashmiris are deprived of their right of self-determination. The
option can be placed before them to join Pakistan or India. The next sentence gives the correct option that is Pakistan. Then three words ‘keep’, ‘own’ and ‘possess’ are described. But the first priority is given to ‘has’.

**Two sample proportion comparison (each knowledge source)**

**Table 1**: Proportion success Comparison between different Knowledge Sources used by Control group and Experimental group in Pre-test

| Knowledge Source               | X₁ | n₁ | X₂ | n₂ | P₁ | P₂ | p-value | Z     |
|-------------------------------|----|----|----|----|----|----|---------|-------|
| Word Level                    | 11 | 11 | 55 | 55 | 24 | 37 | 22 | 39 | 63 | 55 |
| Word Collocation              |    |    | 13 | 37 | 14 | 39 | 0.63 | 0.36 |
| Sentence Level                |    |    |    |    |    |    | 0.021 | 2.300* |
| Sentence Meaning              |    |    |    |    |    |    | 0.877 | -0.160 |
| Sentence Grammar              |    |    |    |    |    |    | 0.36  | 39   |
| Discourse Level               | 10 | 16 | 16 | 0.65 | 0.57 |
| Discourse Meaning             |    |    | 94 | 0.172 | 1.360 |
| Discourse Grammar             |    |    | 16 | 0.36 | 0.42 |
| Non-Linguistic Level          |    |    | 59 | 0.257 | -1.130 |
| L1-Based Sources              |    |    | 10 | 13 | 11 | 0.79 | 0.41 |
| Lexical Knowledge             |    |    | 46 | 0.000 | 9.110*** |
| Word Collocation              |    |    | 13 | 0.20 | 0.58 |
| Non-Linguistic Knowledge of the Topic |    |    | 28 | 0.000 | -6.110*** |
| Word Knowledge                | 15 | 11 | 22 | 0.46 | 0.50 |
|                               |    |    | 71 | 0.392 | -0.860 |
|                               | 15 | 11 | 22 | 0.53 | 0.49 |
|                               | 82 | 0.392 | 0.860 |

*P<0.05, ***P<0.001, P=N.S.
Table 2: Proportion success Comparison between different Knowledge Sources used by Control group and Experimental group in Post-test

| Knowledge Source | X_1 | n_1 | X_2 | n_2 | P_1 | P_2 | p-value | Z       |
|------------------|-----|-----|-----|-----|-----|-----|---------|---------|
| Word Level       | 11  | 11  | 15  | 15  |      |      |         |         |
| Word Collocation |     |     |     |     |      |      |         |         |
| Sentence Level   | 11  | 33  | 42  | 73  | 0.35 | 0.57 |         |         |
| Sentence Meaning | 11  | 33  | 30  | 73  | 0.64 | 0.42 | 0.000   | -6.940***|
| Sentence Grammar |     |     |     |     |      |      |         |         |
| Discourse Level  | 13  | 25  | 27  | 47  | 0.51 | 0.58 | 0.097   | -1.660 |
| Discourse Meaning| 12  | 25  | 19  | 47  | 0.48 | 0.41 |         |         |
| Formal Schemata  |     |     |     |     |      |      | 0.097   | 1.660   |
| L1-Based Sources | 12  | 16  | 0.66| 0.29|      |      |         |         |
| Lexical Knowledge| 80  | 48  | 0.000|   | 6.180***|      |         |         |
| Word Collocation | 40  | 0.000|   | -6.180***|      |         |         |         |
| Non-Linguistic Level | 10  | 30  | 23  | 42  | 0.34 | 0.55 | 0.000   | -5.870***|
| Knowledge of the Topic | 20  | 30  | 18  | 42  | 0.66 | 0.41 |         |         |
| Word Knowledge   |     |     |     |     |      |      | 0.000   | 5.870***|

***P<0.001, P=N.S.

Table 3: Proportion of success Comparison between content words (n=970) and function words (n=750) used by Control group and Experimental group in Pretest

| Knowledge Source    | X_1 | X_2 | P_1 | P_2 | p-value | Z   |
|---------------------|-----|-----|-----|-----|---------|-----|
| Content Words       | 430 | 400 | 0.443| 0.412| 0.169   | 1.380|
| Function Words      | 350 | 340 | 0.467| 0.453| 0.604   | 0.520|

P=N.S.
Table 4: Proportion of success Comparison between content words (n=1020) and function words (n=810) used by Control group and Experimental group in PostTest

| Knowledge Source   | X1 | X2 | P1  | P2  | p-value | Z         |
|--------------------|----|----|-----|-----|---------|-----------|
| Content Words      | 445| 740| 0.436| 0.725| 0.000   | -13.240***|
| Function Words     | 399| 691| 0.493| 0.853| 0.000   | -15.460***|

P=N.S.

Discussion

To what extent does cloze instruction have impact on the success in guessing abilities of L2 learners?

It was found that the instruction on cloze procedure had positive effect on the success of the participants in choosing the right words for the blanks. When instructed, the participants were in a better position to guess the deleted words or their synonyms. The experimental group outperformed the control group in the posttest as proved by the success rate of the experimental group. The members of the experimental group improved their guessing abilities in order to guess the missing words in the cloze letters. They were more strategic in their inferencing behaviours than the control group in the post-test. Both higher processing and lower processing were used by the experimental group. It was observed that most of the participants in the experimental group checked the guessed words against the context provided in the text. When one inference was found incorrect, they chose another one. Their major emphasis was on the selection of the the words that as fullfill the semantic, syntactic and pragmatic constraints of the sentence.

To what extent do function words and content words have impact on the success in finding out the missing words?

The syntactic property of the deleted words had also impact on correct guesses of the language learners. As mentioned above, the words were divided into two categories: (i) content words (nouns, verbs, adjectives and adverbs), and (ii) function words (preposition, determiners and conjunctions). The findings of the study have revealed that the participants of the study were more successful in their attempts when they figured out the function words than the content words. In
fact, the content words are more important than function words. Function words just perform some function. For example, prepositions show the relationship of a person or thing to another person or thing. Thus, it is easier to find out the missing words which are function words. On the other hand, the content words carry with them some content material. Without the proper understanding of all the contextual demands of the texts, it is difficult to find out the suitable content words. Various comments of the participants about content words were observed in the present study. For example, verbs are “the oxygen to the sentence” and nouns are “the kings with crowns in the sentence”. Even after getting the instruction the members of the experimental group were more successful in guessing the meanings of function words than content words. According to Powell and Honsby, (1993), the deletions of function words measure the syntactic knowledge of learners whereas the deletions of content words measure their semantic knowledge.

Conclusion

Reading becomes an active process when readers employ their linguistic and cognitive schemata in order to reconstruct meaning from text (Goodman, 1967). Generating inferences is “a crucial skill for language comprehension” (Rodriguez-Gomez et al., 2018, p.163). Cloze tests provide an illuminative lens on readers’ problems with specific language styles (O’Toole et al., 2015). The present study has demonstrated that cloze procedure encourages language learners to read for meaning. They can use semantic, syntactic and pragmatic clues in their quest for the deleted words. The procedure enables teachers to get insight into learners’ knowledge about the language at target. Tierney and Readence (2000) have found cloze procedure useful for assessment of use of contextual clues, the readability of texts and instructional placement. Cloze procedure involves the deletions of lexical items in a syntagmatic chain. It elicits language learners to make inferences about the deleted words which can fill the specific grammatical context. Cloze activities can be “differentiated for a wide range of abilities and reading expertise” (Wray & Lewis, 1997, p.77). Oller and Jonz (1994, p.12) move many steps forward when they claim that they see cloze “a window through which we may examine certain aspects of the human mind in action.”

The study has several limitations. The small sample size is the major limitation of the study. There are only 20 participants. They may not reflect all the possible ways to deal with the deleted words in the given blanks. Another limitation is methodological. The verbalization of their thoughts through think-aloud may have altered the subjects’ behaviour towards the missing words.
It can also make them more conscious of their thought process. Speaking about their thoughts can create hindrance in the way to thinking (Kusiak, 2013). Even the prompts from the researcher’s side may give some new direction to the way for new planning. Although the researcher is not meant for providing the missing word, a simple question e.g. (what are you thinking now?) can cause disturbance to the thinking process of the participants. Resultantly, thinking loses its natural process.

Next limitation arises from the cloze task assigned to the participants. They were asked to find out the deleted words for the given blanks. This gave them a certain way of approaching the texts. They stopped the reading process over and again while making pauses. The text with blanks created hindrance to get an overall meaning. It was not the natural way of reading a text. For some students this was an artificial way of reading the texts. Sometimes they skip some difficult word in their routine reading tasks. But in cloze procedure skipping is not allowed. For each deletion, the participants have to choose some word according to the textual constraints.

The verbal protocols of the participants were tape-recorded. The presence of the researcher with a tape-recorder may make the participants hesitant of performing the task assigned to them. They can choose the words and sentences very carefully due to the tape-recorder. As observed in the present study, some participants demanded that their voices should not be tape-recorded. All this can hamper their way of proper thinking. It may also have some effect on the way to deal with the missing words in texts.

Lastly Although a cloze test measures the proficiency of learners in the language concerned, it does not provide opportunities to morphological clues. The decomposition of the unknown words is an effective strategy to learn new vocabulary items (Nation, 2001). The intra-word clues enable the language learners to enhance their lexical knowledge. The morphological analysis of the words plus the context provided in the text may work well. But the cloze procedure robs language learners of the richness of morphological clues. Morphological analysis of unknown words assists learners in decoding and comprehension of unknown words in texts (Zoski et al., 2018).

The comparative studies can be conducted to notice the effects of various types of cloze procedure so that their utilization might be analyzed regarding success rate in the cloze tests. The future studies can find out the effect of a longitudinal study. The letters from native English newspapers can also be used in the fourth coming studies in this regards.
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Appendix. Coding Scheme

I = Instructor
P = Participant

Words in Italic = words from cloze texts of letters
….. = Pause
(  ) = Chosen word for the given blank.
{  } = English Translation of Urdu
{( )} = Urdu Transliteration in English