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Analyzing Classroom Strategy: Evaluating the Concept Mapping Technique at SSC Level in Pakistan

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Sidra Mahmood

Department of English
Virtual University of Pakistan
Pakistan

Ihsan Ullah

Department of English
Virtual University of Pakistan
Pakistan

Ayesha Perveen

Department of English
Virtual University of Pakistan
Pakistan

ABSTRACT

This study documents the usage of Concept Mapping in the teaching-learning situation of English at SSC Level. The study is descriptive and analytical in nature and tries to investigate the effects which Concept Mapping renders in the academic environment in the context of ESL classroom setting. The research offers strategies for adopting certain techniques and up gradation of the content taught at the mentioned level by the inculcation of such techniques. Overall, the study produced a range of implementable outcomes by a pervasive discussion of Concept Mapping, the role of the textbooks, the importance of adding the technique to the contents of ESL classroom setting. For data collection and data analysis, two classes were selected. Both were taught the same content under controlled conditions. The concept mapping technique in the class guided the learners towards the improved way of learning the text of second language.

Keywords: Reading skills, Understanding/Comprehension, Concept Mapping, SSC level, Vocabulary

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1. Introduction

English is an international language and is used all over the world as a medium of communication. In Pakistan, the status of English is of the official language. It is the need of time that we should focus on to improve ways of learning English language even at primary level. It is required primarily as a functional language for comprehension and expression. English language should be given more importance in our present curriculum.

The so far prevalent tendency is to focus on learning the grammar of English as grammar is deemed as the most difficult aspect to comprehend and a vital one as well, in gaining proficiency in the context of ESL. But Grammar is not the only required tool to improve proficiency in English language. Learning English grammar is one of the aspects to improve language.

Apart from the difficulties pertaining to grammar and gaining mastery over the four skills, another hurdle while learning English language is the poor knowledge of vocabulary. In the context of ESL, the lexicon of the Learners is, for the most part weak and in some cases, inactive as well. The result is, they face serious difficulties in reading comprehension.

To learn new words and expressions and their usage is also very imperative. It enhances the language skills with clear results (Thornbury, 2002). One of the important ways to master a language is to remember and know a lot of vocabulary items. Besides all the language skills, learning new words are very important not only for the learners but also for the teachers. The success in grasping a language is determined by the size of the vocabulary that one has learned and known (Saleh, 1997). Yet again, learning new words is no doubt significant, but to memorize them is more

substantial (Thonbury, 2002). To describe the vocabulary items of the aforesaid textbook by concept mapping is the key objective of this study. It is also one of the aims to learn the items falling in different categories and improve the reading and understanding/comprehension skills of the learners.

1.1 Background of the Study

There is a saying that a picture depicts more than what a thousand words can't. This claim, if accepted as true, can enhance the teachers-students communication in the teaching-learning situations which are mostly text-based.

1.2 Aims of the Study

The objectives of this research are to:

1. Evaluate the words and their meanings in the text book.
2. Describe the vocabulary of the certain chosen text by semantics/concept mapping.
3. Ascertain the words falling in different categories.
4. Make the learners capable to comprehend the lesson effectively.

Most of the learners and teachers cannot get proper vocabulary and cannot develop proper approach to vocabulary from the text books.

Concept mapping was developed in 1972 by Joseph Novak's research team, based on the learning psychology of David Ausubel. The principal idea of Ausubel's cognitive psychology is that learning takes place by assimilation. In constructing concept maps information already gained is linked with a new understanding. Concept maps are visual organizers. They are special forms of web diagrams for exploring knowledge and gathering and sharing information (concept map, 2004). As it is considered that "a visual organizer" is very vital by which learners can enrich their comprehension of new

ideas/concepts and would be able to read the text in a better way. It simply provides the learners to think about these concepts in several ways. We use concept maps to organize the information. They help the learners to make meaningful concepts of the main idea. They are easy to construct and helpful in comprehending the texts.

The importance of concept maps lies in the fact that they render help in teaching and learning situation. It is quite obvious that the usefulness of concept maps as instruments for enhancing the teaching-learning process cannot be denied, the more beneficial option is to implement and use the technique of concept maps as only then the true value can be judged. (Elizabeth Santhanam, Carolyn Leach and Chris Dawson. 1998).

Snow (as cited in Kevin Oliver, 2009) is of the opinion that reading comprehension may be defined as a vigorous process of "simultaneously extracting and constructing meaning through interaction and involvement with written language". Burdumy et al. and Zmach et al. (as cited in Kevin Oliver, 2009) suggested that the reading comprehension of the learners may be enriched by adopting certain strategies i.e. questioning, predicting and summarizing and using graphic organizers. According to National Reading Panel (as cited in Kevin Oliver, 2009) research has shown that seven categories of text comprehension guidelines are of value, among them is the "use of graphic and semantic organizers... where readers make graphic representations of the material to assist comprehension"

Mainly these strategies were introduced in 1970s and in 1980s for secondary learners to build their vocabulary skills and increase their knowledge. Concept mapping is a reliable way out to represent the intended knowledge in a graphical manner. The nodes symbolize the concepts, whereas the tagged links show the inherent relationship between

the concepts. It was from Ausubel's assimilation theory of cognitive learning that the idea of concept mapping originated Ausubel et al. 1978 (as cited in Tatjana S. Hilbert and Alexander Renkl, 2008).

According to Ausubel, the mind adopts a hierarchical top-down fashion for the organization of data. Concept maps show the way concepts are related hierarchically and also, explains the way concepts are interrelated on the same hierarchical level. By adopting this strategy words are graphically designed in relation to one another. These are the new ways of representing the information and a good technique for the learners to improve vocabulary in an easy and interesting mode. This also increases the motivational level among the learners; the reason is, once they are able to comprehend the items properly in an effective way, their motivational level automatically enhances. This is a kind of schematic summary of what learners know. It is a creative activity in which learners exert effort to get meanings, by identifying important concepts and structure within a specified domain of knowledge (Novak & Gowin, 1984).

Novak (as cited in Tatjana S. Hilbert and Alexander Renkl, 2008) explains diverse applications of concept mapping in teaching-learning context i.e. lessons can be prepared in an easy way and topics can be represented and explained in a sequential manner. They are helpful in discussions and in evaluating the chunks of knowledge. Moreover, concept maps can render easy the reading from the texts.

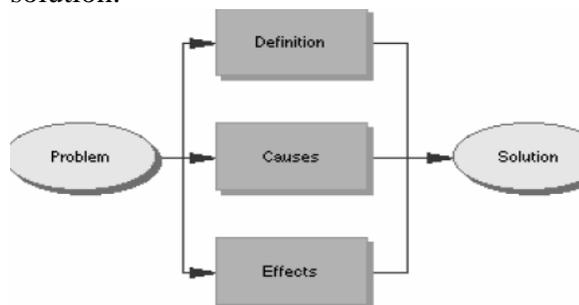
Novak & Gowin (as cited in Lynne Anderson-Inman and Mark Horney Dec., 1996 - Jan., 1997) argue many sets of instructions and rules have been devised to evaluate concept maps, yet the facts remains constant that often the concepts map is difficult to comprehend by the readers other

than the creator/s. This fact becomes further strengthened in the case of complex and containing too much graphics or cross-links concept maps.

With the advent of computer based technology, it has become easier to draw semantic maps and that too, in a short span of time. But the scenario becomes complicated when the hesitancy to adopt the new ways hinder the goal of improved teaching and learning, whether it be by the teachers or the students.

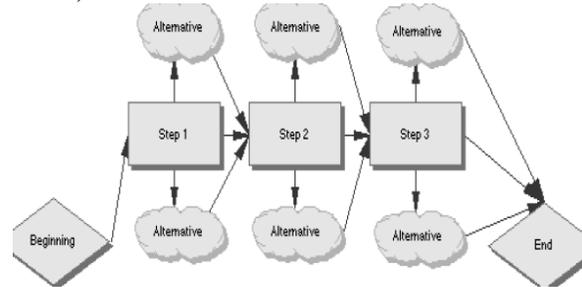
Lewis et al (as cited in James A. Rye, 2001) reported that a survey of public school teachers in the US disclosed that only 20% among them felt comfortable to use the technologies in education. In a report by the President's Committee, (as cited in James A. Rye, 2001); the usage of electronic concept mapping acts as a tool to improve the teacher literacy in instructional and IT technology as well. Jonassen (as cited in James A. Rye, 2001) says the invention of concept mapping software has made it easier to format reliable and meaningful concept maps.

There are different types of concept maps. The first one is called "Problem-Solution Map". It is a straightforward map. In this type of concept map, learners have a problem statement, definition, cause and effect and this surely leads learners towards a possible solution.

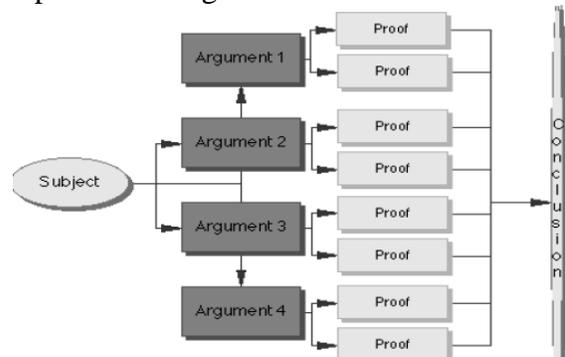


Another type is called "Process Development Map". In this type, the learners avail a chance to create a process for completing a task. These maps can be used

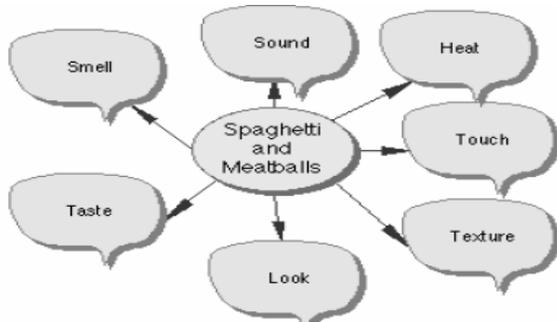
while making assignments. They should have a beginning and an end. One possible way of structuring this activity would be to provide a blank map and ask students to list the steps and alternatives, with results shown by adding text to the links (Types of Maps, 1999).



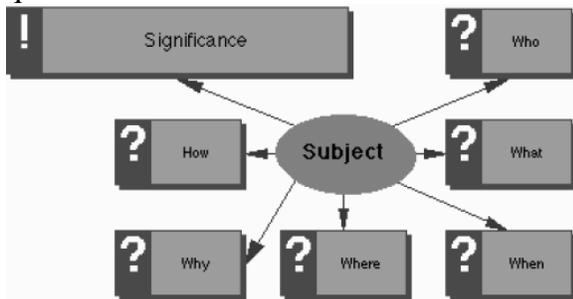
The third type is called "Persuasive Argument Map". This is a common type of theme for the learners in which they present a persuasive argument.



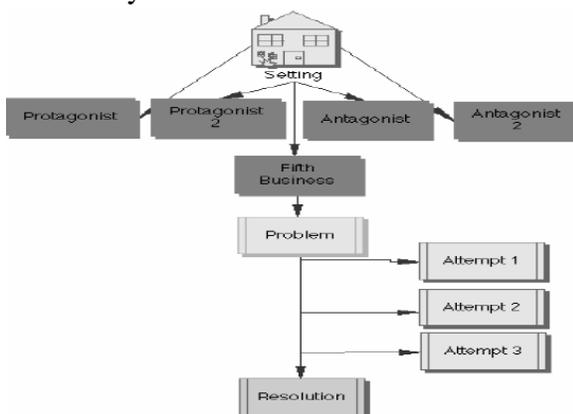
A very interesting type of map is called "Characteristics". It is a free-form map which asks the learners to think about the characteristics of something. For instance, to think about the characteristics of spaghetti and meatballs and write these in the balloons to cover all the points related to it. This is more helpful in descriptive essays.



This type of map is called “Research Topic”. In such type of maps, learners are assigned the task to add questions like who, what, when, where etc. Such maps answer the questions of the learners in chunks.



This type is called “A Narrative Story Line”. The structure of this map may comprise of a setting, set of characters, problem, set of alternative attempts to solve the problem, and a resolution. Such maps are used in teaching stories to the learners in classroom. It shows a traditional setting, cast of characters, problems, attempts at solutions and finally resolution.



The use of concept mapping is dependent upon the style of text which is to be mapped. There are six styles of text organization

which have been identified: Sequential; it provides information in a successive order. Descriptive; it provides detailed descriptions. Classificatory; it provides information in groups of related themes.

Comparison/Contrast: it provides information on how concepts are alike and how they are different. Cause/Effect; it provides insight into how one concept can cause another. Persuasive/Argumentative; it provides the reader an opportunity to create their own judgments and opinions about the information. Once the category of the text is identified, the next stage is to draw the relevant concept map.

Comprehension/understanding is defined as the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words or numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond simple remembering of material, and represent the lowest level of understanding. It is equally important that before the start of mapping process, the entire lesson should be taught to the learners because they need a sense of the “whole” before they are able to see how the “parts” relate.

Reading, understanding/comprehension and understanding skills of the learners can improve after learning the method of concept mapping.

2. Research Methodology

This research is descriptive-analytical in which both qualitative and quantitative methods have been used. In the qualitative approach, the vocabulary items were categorized and measured according to the model of concept mapping. In quantitative method, the measured words were counted according to the category of the concept mapping in which they fall respectively. For



data gathering, the tools of survey and observation were used. Three sample lessons were randomly selected out of nineteen lessons from the English text book “Punjab Text Book Board for Class X” for vocabulary analysis.

3. Data Collection, Analysis & Findings

A survey (observation) of the school was done by the researchers, where they observed two sections of class 10th. Two different teachers were teaching with almost the same teaching method (Grammar Translation). Teachers were translating the text and explaining the difficult meanings in the native language. Both sections’ students showed average understanding of the text and knowledge, when different vocabulary words related to lessons were asked from them. Most of them were slow and least interested in their response while doing the assessment tasks verbally. The reading skills and pronunciation were also poor. Understanding of grammar and vocabulary was rundown. The ability of understanding/comprehension and reading skills were not up to the mark. This strategy was not at all helpful in providing an enhanced comprehension of the lessons in English textbook.

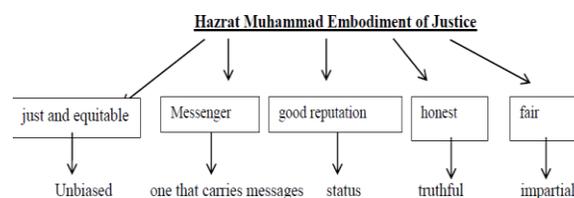
After completing the observational survey of the teaching methodologies, the researchers introduced a semantic/concept mapping technique to one section and taught the same lesson with the adopted strategy. At the end of the session, the results were quite clear. Below is the detailed analysis of three model chapters that were taught according to the concept map strategy.

Text1:

Hazrat Muhammad Embodiment of Justice

“Hazrat Muhammad practically proved that no one could be more just and equitable than the Messenger of Allah Almighty [Peace and Blessings be upon Him]. As a young trader, he earned the good reputation of being

an honest, fair and just business man. He always had fair and just dealings with all people.”



This chapter was associated to the traits of the prophet Hazrat Muhammad [Peace and Blessings be upon Him]. The Lesson’s first paragraph was read aloud to the class, and a concept map was drawn related to the qualities of Hazrat Muhammad [Peace and Blessings be upon Him]. All the difficult vocabulary words were explained by using the technique of concept mapping. For instance, the above written words in the boxes fall in the category of description because they were describing the qualities and characteristics of the Prophet.

After explaining the lesson with the meanings, the researcher asked the learners to summarize the lesson in their own words. The mistakes done by students were pointed out and at the end of the class, by repeating so many times the summary of the text; the learners were able to describe it. On the other hand, the learners in the second class without practicing/learning by concept mapping technique had the same understanding level because they were not taught according to concept map technique. Learners were not depended on the teacher at the end; they had developed speaking skills too and improved reading skills.

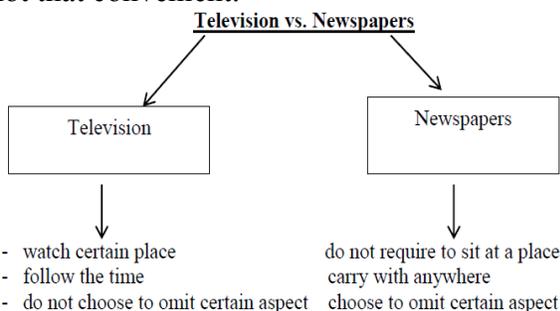
Researchers had pointed out different learners to read different paragraphs; learners read the paragraphs in a good manner, as compare to other class. The difference between the both classes is mainly the comprehension of the text.

Text 2

Television vs. Newspapers

“Newspapers do not require us to sit at a place and read the news. Busy people may read the paper anytime of the day. They may read the news that is important to them early in the morning, and carry the paper with them to read in the bus or van. They may also choose to omit certain aspects of the news that they are not interested in.

Television, on the other hand, requires its viewers to be at a certain place, at a certain time in order to watch and listen to the news. If they are busy people, they will miss the news. They cannot choose to read it on the move or throughout the day. They cannot even choose which piece of news they wish to skip. One way could be to record it and watch it later. But the point here is that it is not that convenient.”



In this section, the difference between television and newspapers was explained. The focus was on comparison and contrast between television and newspapers. Learners were taught according to the comparison/contrast style of concept map. Compare/contrast style is another type of concept map. While applying this style in the experimental class, the repercussions were different and very positive. The concepts of the learners were increased and they took more interest in the lesson and participated very actively.

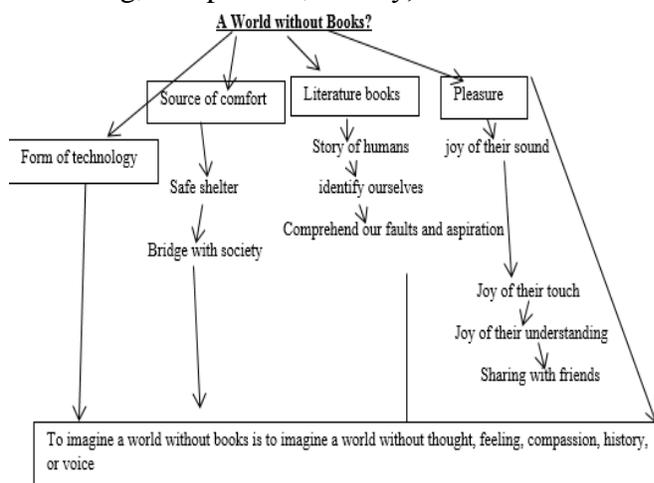
Text 3

A World without Books

“Books are themselves a form of technology that is spread over the pages and

makes us delve into the complexities of life. Literature is the story of humans. It is the record of who we are, where we come from and where we are going. Books make us travel at large. During our journey, we are connected with humanity. We identify ourselves with characters we meet and learn whether we love, loathe, fear or flatter.

Books are source of comfort for us. They are a safe shelter. Books are bridges... through their pages we make our contact with society. Books offer other types of pleasures as well. The joy of their touch, sound and fragrance is immeasurable. The pleasure of their understanding is an addition to it. The sharing of a book with friends is still another form of joy. To imagine a world without books is to imagine a world without thought, feeling, compassion, history, or voice.”



Thus, in this section, the qualities of books were described and it also gave proper information on how, if we develop the habit of book reading, what kind of benefits we can get. A concept map was developed in an informative way. The above graphical representation made the learners capable to comprehend the text fully and then also enabled them to enhance their reading strategy. Informative way is another type of concept map. This type was used in the experimental classroom and it was found that it produced noticeable results. Learners



became more enthusiastic while learning these new techniques and learned positively.

4. Conclusion

Above were the sample lessons that were presented in the research, otherwise researchers had used and applied other types of the concept mapping techniques in the class and results were much more positive than the expectations. Nowadays old teaching techniques are not useful. Teachers should adopt the new techniques and strategies according to the mental level of the learners. Even while rendering to the text books, instructors should be flexible to adopt the new techniques. It was found that teaching strategies and proper methodologies matters a lot. The way and style of the text should be considered by the teacher if s/he wants to be a good mentor. The learners' intelligibility would be much improved by comprehending the text through concept mapping strategy. It increases the learners' sense of working in a group. Concept maps were helpful to improve affective conditions for learning and these were alternative aid to the traditional writing. It was observed that maps constructed by learners made their learning process easy and they could use these maps in several ways to facilitate meaningful learning. Reading skills were improved with the comprehension of the texts, its themes, story and all other settings. Learners became active and participated in the class activities.

About the Authors:

Sidra Mahmood is currently serving as an instructor in English Department at Virtual University of Pakistan. She has done M.A English (Linguistics and Literature) and M.A TEFL. She has also completed her B.ED degree from Federal College of Education, Islamabad and taught in different institutions.

Ihsan Ullah is currently serving as Lecturer in English at Virtual University of Pakistan. He is a PhD scholar at International Islamic University,

Islamabad. He did his MS English from International Islamic University, Islamabad. He has served in various organizations against different categories.

Ayesha Perveen works as an Assistant Professor and is Head of the Department of English at Virtual University of Pakistan. She is a PhD scholar at University of Management and Technology (UMT). She has so far worked as a Lecturer at GCU and NUML Lahore. She has been visiting faculty at Punjab University College of Information Technology as well as an external Examiner at Kinnaird College, Lahore.

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