The Analysis of Cohesive Devices in Psychology Research papers using Discourse Analysis Technique

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The purpose of this paper is to investigate the cohesive devices used in psychology research papers. It highlights the usage of different types of cohesion with the range of cohesive devices used in writing and reading. The research papers are selected from the American Psychology Association, Journal of personality and social psychology which is widely read for academic purposes by psychology students as references. The analysis is done using the discourse analysis technique which helps in refining the findings. The findings reveal the types of cohesion used and the range of cohesive devices for each type & focus on the importance of cohesion in reading and writing .It highlights the reasons of why psychology academic articles are written employing cohesive devices layered in the text. The paper also show implications to ESP (English for specific purposes).It shows the importance of teaching cohesion to psychology students to help them comprehend and interpret the meanings from the written discourse. The importance of written discourse in psychology discipline is highlighted as they are enriched with lexical bundles. A lesson plan is also formulated in order to help ESP practitioners to teach reading and writing using cohesion to psychology students. It is formulated in such a way that it will facilitate and help the students to both read and write psychology research articles. Therefore, the aim of this paper is to provide a deep insight into the importance of cohesion for reading and writing skills for academic purposes for psychology students.

Keywords: *Cohesion, Discourse Analysis, ESP, Psychology, Research papers*

1.INTRODUCTION

The term *cohesion*is used for the relations obtaining among sentences and clauses of a text. These relations, which occur on the grammatical stratum are signaled by certain grammatical and lexical features reflecting discourse structure on a higher. These features such as anaphora, subordination and coordination are called cohesive. They account for what may also be referred to as the textual connectivity of sentences and clauses. They do not themselves constitute cohesion but they mark which clauses and sentences are related and in what manner, (Gutwinski, 1976). In Halliday & Hasan (1976), their definition of cohesion emphasizes the relationship between the meanings of linguistic units. They define a concrete form as a tie, "we need a term to refer to a single instance of cohesion, a term for one occurrence of a pair of cohesively related items. This they call a "tie." This term "tie" refers to a single instance of cohesion or one occurrence of a pair of cohesively related items. The links are called "cohesive ties" or "*cohesive devices"*. (Cited by Wang Gang and LIU Qiao, 2014). McCrimmon says that "a paragraph is more coherent when the author has provided transitions between thoughts expressed in its sentences. (p. 26-27)

The *framework* used for this study is of Halliday who wrote a paper titled "The linguistic study of literary text" in 1962 where he defined cohesion as "A syntagmatic relation and, insofar as it is grammatical, it is partly accounted for by its structure." His concept of cohesion allows the gathering together of various lexical categories which can be useful in the linguistic study of a literary text. Halliday and Hasan (1976) distinguished cohesive ties in terms of grammatical cohesion and lexical cohesion in their work. Grammatical cohesion covers four cohesive devices: reference, substitution, ellipsis, and conjunction, while reiteration and collocation fall into the category of lexical cohesive devices. According to Wang Gang and LIU Qiao (2014) who also made use of the theory of Halliday and Hasan,elaborates their classification and explain them in detail. They explained that **conjunctions** are classified, <u>which is the focus of this study</u>, into three types of abstract logical-semantic relation: elaboration, extension and enhancement. Elaboration means one clause elaborated on the meaning of another by further specifying or describing it. It includes apposition and clarification. Extension means one clause extends the meaning of another by adding something new to it.The additive conjunctions include *and, also, moreover nor, but, on the other hand, however; on the contrary, instead, except for that, alternative etc.*

Enhancement means one clause enhances the meaning of another by qualifying it in one of a number of possible ways: by reference to time, place, manner, cause or condition. Hallidayand Hasan(197   6)   emphasizethatrelationshipsbetweenideasare   notmerelydependenton thepresenceofconjunctionsbutare   derived   from   thefunctional andmeaningfulbasisoftexti.e.textunityrelies   on   thecontentand   ideasin   a textratherthanonpunctuationorothertextualconventions.

According to Hu Zhuanglin (1994), *discourse*refers to any natural language denoting complete semantic in certain context, rising above the constraints of syntax. It can be observed in the use of spoken, written and signed language and multimodal forms of communication. Cohesion and relevant theory, as well as functional grammar are two of the specific theoretical perspectives and analytical approaches used in linguistic discourse analysis. Discourse cohesion and coherence is an important aspect of discourse study (Wang and LIU, 2014). "If a discourse is cohesive in its content and coherent in meaning, it is very likely to be accepted." (Hu, 1994 cited by Wang and LIU, 2014).

Discourse analysis method in the *written discourse*is used in this study as according to Moreno (2003), "the notion of written discourse is defined as the meaning perceived by a reader in the act of interpretation of a given written text at any moment of the interpretation process."Textual elements would enable the speaker or writer to organize what he is saying in such a way that it makes sense in the context and fulfills its function as a message (Vande Kopple, 1985: 86).Grabe and Kaplan (1996) believed that cohesion and coherence are on textual level. This level is the underlying structure of the surface structure achieved through the use of grammatical elements to form the sentences and the first stage to the formation of the text through cohesion and coherence constructed on the basis of the textual cohesion through the readers" efforts to interpret.

STATEMENT OF THE PROBLEM

As the Journal of personality and social psychology, American Psychological Association have online published articles for psychology discipline students which are highly recommended by the lectures and referred by the students for academic purposes, from my observation the

discourse of the text in the journal demonstrates a complex structure of cohesion. Students need to understand the complexity of the structure to understand the article as a whole. This may pose a specific problem for non-native speakers in general who may find it difficult to comprehend the text because of its complicated language structure. The difficulty for the non-native readers arises because of unawareness of cohesive devices which are important enhancing the meaning of the text and helps in the organization of the ideas.

AIM- The aim of this study is to analyze the cohesive devices used in the written discourse of psychology online published articles in the journal of personality and social psychology.

OBJECTIVE- To analyze and identify the lexical cohesive devices in the psychology research articles. In journal of personality and social psychology.

2. LITERATURE REVIEW

DISCOURSE ANALYSIS AS A METHOD AND WRITTEN DISCOURSE

According to Michael McCarthy, discourse analysis has grown into a wide-ranging and heterogeneous discipline which finds its unity in the description of language abovethe sentence and an interest in the contexts and cultural influences which affect language in use. Therefore, discourse analysis is concerned with the study of the relationship between language and the contexts in which it is used, (p.5-6). McCarthy highlights that "discourse analysis is not only concerned with the description and analysis of spoken interaction. In addition to all our verbal encounters we daily consume hundreds of written and printed words: newspaper articles, letters, stories, recipes, instructions, notices, comics, billboards, leaflets pushed through the door, and so on."(p.12). For written discourses, McCarthy explains that basically, most texts display links from sentence to sentence in terms of grammatical features such as pronominalisation, ellipsis (the omission of otherwise expected elements because they are retrievable from the previous text or context) and conjunction of various kinds (Halliday and Hasan 1976), (p.25).In a text there are features of grammatical and lexical cohesion clues.The cohesive items are clues or signals as to how the text should be read, they are not absolutes. Written discourses are accompanied with Markers of various kinds as mentioned by McCarthy, i.e. the linguistic signals of semantic and

discourse functions are very much concerned with the surface of the text. He writes that cohesive markers are no exception as they create links across sentence boundaries and pair and chain together items that are related.There are patterns present bits of text which may be phrases, clauses, sentences or groups of sentences; we shall refer to them as textual segments to avoid confusion with grammatical elements and syntactic relations within clauses and sentences as mentioned by McCarthy, (p. 28).

ACADEMIC RESEARCH ARTICLES

Investigating the impact of English language standards in submitted papers on their progress to publication might, of course, be done from a number of different perspectives. For most academic disciplines, the research article is the primary written text by which the results of investigations are recorded and disseminated, and research article writing and revision has become an area of considerable interest. (Martin Hewing, 2001). Some researchers have found a correlation between cohesive devices and writing quality (Liu and Braine, 2005; Wenjun, 1999; Witte and Faigley, 1981). According to Richards and Renandya (2002) the difficulty emanates both from generating and organizing ideas and translating these ideas into readable text. Halliday and Hasan (1976, 1989) believed that cohesion and coherence, as the two important textual elements have long been recognized as important features of good writing. It is commonly believed that highly scored essays include more lexical collocations than do low scored ones (Johns, 1980; Zhang, 2000). They also held that lexical cohesion is the most commonly used category in both good and weak essays, followed by conjunction and reference (Johns, 1980; Zhang, 2000).

COHESION AND TYPES OF COHESION

According to Halliday and Hasan (1976), Halliday (1985) and Hasan (1984), the type, number, and degree of utilization of cohesive devices used in the text contribute to the cohesiveness of a text. In spoken and written English discourses, accordingly, individual clauses and utterances are linked semantically by grammatical connections (McCarthy, 1991), which make a text cohesive.For Hoey (1991, p.260)," cohesion is a property of a text whereby certain grammatical or lexical features of the sentences of the text connect them to other sentences in the text."According to Halliday and Hasan (1976), the primary factor of whether a set of sentences do or do not constitute a text depends on cohesive relationships between and within the sentences

which create texture.Malmkjar (2004, p.543) is of the opinion that "cohesion concerns the way in which the linguistic items of which a text is composed are meaningfully connected to each other in a sequence on the basis of the grammatical rules of the language, and formal devices signal the relationship between sentence.Cohesion connectscertaingrammatical or lexical features of the sentences to the text of the other sentences in the text. Halliday and Hasan (1976, p.14) argue that cohesion is expressed partly through the grammar and partly through the vocabulary, hence grammatical cohesion and lexical cohesion. "It is necessary to consider that cohesion is a semantic relation but, like all the components of semantic system, it is realized through the lexico grammatical system. The lexicogrammatical system includes both grammar and vocabulary. Of the cohesive types reference, substitution, and ellipsis are grammatical; lexical cohesion is lexical; and finally conjunction is on the borderline of the two, mainly grammatical, but with a lexical component in it" (Halliday and Hasan 1976. p.5).According to Halliday and Hasan (1976), lexical cohesion is 'phoric' relation which is established through the structure of vocabulary, and it is a relation on the lexicogrammatical level. Lexical cohesion comes about through the using of items that are related in some way to those that have gone before. In short, lexical cohesion occurs when two words in a text are related in terms of their meaning. Reiteration and collocation are the two major types of lexical cohesion (cited in Wang & LIU, 2014). According to Schiffrin, Hamilton and Tannen (2001), "Conjunction is concerned with resources for connecting messages, via addition, comparison, temporality, and causality. This system subsumes earlier work on linking between clauses in a framework which considers, in addition, the ways in which connections can be realized inside a clause through verbs, prepositions, and nouns, (p.35)". According to Tárnyiková, the cohesion presents "a surface structure linkage between elements of a text" (2009:30). Cohesion used to be described as "the way certain words or grammatical features of a sentence can connect that sentence to its predecessors and successors in a text" (Hoey 1996: 3). Cohesion can also be realized by implicit (zero) signals, defined as follows: "those surface representations which are realized by a phonologically null anaphoric or cataphoric element, the explicit reading of which is recoverable on the basis of commonly shared knowledge of the language system in general." (Tárnyiková 2009:52). Brown & Yule (1983) focused much on the process of analyzing written discourse. They pointed that coherence is the result of the interaction between

discourse and its receivers, which is produced while readers dealing with discourse, (cited in Wang and LIU, 2014).

Therefore the written discourse has been analyzed to identify cohesion which layers coherence under each cohesive device used.

3.METHOD: The method adopted for this study is discourse analytical approach as discourse analysis is an approach which surpasses the dichotomy between subjective meanings and objective reality, as well as the dichotomy between user-centered and system-centered research (Talja, 1997).The samples are two research papers taken from "The journal of personality and social psychology, American psychological association published online. The information of each article is given below:-

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SAMPLE-1

TITLE: - "Gender differences in Implicit Self Esteem Following a Romantic Partner's Success and Failure".

AUTHORS: Kate. A Ratliff & Shigehiro Oishi

PAGES- 11 pages

WORDS- 10,475 words

JOURNAL: Journal of personality and Social Psychology, Vol. 105, No-4, p. 688-702

SAMPLE-2

TITLE: - "I cheated, but Only a Little": Partial Confessions to Unethical Behavior

AUTHORS: Eyal Peer and Alessandro Acquisti & Shaul Shalvi

PAGES- 11 pages

WORDS-13,125 Words

JOURNAL: - Journal of personality and Social Psychology, Vol. 106, No-2, p. 202-217

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4. ANALYSIS

4.1- ANALYSIS OF THE FIRST PAPER: The analysis of the first paperis done through discourse analysis is shown. The analysis focuses on the identification of *(i) the cohesive devices used, (ii)the type of cohesion, and the (iii) frequency of occurrence.*From the list of cohesive devices, the cohesive devices are categorized into 6 broad categories which are shown in **table-1** given below**.**

Table-1: Categories of cohesive devices in Paper-1

Categories of cohesive devices	Examples of the cohesive devices
1. Result/consequence/summary	Therefore, thus, overall, in all, in sum, finally, so.
2. Contrast and comparison	Neither, or, but, instead, in contrast, whereas, although, also, however. Likely, whether, than, more than, either.
3. Giving examples/exemplification	Such, for instance, on the other hand.
4. Reinforcement/addition	In addition, further, also.
5. Giving reasons/ Connective/position/highlighting	And, between, because, more important.
6. Listing/enumeration	First, second, third, further, finally.
7. Adverbs	Significantly

Explanation: As shown above in table-1, the analysis of paper-1 showed that there are range of different types of cohesive devices used by the researchers in order to produce coherence or meaning within the text. The researchers used different types of cohesive devices to perform different actions like to show contrast, to explain, to connect two statements, to give examples, to summarize, highlight or to list down the steps of the procedures in the research. Interestingly, the researchers used a range of cohesive devices for different types of cohesion like listing/enumeration, giving examples, highlighting/reinforcement, contrast and comparison, connecting and addition, and consequence/result. As a result, these types of cohesion are formulated into six broad categories and the range of cohesive devices used for each category are divided accordingly which are shown above in table-2.Each category is being explained below to give a deep insight in the usage of cohesive devices of the same type.

1. *Tosummarize or give results/consequences*, the researchers used devices like*therefore, in sum, overall, finally, thus, and so* which have the same function but give different meaning in different sentences to summarize or conclude.

<u>For e.g.</u>1. "*Overall* participants reported being quite with their romantic relationship on the same relationship satisfaction scale used in experiment 1 and 2."

"*Therefore,* one's self-esteem might increase due to a partner's success or decrease due to partner's failure." The devices "overall" and "therefore" have the same meaning of giving result or to conclude but the usage is different. So, as *"overall"* gives the result of an experiment conducted by the researcher, *"therefore"*concludes the experiment and gives a fact at the end.

2. *To give contrast*the range of devices include *neither, or, but, however, instead, in contrast, whereas, although, also* which shows contrast or difference between two ormore piece of information i.e. have the same function but differ in meaning depending on the its use& devices like *likely, whether, than, more than, either*are used *to show comparison*or similarity or giving a choice between two or piece of information.

For e.g. 1. "Women report higher levels of relationship satisfaction when they think about time that their partner succeeded relatively to a time that their partner failed *but* men do not."

2. "*Although* there is little direct evidence for gender differences, there is a reason to suspect that women might react more favorably and that men might react less favorably to a partner's success."

In the above two examples, *"but & although"* show contrast between men and women but the use of devices are different in sentence structures. *"Although"* gives the reason of the contrast and show the contrast whereas *"but"* shows the contrast directly in its usage.

3. Devices like *such as, for instance, on the other hand* perform the function*to give examples/exemplification*and illustrate the instances or information in a certain process or experiment for the research.

For e.g. 1."*For instance*", social norms and personal values might prevent men's expectation of a negative response to a partner's success.

2. "The IAT was scored *"such"* that positive scores indicate a stronger association."

In the above two examples, *"for instance"* gives the example whereas *"such"* shows exemplification i.e. shows the representation of then example.

4. *To show reinforcement/addition*the devices used are *in addition, further & also* which show addition or reinforcement in the existing knowledge of fact, result or highlight information which shouldn't be ignored.

For e.g. 1. "*Further*" it suggests that gender (implicit or explicit) stereotyping and beliefs about appropriate gender roles might moderate the effect"

2. "*In addition*" to implicit and explicit self-esteem we "*also*"examined whether imagining a partners success or failure would influence participant's views about the future of their romantic relationships.

In the above two examples, *"further"* highlights one of the result of the experiments which should the researcher want to bring into the notice of the reader whereas *"In addition"* shows the information which is being added to the existing one and *"also"*

depicts reinforcement and highlights the aspect which is being added to examine to show accuracy of their experiment.

5. ***To give reasons/ show position/highlighting*** devices such as ***between, because, more important*** are used. The device ***"between"*** shows the reason for the effect or the position of the effect.***"Because"*** give reasons for the information present or the findings and "***more important"*** highlights the main reasons.

For e.g. 1. There was a non-significant tendency for the effect to be larger when the linkage***"between"*** the partner's success and one's own failure was made explicit.

2. ***"Because"***participants are nested within a couple, individual responses are not independent.

3. This brings us to the fourth and the ***"most important"*** way that the present work is different from the previous research.

In the above three examples, ***"between"***highlights the position of the information,***"because"*** gives the reason for the result or finding and ***"most important"***highlights to show that this research conducted is important and later give reasons by listing why it is.

6. ***To list or enumerate,***devices like ***first, second, third, finally*** are used. These devices are used to list down the steps or give information in a sequential manner. It helps to sequence the process steps, information and the results or findings.

For e.g. 1. ***"Firstly"*** we conducted experiments in Netherlands and USA, ***"secondly"*** assessed with IAT variant and ***"finally"*** collected data from non-college students.

In the above example, "***firstly, secondly and finally"*** shows the sequence of the process of this research.

As seen from the analysis and the examples given above, all the cohesive devices have the *same function of linking two ideas or sentences with each other but hold different meaning* which highlights the importance of cohesive devices in written discourses.

4.2 ANALYSIS OF THE SECOND PAPER: The analysis of the first paperis done through discourse analysis is shown. The analysis is done to identify the

*(i) Cohesive devices used, (ii) the type of cohesion, and (iii) the frequency of occurrence.*From the list of cohesive devices, the cohesive devices are categorized into 6 broad categories which are shown in table-2 given below.

Table-2: Categories of cohesive device is paper-2

Categories of cohesive devices	Examples of the cohesive devices
1. Result/consequence/summary	Therefore, thus, overall, as a result, in sum, finally, so, then, in total.
2. Contrast and comparison	Or, but, in contrast, whereas, although, also, however, alternatively. Likely, likelihood, whether, than, more than, either.
3. Giving examples/exemplification	Such, Such as, on the other hand, for example
4. Reinforcement/addition	In addition, additionally, further, also, next.
5. Connective/position/highlighting/ Giving reasons	And, between, because.
6. Listing/enumeration/time &sequence	First, second, last, further, next.
7. Adverbs	Significantly, specifically, interestingly, paradoxically, arguably, chiefly.

Explanation: : As shown above in table-3, the analysis of paper-2 showed that there are range of different types of cohesive devices used by the researchers in order to produce coherence or meaning within the text. The researchers used different types of cohesive devices to perform different actions like to show contrast, to explain, to connect two statements, to give examples, to summarize, highlight or to list down the steps of the procedures in the research. Interestingly, in this paper the researcher used range of adverbs to highlight the information or show the importance or significance of the information. The researchers used a range of cohesive devices for different types of cohesion like listing/enumeration, giving examples, highlighting/reinforcement, contrast and comparison, connecting and addition, consequence/result and adverbs which are formulated into seven broad categories and the range of cohesive devices used for each category are divided accordingly which are shown above in table-4. Each category is being explained below to give a deep insight in the usage of cohesive devices of the same type.

1. *To summarize or give results/consequences,* the devices used are *therefore, thus, overall, as a result, in sum, finally, so, then, in total.* Devices like *in total, as a result, then* are being mostly used in this paper to show the results. The device "then" is used to highlight the time and sequence of the process and also indicate the upcoming process or results for a particular process as all these devices have the same function but give different meaning in different sentences to summarize or conclude.

   For e.g. 1. "Participants were asked to imagine taking part in an experiment in which they were asked to guess the outcomes of 10 coin tosses and *"then"* check their guesses using a website that stimulates a random coin."

   2.*"In total"* 10.09 % cheaters cheated to the full extent.

   In the above two examples*, "then"* indicates about the upcoming process that has to be done and *"in total"* shows the result of the experiment done by the researchers.

2. *To compare and contrast* the devices used are *or, but, in contrast, however, whereas, although, also, alternatively, likely, likelihood, whether, than, more than, either.* These devices help in showing contrast and comparison to show the relationship between the information.

<u>For e.g.</u> 1. Our result proved evidence that *"although"* partial confessions might seem attractive, they come at an emotional cost.

2. People who reported their partial confessions regretted their confessions *"more than"* people reporting full confessions.

In the above example, *"more than"* shows a comparison of confessions between two kinds of people whereas *"although"* shows contrast as how confessions might affect people even though they are attractive.

3. *To give examples/exemplification* devices like **such, such as, for example, on the other hand** are used which perform the same function but vary in their usage.

<u>For e.g.</u> 1. *"For example",* if a person stole $100, admitting to stealing $100 would constitute a full confession. Claiming to have stolen only $50, *"on the other hand,"* would constitute a partial confession.

In the above example, *"for example"* gives an example of a situation whereas *"on the other hand"* show exemplification which is illustrating an information with an example.

4. *To show reinforcement/addition* the devices used are **additionally, in addition, further, also&next** which showaddition or reinforcement in the existing knowledge of fact and showing addition of steps used further, highlight information which shouldn't be ignored.

<u>For e.g.</u> 1. We *"next"* assessed the likelihood of the participants cheating to different degrees to confess to a full versus a partial extent.

2. To *"further"* assess we examine the distribution of answers participants in the open ended condition provided to the confession extent index.

In the above two example, *"next"* indicate the step which was taken after no of steps already taken and *"further"* indicates that they added a new step to the existing process to show more accurate results.

5. *To give reasons/ show position/highlighting* devices such as **between, because**, **and** are used. The device *"between"* show the reason for differences between opinion or result or information provided by any source. *"Because"* give reasons for the information present or the findings and *"more important"* highlights the main reasons.

For e.g. 1. The overall differences *"between"* the frequency of categories in the full versus partial confessions were not statistically significant.

2. Potentially negative emotions may rise *"because"*partially confessing people admit to behaving unethically while not taking full responsibility for their actions.

In the above two examples, *"between"* give reasons and show the difference in the result &*"because"* gives the reason for the result or the finding.

6.*To list or enumerate,*devices like *first, second, last, further, next* are used. These devices are used to list down the steps or give information in a sequential manner. They help to sequence the process steps, information and the results or findings.

For e.g. 1. *"First"*, partial confessions are prevalent in many real life situations and circumstances. *"Second",* people who reported their partial confessions regretted their confession more than people reporting full confessions.

In the above example, *"first, second"* shows the result which provide several insights to this research.

7.*Adverbs:* In *both*the research papers this category was very prevalent which showed relations between the sentences and highlighted the importance of the information by being used in the beginning of the sentences and also express certain ideas which the readers might want to notice.*Adverbs* may be used at the beginning of sentences to show how the sentence which follows relates to the rest of the text. Many of them reveal the idea expressed and can be used as an important tool in writing. The different kind of such devices present in the papers were *interestingly, significantly, specifically, paradoxically, arguably, chiefly.*

For e.g. 1.The confession extent score differed *"significantly"* between conditions. *"Specifically"*, and demonstrating the success of our manipulation, participants in the full confession condition gave a higher score.

2. Men had *"significantly"* higher implicit self-esteem after thinking about a time when their partner failed.

8.*And:*This is the most *common cohesive device*used everywhere and is used in these two papers as well which connect two statements, give equal importance to the two statements and also create coherence within the text. The frequency of occurrence of this device is highest among all which is *148 times*in total.

OVERALL ANALYSIS/CONCLUSION

The above analysis of the cohesive devices in the two research papers clearly shows the importance of the cohesive devices in writing academic research articles. The range of devices adds on to the vocabulary and also coherence to the text. As shown above, the range of devices for one type of cohesion are used differently to layer and incorporate different kind of meanings to the text. The writers use a lot of these devices which makes it important for the reader to have knowledge about the cohesive devices as it may create a gap between the reader and the writer. The use of cohesive devices in the papers clearly shows that they *have the same function but gives different meanings which brings the coherent factor.*Therefore, to comprehend the text, the reader need to have enough knowledge or skill for interpreting the meanings within text and understand the text more effectively especially to the non-native speakers. The function of cohesion and coherence for reading are very significant which helps to understand the function as well as the meaning in context. Hence, the *Cohesion and Coherence* are important while *Reading*.

Why psychology papers are written are like this?

The main objective of writing psychology papers in such a manner is to explain the principles that govern the well formedness, the unity and connectivity of texts by looking at the different kinds of ties established within texts and the relations they express as psychology is discipline with *lot of contemplations and observationsand not theoretical*. The observations and contemplations are made by the researcher himself. So, when putting the findings and ideas in writing articles or research papers is the most difficult part as it may look distorted and scattered which may make the reader confused. Therefore the function of cohesive devices help the researchers to connect the ideas and the facts simply which make things move smoothly within the text. This is one of the main reasons for the result of my findings where I discovered a range of cohesive devices used in psychology research articles. The *relation of cohesion and the style*

*of writing psychology research articles*is strong and unique which should not ignored. From the educational perspective, researchers have performed a number of studies on the analysis of lexical cohesion markers due to their importance in teaching writing and reading to foreign/second language learners. "Of the most widely investigated genres in descriptive studies are narratives because they contain a rich source of participant chains, temporal, and spatial progression" (Creswell, 2011). Cohesion in a text is developed when the writers use some clear signals and markers to link different parts of their text, be it different parts of a given sentence, different sentences of a given paragraph, or different paragraphs of a given text. Once a text achieves its cohesion by logically connecting different parts of a text using related linguistic means or markers, its overall meaning is developed and interpreted by the reader. It can be said that cohesion in a text is developed by the writer, while coherence is developed by the reader.

Therefore, for writing articles or research papers in psychology discipline the writer should keep the readers in their mind and understand the problems the reader may face while reading their article. As I already mentioned before, psychology has a deep meaning and answers for every problem the accurate information has to be conveyed in the right way to the reader in the form of writing where cohesion cannot be ignored at all. Cohesion is the most important factor which should be taken into consideration when writing psychology research articles.

REFLECTION

1. IMPLICATIONS FOR THE TEACHING OF ESP

*English for specific purposes*comes with a specific context where language in that context is the focuswhen teaching is concerned. As cohesion being one of the most important aspects of language is independent of any context and is mostly taught in an academic context.

The idea or approach of **Widdowson (1983) model**named *"Athree tier model",* which was introduced to account for actual language use, has been taken into consideration to meet the needs of the students as Widdowson model is primarily concerned with the theoretical background of to teaching of English for specific purposes and is a discourse model that is firmly based on schema theory. The model therefore contains three levels:

   a.   Systematic level (linguistic competence)
   b.   Schematic level (communicative competence)

c.   Procedural level (communicative capacity)

As Fulcher (1998) explains that the procedural level is significantly different from 1 and 2 levels and it is this level which deals with performance issues or how the reader establishes a mental representation of the text is able to predict what is coming in the text, the approach adapted is based on this level of the three tier model. It is concerned in the ways in which a reader goes about interpreting the schemata of the text. Widdowson distinguished between frame procedures and routine procedures where frame procedures are said to explain the ability to utilize from frame schemata and routine procedures are said to explain the ability to utilize from routine schemata. Frame procedures are defined by those that establish and maintain reference especially with regard to cohesion and working out "given" from the new information (Widdowson, p.41-42, 67) (cited by G. Fulcher, 1998). Fulcher further explains that through these procedures the reader fits new information into frame. The procedures involve tracing cohesive links and understanding the relationship of information as belonging to a specific frame, which is the engagement of schematic knowledge in processing text meaning. G. Fulcher (1989) elaborated more on cohesion and frame procedures that "as cohesion is concerned with both endophoric and exophoric reference and lexical cohesion, it may be said that the frame procedures are those concerned with the interpretation of and formation of ideational schemata." Ideational schemata are related to conceptual organization (Widdowson, 1983, p55-56).

Therefore, the approach to teach cohesion so as to able the students to apply their knowledge of language use and its applications in understanding and comprehending the text is inspired by the idea of Widdowson (1983) for frame procedures in the procedural level of his three tier model. It gives a clear insight as in how the schema i.e. organizational concept of a text plays an important role in comprehending the text and understanding the relation of information sentence by sentence.

The context for teaching cohesion could be decided by identification of the skill to be taught as it plays an important role in all the skills which should be organized well and delivered cohesively and coherently as Hasan (1984) cogently argued that there is a string connection between cohesion and making sense of coherent text (cited by Fulcher, 1998).

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