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Establishing Propositional Relations in Reading Stories

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Abstract

This study examined the establishment of coherence relations by Persian EFL learners in their reading of stories. 201 undergraduate EFL learners read narrative passages and selected appropriate coherence elements of different types necessary for the proper construction of meaning. The results demonstrated a consistent pattern of a text-specific hierarchy for the comprehension of conjunctive relations across learners with different proficiency levels. More specifically, adversatives were found to be the easiest connectors by all the three groups followed by causals as the second easiest, then sequentials as the third and more difficult, and additives as the most difficult markers. The results have both theoretical and SUDFWLFDO LPSOLFDWLRQV DQG LP SOLFDWLRQV IRU WKH µP RGHO EXLOGLQJ¶ K\SRWKHVLV RQ WKH RQH KDQG DQG UHDGLQJ comprehension and instruction on the other.

Keywords: inference, meaning construction, connectives, reading comprehension, stories

1. Introduction

Reading comprehension studies have been mainly dealing with variables such as ability, age, prior knowledge, motivation, purpose, as well as text variables such as voice, ambiguity, word length or frequency

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(Brantmeier, 2005; Zinar, 1990). However, few studies have examined KRZ WKH UHDGHUV FRPSUHKHQVRQ LV DIIHFWHG ZKHQ WKH VDOLHQFH RI D SDUWLFLSDQW¶V WKHPDWLF NQRZOHGJH . IQWFK DQG9 DQ' LNN DUJH G that when logical links between and among propositions could not be found, the reader must make an inference. Coherence elements are believed to help the reader identify and link proposition sets. Through them, the reader will be able to organize information stored in the long-WHUP PHPRU\ DQGKHQFH DFFHVV WKHP HDVLO\ 6\UGNLV . IQWFK DQG9 DQ' LNN * UDHVHUHWDO =IQDJ ,QDVPIODUYHQ 6\UGNLV S WDWHG WKDW FRKHUHQFH HOHPHQW ¼ LNH transitions, interrelate superordinate and subordinate content by adding in ZRUGVDQGSKUDVHV WKDWHP SKDVL]H WKHUHDWRQKSV« 6LJQDO VKRXG help the reader form a hierarchical framework in memory that will facilitate the placement of the incoming information".

Narratives construct a pattern of events with a problematic and/or unexpected outcome that entertains or instructs the reader or listener. 7KH WQGWK IQGXLQJ µY MX QLDWRQ¶LQ WKHUHDGHUDSDWRI WKHUHDGQJ SURHVV ' HQV 7KHP RWFRPP RQHOPHQWIRXG IQ QUUDWYH texts are characters with goals and motives, event sequences, morals and WKHP HV * UDHVHU * RGGQJ / RQ 1 DUDWYHW W IREX RQ SHUVRQVREMFWDQGUHDWRQVLQ WP H L H P HQWOSURHVRI SHUFHSWRQ IQWP H %URRNV: DUHQ 5 HVHDUFKHUVOLNH RUED WUHGWR discover how native and non-native readers of Japanese process text and represent its meaning in memory when they have differing goals (narrative vs. expository). He argued that narratives have a more predictable organization with global causal structures which appear to JXGH\RQJ DQGDGXOWHDGHUV¶FRPSUHKHQVRQDQG SURHVWQJ * RGGPDQ DQG9 DQKOJHQ 7UDEDVR HWDO * HJHUDQG0 IGDV found that comprehension differences between procedural and other text WSHVOLNHQDUDWYHVDUHP DQ\GXHWRGLIHUHQFHVIQORREDFRKHQFH ,Q the same vein, Abdollahzadeh (2006) found that when low-level learners perform on narrtive texts in which textual signals are not included, they may find the narratives as difficult as the expository texts.

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Prior research on connectives and narrative comprehension suggest a limited picture of the relationship between text signals and comprehension. They essentially focus on the role of causal relations as unique element in narrative comprehension Myers et al. Trabasso et al. Trabasso Sperry They argue that readers judge causal relations as more important to the interpretation of narratives than any other type of element Trabasso Sperry However, readers do not unfold narratives by means of causal relations per se, but may also resort to other connectives like additives and adversative markers Ben Anath These researchers' focus then runs the risk of limiting their findings since such a restricted focus excludes other types of relations (i.e. concessive, additive, and sequential relations) that readers seek to comprehend while reading stories. Further, almost all these studies have used sentence pairs rather than extended passages in the design of their instruments As Murray cautioned such pairs may present relations that are inherently easy to integrate and comprehend. Sentence pairs may not accurately reflect the effect of connectives as the global macro-level context provided in an extended passage is not taken into account in such designs.

1.1 Significance of the study and research questions

Examining the effects of connecting devices such as logical connectives can help us identify how these devices function in the text and how they contribute to a better understanding of the narrative information. A systematic investigation of different kinds of signals can help us discover whether some are more important for comprehension than others. Accordingly, better models of the cognitive effects of signals could be potentiated that can have relevance to reading instruction Lorch Previous research has been mainly concerned with the relationship of these signals with the amount recalled or questions correctly answered. Further, almost all these studies, using sentence pairs rather than extended passages in the design of their instruments, have failed to reflect the effect of connectives at the global macro-level. The

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assumption in this research is that an inability to connect ideas in the text in an appropriate fashion would impact comprehension of the text as a ZKROH * ROGPDQ DQG0 XUUD\ 7KHLQWHUHVWKHUH LV HVVHQWLDOO\ LQ how readers understand the functions of logical connectors of different kinds and the meaning relationships implied by them.

To shed light on these issues, this research attempted to delve into WKH ZD\ / UHDGHUV DWGLIIHUHQWODQJXDJH SURILFLHQF\ OHYHOV FDQ LQIHU logical relations denoted by connectives while reading extended stories. To this end, the following research question was investigated in this VWXG\ +RZ GR ,UDQLDQ / UHDGHUV ZLWK GLIIHUHQWOHYHOV RI ODQJXDJH proficiency infer connectives while reading extended narratives?

1.2 Background

Coherence elements or connectives are used "to characterize words or morphemes whose function is primarily to link linguistic units at any OHYHO &U\VWDO S 7KHVH FRQQHFWRUV FDQ UHIHU WR D ULFK VHWRI relationships such as causal, adversative, additive, sequential as well as SUDJPDWLF UHODWLRQV 9DQ 'LMN 7KH\ DUH IUHTXHQWO\ FODVVLILHG DFFRUGLQJ WR WKH FULWHULD SURSRVHG E\ +DOOLGD\ DQG+DVDQ PRGHO This model is a broadly used model in different discourse-functional approaches in linguistics. That is why we, given our purposes, chose this model for identifying the connectors in the texts. They present four classes of connectives: (a) additives, which present new information; (b) adversatives, which present relations contrary to our expectations; (c) causals which present true causes and logical inferences, and (d) sequentials (temporals) which present real-time or sequential relationships.

There have been a number of studies investigating the role of connectives in text processing in different narrative and expository text types. Some researchers claim that coherence relations are merely analytic tools which are useful to describe text structure but they should QRWEH JLYHQ SV\FKRORJLFDO LQWHUSUHWDWLRQ *URV] DQG 6LGQHU Others hypothesize that coherence relations should be considered as

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FRJQLWLYH HQWLWLHV +REEV 0 DQQ DQG 7KRPSVRQ 6DQGHUV HW al., 1993). According to the cognitive representation of coherence, constructing a coherent representation of a text requires that coherence relations be established between text segments or rather between the cognitive representations that readers have of text segments. For instance, Sanders and Noordman (2000) focused on the cognitive status of these relations. They found that explicit marking of the relations resulted in IDVWHU SURFHVVLQJ EXW GLG QRW DIIHFW UHFDOO $OVR ' HJDQG DQG 6DQGHUV (2002) investigated the effect of causal connectives and signaling phrases in expository texts that were manipulated with respect to the presence or absence of linguistic markers. Their results showed that comprehension in the implicit condition was significantly lower than in the explicit condition while the explicit versions did not significantly differ from each other.

Other studies examined the effect of explicitly versus implicitly WDUJHW FRQQHFWLYHV LQ WKH FRPSUHKHQVLRQ RI WH[WV * HYD DQG 5\DQ examined fifth and seventh grade children who read expository texts XQGHU IRXU FRQGLWLRQV ,PSOLFLW ZLWKRXW FRQQHFWLYHV H[SOLFLW ZLWK FRQQHFWLYHV KLJKOLJKWHG ZLWK FRQMXQFWLRQV XQGHUOLQHG DQG FDSLWDOL]HG DQG GHHS WKH UHDGHU KDG WR VHOHFW FRQMXQFWLRQ WKURXJK D FOR]H WDVN 7KH analysis indicated that all groups benefited from the highlighted and H[SOLFLW FRQMXQFWLRQV ³$YHUDJH DQG EHORZ DYHUDJH UHDGHUV VKRZHG OHVV knowledge of these important cohesive indicators than above average UHDGHUV * HYD DQG 5\DQ S 7KH\ FRQFOXGH WKDW WKRXJK UHDGHUV VKRZ SUREOHPV ZLWK ERWK NQRZOHGJH RI FRQMXQFWLRQV DQG FRQWURO RYHU their use in comprehending expository text. Nonetheless, these readers benefited from the highlighted condition in accessing and answering both GHWDLO DQG WKH WH[W TXHVWLRQV 6LPLODUO\ * RONDU H[DPLQHG WKH HIIHFW RI H[SOLFLW LPSOLFLW DQG KLJKOLJKWHG FRQQHFWRUV RQ (67 UHDGHUV¶ comprehension. He found significant differences between the performances on the explicit and highlighted versions on the one hand, and the implicit versions on the other hand. However, no significant differences between the explicit and highlighted versions were found.

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* ROGVP LWK LQYHVWLJDWHG WKH UROH RI DGYHUVDWLYH FRQQHFWLYHV LQ helping good and poor readers to integrate information in texts. $GYHUVDWLYH FRQQHFWLYHV ZHUH IRXQG WR DLG SRRU UHDGHUV¶ DELOLW\ WR H[FOXGH LUUHOHYDQW LQIRUPDWLRQ DQG LPSURYH JRRG UHDGHUV¶ SHUIRUPDQFH WR IRUHJURXQG LQIRUPDWLRQ 2Q D PRUH JHQHUDO QRWH * ROGVP LWK EHOLHYHV that connectives help readers activate the schema related to the topic under discussion or to its structure. They also help, through their redundancy, alert the reader to the organizational structure of the texts, thus helping the reader to process the information on a deeper level.

0 H\HU IRXQG WKDW VNLOOHG UHDGHUV SRVVHVV DGHTXDWH WH[W organizational skills to generate most of the implicit logical relationships in a text through their structure strategy to read difficult texts even in the DEVHQFH RI FRQQHFWLYHV 7KLV WKHVLV ZDV ODWHU TXHVWLRQHG E\ RWKHU UHVHDUFKHUV)RU LQVWDQFH 6S\ULGDNLV DUJXHG WKDW µP RUH WKDQ likely if a comprehender is faced with a sufficiently difficult text; he/she Z LOO IXQFWLRQ OLNH D SRRU FRPSUHKHQGHU ,I WKLV LV VR WKHQ VLJQDOV FRXOG aid good comprehenders, who have become poor comprehenders due to textual difficulty" (p. 231). She found that logical connectives appeared to contribute to both superordinate and subordinate level of comprehension.

Robertson (1968) also investigated fourth, fifth, and sixth grade UHDGLQJ FRPSUHKHQVLRQ RI FRQQHFWLYHV +H FKRVH LQGLYLGXDO connectives and examined the sentence structures in which they appeared LQ WKH VWXGHQWV¶ EDVDO UHDGLQJ WH[W 7KHQ KH FRQVWUXFWHG D P XOWLSOH choice test in which each connective had to be selected for the slot from WKH RSWLRQV 7KH UHVXOWV VKRZHG WKDW EDVHG RQ JUDGH VXEMHFWV GHYHORSHG DQ LQFUHDVLQJ XQGHUVWDQGLQJ RI HDFK RI WKH VHOHFWHG FRQQHFWLYHV 6WXGHQWV FRPSUHKHQVLRQ RI LWHP V FRQWDLQLQJ FRQQHFWLYHV VXFK DV KRZHYHU¶ µWKXV¶ DOWKRXJK DQG \HW P RVW DGYHUVDWLYHV ZHUH EHORZ WKH comprehension level of the total student groups on all test items. Significant correlations were also found between understanding of FRQQHFWLYHV DQG WKH VXEMHFWV¶ VH[DJH SODFH RI UHVLGHQFH DQG DELOLWLHV LQ listening, reading, and written language. Female readers gained higher

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marks than male readers on the connective test and children in urban areas scored higher than those in small towns, who in turn did better than WKRVH LQ UK DOLHDV 5REHUWVRQ¶V WKHRU\ LV LQWHUHVWLQJ LQ WKH VHQVH WKDW LW refers to the developmental nature of the learning of connectives by children. This view is an ontogenetic perspective which indicates that producing texts in writing is not a skill acquired all at once homogeneously, but it follows different paths depending on the requirements, and depending on the text type concerned at different ages 6FKQHX (

6HJDO ' XFKDQ 6FRWW DVVLJQHG D PRUH FHQWUDO UROH WR connectives. They found out that they not only signaled the structural relations between elements in simple narratives, they were crucial as well in building a coherent mental model for interpreting happenings in the story world without which the reader would not be able to build the LQWHQGHG PRGHO 7KXV WKH SUHHU WR XH WKH WLP µP RGHEXGLQJ connectives, for inter-clausal connectives.

7KH H[DP LQHG DFKLG¶V RUDOQDUDWLYH DVHWRI WRUHV RYHD year, a story written for children by an adult, an adult narrative written for an unknown adult audience. They examined the first 10 occurrences RI µEXW¶ LQ WKH DERYH HQWRQHG GLHUHQW GLVFRXUVH FRQWWWR GLVFRYH what the producers of discourse were attempting to convey in the SDUDJHV WKDWFRQWDLQHG WKH WLP µEXW¶ DQG KRZ µEXW¶ IXQFWLRQHG WR DFKLHYH WKHLUJRDO 7KH FRQEXH WKDWµEXW¶ FUHDWV D µGRPDLQ¶IRUWKH interpreter and that the interpreter needs to determine what the domain is, ZKDWµH[SHFWDWLRQ¶ DUH DVRFLDWHG ZLWK WKH GRPDLQ DQGKRZ WKH DUH being violated. By this, they meant that interpreting relations denoted by µEXW¶ UHTXLUHV JRLQJ EH\RQG WKH WH[W WR XQGHUVWDQG WKH SUDJPDWV 6HJDO HWDO S DJXHG ³HYHQ IDYH\HDURO GVVHP WR KDYH 0HDQIGLVVLJQLFDQFH 0RUHRYHU XQGHUVWDQGLQJ FRQQHFWLYH XHG LQ texts requires consideration of information presented much earlier than WKH FDX H SUHFHGLQJ LW: HFDQ WKX LQIHUWKDWFRQQHFWLYH FDQ FUHDW different interpretive relations of continuity (as through additives), discontinuity, causality, and adversity.

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All in all, these studies highlight the significance of textual markers of different types and how they may facilitate or constrain the various interpretations that readers might make while reading or producing stories. They further show that the communicative purpose affects the construction of an efficient configuration of textual organizers, and the mastery of narrative comprehension or production implies a restructuring of the configuration of textual organizers in a text.

2. Method

2.1 Participants

254 male and female students took part in this research. They were VHOHFWHG IURP XQGHUJUDGXDWH ()/ VWXGHQWV RI 6FLHQFH DQG 7HFKQRORJ\ from three state universities in Tehran. To determine the language SURILFLHQF\ OHYHO RI WKH SDUWLFLSDQWV D 1HOVRQ WHVW 9HUVLRQ ZDV DGPLQLVWHUHG *LYHQ WKH IDFW WKDW WKH SDUWLFLSDQWV¶ PDMRU ZDV QRW (QJOLVK LW ZDV DVVXPHG WKDW 72()/ DQG ,(/76 PLJKW EH D YHU\ GLIILFXOW WHVW IRU thee learners. Therefore, it was decided that this test may be a better candidate for the purposes of the current study.

These participants were divided into three groups of weak, intermediate, and advanced language proficiency levels based on their mean SHUIRUPDQFH DQG VWDQGDUG GHYLDWLRQ VFRUH RQ WKLV WHVW 0HDQ 6' $V VRPH SDUWLFLSDQWV IDLOHG WR WDNH ERWK WHVWV RI WKH VWXG\ WKH final sample was reduced to 201 participants (see Table 1).

Table1. The distribution of the participants

*URXS	/DQJXDJH OHYHO	1
1	:HDN	
2	,QWHUPHGLDWH	
3	$GYDQFHG	
Total		201

2.2 Instrumentation and procedure

7KH PDLQ LQVWUXPHQW IRU WKLV VWXG\ ZDV D FRQQHFWLRQ FRPSUHKHQVLRQ WHVW 7KH SXUSRVH RI WKLV WHVW ZDV WR FKHFN WKH IRUHLJQ ODQJXDJH UHDGHUV¶

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NQRZOHGJH RI ORJLFDO FRQQHFWRUV RI DGGLWLYH $'' DGYHUVDWLYH $'9 causal (CAUS), and sequential (SEQ) types in different text types WKURXJK D UDWLRQDO FOR]H SURFHGXUH 7KH VXEMHFWV ZHUH UHTXLUHG WR VHOHFW WKH FRUUHFW FRQQHFWLRQ IURP WKH PXOWLSOH FKRLFH LWHPV RQ WKRVH connector types. Understanding of five additives (i.e. in addition, for example, for instance, moreover, furthermore), three adversatives (but, however, nevertheless), five causals (consequently, as a result, so, therefore, thus), and six sequentials (first, then, second, third, finally, in short, briefly) was examined. Three representative texts for each text type were selected and the following procedures were observed in them: (a) there were eight cloze slots in each passage, each slot at the beginning of a sentence requiring a different connector type as the correct answer; (b) a minimum of one sentence separated two successive slots; (c) the sequence of correct choices and distracters was different in each passage and across passages.

,QLWLDOO\ VHYHUDO QDUUDWLYH SDVVDJHV WKDW VHHPHG WR EH RI FRPSDUDEO\ similar features were selected. Then, five passages out of this pool of passages were selected as appropriate ones with comparable features in terms of length (one-page long passages), number of words (Average ZRUG IUHTXHQF\ 0LQ 0D[QXPEHU RI SDUDJUDSKV paragraphs each), and text type (narrative). These passages were shown to three experienced instructors involved in teaching English reading courses, and were deemed appropriate for our intended participants in terms of difficulty level. Their consent as to the readability of the texts was important as the current readability formulas were not suitable for our intended purpose. Readability formulas provide a quick and easy way of estimating the difficulty of a text focusing on word difficulty and sentence length. Notwithstanding, the point is that connectives make sentences longer and readability scores soar, while they ease the GLIILFXOW\ RI WKH WH[W IRU UHDGHUV %HDXJUDQGH DQG 'UHVVOHU VWDWH that readability formulas ignore the degree of vividness, concreteness, exposition, organization, and content of the texts. Therefore, these IRUPXODV DFFRUGLQJ WR 0HHU QHHG WR FRQVLGHU UHDGHU YDULDEOHV

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(verbal ability, age, education, styles, etc.), text variables (such as textual signaling which was examined here), and task variables (mode of presentation, task type, etc.). Unless readability formulas take these points into account, they would not be really reliable. That is why we SUHIHUUHG WKH MXGJPHQW RI UHDGLQJ WHDFKHUV RU H[SHUWV

After the trial administration, the researchers decided to include three passages for the final administration. The developed instrument VHHWKH $SSHQGL[ZDV SLORWHG ZLWK DJURXS RI ( ) / OHDUQHUV VLPLODU to the target population. Participants took the test in one hour. Pilot DGPLQLVWUDWLRQ DQG GHVFULSWLYH VWDWLVWLFV RI WKHUHVHDUFKHUV FROOHFWHG resulted in some modifications of items as to appropriacy, intelligibility, workability, and item classification. Accordingly, the number of the passages was reduced to three passages, and the administration time to 50 minutes.

7KH SDUWLFLSDQWV WRRN WKH WHVW LQ WZR VHVVLRQV, Q WKH ILUVW VHVVLRQ they were assigned he Nelson test, and one week later they were assigned WKH GHYHORSHG WHVW 7KHVH GDWD ZHUH WKHQ XVHG LQ WKH 6366 software for analyses and comparisons.

3. Results

) LUVW DQ RYHUDOO GHVFULSWLRQ RI WKH SDUWLFLSDQWV¶ FRPSUHKHQVLRQ RI connectives of different types across groups is presented in Table 2.

Table 2. Connective comprehension in narratives

/ HYHO	&21&7<3(	0 HDQ
: HDN	$	.81
	$'	1.30
	C	1.21
	S	
,QWHUPHGLDWH	$	1.2
	$'	1.81
	C	
	S	1.41

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/ HYHO	&21&7<3(	0 HDQ
Advanced	A	1.64
	$'	2.10
	C	2.02
	S	1.91

1 RWH $ GGLWLYH $ ' $ GYHUVDWLYH & DXVDO 6 HTXHQWLDO

An overall comparison of the performance of the groups on the comprehension of coherence elements shows that, in terms of mean rank performance, additives and sequentials were the most difficult to infer by all learners, followed by causals and adversatives respectively (see Table 3).

Table 3. Overall performance on connectives in narratives

&21&7<3(	0 HDQ
A	1.22
$'	
C	1.63
S	1.36

To discover the significance of the differences in mean performances of different groups on the main instrument of the study, 5HSHDWHG 0 HDVXUHV 129 ZDV FRQGXFWHG 0 DXFKO\V 7HVW RI Sphericity (Table 4) shows the homogeneity of covariances and thus allows us to make further comparisons.

7DEOH 0 DXFKO\V WHVW RI VSKHULFLW\

0 DXFKO\V: : LWKLQ6XEMHFW Effect	Approx. Chi-Square	GI	6LJ	* UHHQKRX VH* HLVHU	Huynh-Feldt	/ RZHU bound
&21&7<3(						

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7KH: LWKLQ 6XEMHFW (IIHFW GDWD 6HH 7DEOH GHP RQVWUDWH G significant differences between connector type and language level, respectively. That is, there were significant differences in the comprehension performance of narratives across connector types. No significant interactions, however, were discovered between connector type and *language level.

7DEOH 7HVWRI Z LWKLQ VXEMHFWHIIHFWDFURVFRQQHFWRUVDQGODQJXDJH

6RXUFH		7\SH,,, Sum of Squares	GI	0 HDQ Square	F	Sig.
&21&7<3(	Sphericity Assumed	23.663	3		10.934	.00
	* UHHQKRXVH	23.663	2.852		10.934	.00
	* HLVHU	23.663		8.084	10.934	.00
	Huynh-Feldt	23.663	1.000	23.663	10.934	.001
	/ RZ HUERXQG					
&21&7<3(	Sphericity Assumed	1.964	6		.454	.84
* / * / (9 /	* UHHQKRXVH	1.964	1.964	.344	.454	.83
	* HLVHU	1.964	5.854	.335	.454	.83
	Huynh-Feldt	1.964	2.000	.982	.454	.63
	/ RZ HUERXQG					
Error(CONCT	Sphericity Assumed	428.494	594			
<3(	* UHHQKRXVH	428.494	564.684			
	* HLVHU	428.494				
	Huynh-Feldt	428.494	198.000	2.164		
	/ RZ HUERXQG					

7KH%HZHQ6XEMHFW(IIHFW 7DEOH VKRZVJQLILFDQW differences in the mean performance on narratives among groups with different language proficiency levels.

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7DEOH 7HVWRI EHWZHHQVXEMHFWVHIIHFW

6RXUFH	7\SH,,, 6XP RI Squares	GI	0HDQ Square	F	Sig.
,QWHUFHSW					
/*/(9/					
(UURU					

To discover the loci of the differences in connectives and across levels, 3RVW KRF 6FKHIIH DQDO\VLV ZDV FRQGXFWHG 7DEOH 6LJQLILFDQW differences between all the groups with weak, intermediate, and advanced language levels in their performance on the narrative comprehension test were found.

7DEOH 3DLUZLVH FRP SDULVRQV DP RQJ JURXSV RQ WKH FRP SUHKHQVLRQ RI connectives

, QWHUY HO	- QWHUY HO	0HDQ ' LIIHUHQFH	Std. Error	Sig.
:HDN	,QWHUP HGLDWH			
	Advanced	-.903	.141	.00
,QWHUP HGLDWH	$GYDQFHG			

The post hoc analysis on connector types across narratives (see Table 8) showed significant differences between additives on the one hand, and adversatives and causals on the other.

Table 8. Pair wise comparisons between connector types across narratives

&21&7<3(	&21&7<3(	0HDQ' LIIHUHQFH	6WG(UURU	6LJ
A	$'			
	C	-.410	.096	.00
	S	-.136	.105	1.00
$'	&			
	S	.380	.106	.003
C	S			

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Additives, contrary to our expectations, were found to be more difficult to infer in narratives than adversatives and causals by all OHDUQHUV 0 RUHRYHU WKHGLIIHUHQFHVEHWZHHQ DGYHUVDWLYHVDQGVHTXHQWLDOV were also found to be meaningful, i.e. overall the comprehension of sequentials was found to be significantly more difficult across all the OHDUQHU JURXSV ZLWK GLIIHUHQWSURILFLHQF OHYHOV 0 HDQZKLOH WKH differences between causals on the one hand and sequentials and adversatives on the other were not significant, nor was the difference between additives and sequentials.

4. Discussion and Conclusion

This study tried to examine the comprehension of connective elements in UHDGLQJ QDUUDWLYHV ,WZDV IRXQG WKDWKLJKHUOHYHOOHDUQHUV FDQ SHUIRUP significantly better in comparison to lower level learners in their construction of propositional meaning established through connectors. Sequentials and additives were by and large the most difficult markers IRUOHDUQHUVDWDOOOHYHOVWRLQIHU 0 HDQZKLOH WKHFRPSUHKHQVLRQRIFDXVDO and adversative relations was found to be easier for them.

An interesting finding about the performances of the participants across different proficiency groups is that there was a consistent pattern of performance by all the learner groups in their comprehension of the logical relations of different types. That is, examining the performances across the three learner groups, we notice an absolutely consistent pattern RI SHUIRUPDQFHV RQWKHFRQQHFWLYHV ,Q RWKHUZRUGV ZH FDQ SUHGLFWD consistent hierarchy of performance across the three learner groups. 0 RUHVSHFLILFDOO DGYHUVDWLYHVZHUHIRXQG WREHWKHHDVLHVWFRQQHFWRUV by all the three groups in narratives followed by causals as the second easiest, then sequentials as the third and more difficult, and additives as the most difficult markers.

Causal relations were found easy to infer by all learner groups. Previous research on narrative comprehension refers to the unique and GLVWLQFWUROHWKH SOD\ LQ QDUUDWLYHFRPSUHKHQVLRQ 0 \HUV HWDO 7UDEDVVR HWDO 7UDEDVVR 6SHUU WRWKHH[WHQWWKDWWKH

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DFFRXQWHG IRU WKH PDMRULW\ RI WKH HYHQWV DQG FLUFXPVWDQFHV GHSLFWHG LQ QDUUDWLYHV 7UDEDVVR HW DO 7UDEDVVR 6SHUU\ ,W DSSHDUV WKDW UHDGHUV MXGJH HYHQWV LQ D VWRU\ LQ WHUPV RI FDXVH HIIHFW FKDLQV DQG WKXV MXGJH FDXVDO UHODWLRQV DV PRUH LPSRUWDQW WR WKH LQWHUSUHWDWLRQ RI narratives than other elements such as text structure hierarchy (Trabasso Sperry, 1985). Accordingly, they performed better in their recognition of such causal relations as such markers might have helped them interpret the story line by identifying cause-effect chains integrated in a causal network that directs the narrative forward to its resolution.

,W LV KDUG WR H[SODLQ ZK\ OHDUQHUV SHUIRUPHG ZHOO LQ LQIHUULQJ adversative relations than other relations like sequential or additive. %DVHG RQ 0XUUH\¶V FRQWLQXLW\ K\SRWKHVLV FRQQHFWLYHV SOD\ D salient role in narrative text processing and thus help readers engage in processing of the events depicted in the story. The result of this engagement would be becoming internal participants rather than external observers in the story and thus identify with the story characters or with WKH QDUUDWRU RI WKH WH[W 7KLV VHQVH RI EHFRPLQJ µRQH¶ ZLWK WKH VWRU\ characters would help them overcome the sense of discontinuity (denoted by adversative relations and markers) which might arise as a result of changes in time, place, theme, or characters.

0HDQZKLOH LQ HPSLULFDO VWXGLHV RI SHUVRQDO RU SLFWXUH EDVHG narrations the use of additives and sequentials is very common at both the local and the global level of a text especially in oral narration UHIHUULQJ WR HYHQWV WKDW IROORZ HDFK RWKHU LQ WLPH 9LRQ DQG &ROOV 7KH\ FRGH WKH H[LVWHQFH RI µPLQLPDO UHODWLRQVKLSV¶ EHWZHHQ SURSRVLWLRQV and group sequences of propositions into a whole in which in some cases WKH OLQNV EHWZHHQ WKH FRQWHQW RI WKH GLIIHUHQW SURSRVLWLRQV LQ WKLV µZKROH¶ DUH QRW DOZD\V FOHDU -LVD 3HWHUVRQ 0F&DEH ,W IROORZV that participants might have failed to recognize such links between propositions denoted by such markers. Of course this remains at the level RI VSHFXODWLRQ 0RUH UHVHDUFK ZLWK ULJRURXV GHVLJQ LV QHFHVVDU\ XVLQJ verbal protocol and/or recall measures to prove this.

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Taking the findings of this study into account, we can argue that WKHUHLVDKLHUDUFK\ RIGLIILFXOW LQ WKHFRPSUHKHQVLRQRIFRQQHFWLYHVLQ narratives. Contrary to our expectation, this hierarchy is both text-VSHFLILF DQG OLQHDUOHYHOVSHFLILF ' LIIHUHQWWH[WW\SHV GRQRWFRKHUHLQ WKHVDPHZD\ DQGPHWKRGVRIFRQQHFWLRQLQ GLIIHUHQWWH[WVYDU\ LQD statistically significant manner (Smith, 1985; Smith and Frawley, 1983). : H PD\ WKXV VSHFXODWH WKDW WKH FRPSUHKHQVLRQ RI WKH SURSRVLWLRQDO UHODWLRQVGHQRWHGE\ WKHFRQQHFWLYHGHYHORSPHQWP LJKWDOVRYDU\ LQGLIIHUHQW text types (e.g. in arguments or in expositions) due to the different cognitive and rhetorical organization of these text types.

7KHRUJDQL]DWLRQDOUROHSOD\HGE\ FRQQHFWLYHVDGYHUELDOVDQGWKHLU different distribution patterns across different text types assigns a core VLJQLILFDQWUROH WR WKHVHPDUNHUV 7KLVUROHKLJKOLJKWVWKHPRUHµPRGHO EXLOGLQJ¶ IXQFWLRQRI WKHVHVLJQDOV 6HJDO HWDO 7KDWLV WKH\ DUH crucial as well in building a coherent mental model for interpreting happenings in the text world without which the reader would not be able to build the intended model.

4.1 Limitations and recommendations for further study

,WVKRXOG EHPHQWLRQHG WKDWWKLV VWXG\ ZDV OLPLWHG WR H[DPLQLQJ connectives and inferring them in extended stories. The role of such devices in other discourse types was not examined. This issue might be considered as one of the limitations of this study. The role of the SUHVHQFHRUODFNRIRWKHUWH[WXDOIHDWXUHVOLNHµLQIHUHQFH¶ µHOOLSVLV¶ DQG µVXEVWLWXWLRQ¶LQWKHFRPSUHKHQVLRQRIWKHDERYHPHQWLRQHGWH[WW\SHVZDV not investigated either.

Nonetheless, the results of this study demonstrate that consideration of textual signals is essential for comprehension at least at lower levels of UHDGLQJ SURILFLHQF\ 0RUHRYHU ZKHQ WKHVHPDUNHUVDUHPLVVLQJ LQ WKH texts, it is essential for readers to infer them. Hence, we will come across differences between more or less proficient readers in their comprehension of logical relations implied by such markers when they DUH QRWH[SOLFLW LQ WKH WH[W ,UZLQ $FFRUGLQJO\ VWXGHQWV¶

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awareness of the relationship between textual signals and the rest of the text need to be raised. This way, the facilitative role of the explicit WH[WXDO FXH RI WH[W RUJDQL]DWLRQDO VWUXFWXUH LQ FRPSUHKHQVLRQ RI ( )/ learners in general, and ESP students in particular would be highlighted.

' HYHORSPHQWDO GLIIHUHQFHV LQ WKH XVH RI WH[WXDO FRQQHFWLYHV in reading can be expected in other skills (listening, speaking, writhing) WRR ZLWK WKH FKLOGUHQ LQ RQHV NLOO DV D SRWHQWLDO GLG WKH FKLOGUHQ¶V understanding of connectives in another.

)XUWKHU ,W LV DOVR DUJXHG WKDW DOWKRXJK FKLOGUHQ XVH WKHVH connectives in speech before going to school, they do not develop a sufficient understanding of their meanings years after that (Ozono and ,WR 7KHUHIRUH SURJUDP FDQSURYLGHV WHP DWF WKLQJLQDZD that the learners develop more facility in the written form.

Further research is needed to investigate which signals are more problematic for readers at different proficiency levels, and whether the comprehensibility of logical relations for readers is a function of the type of logical relation implied through the signals in the text, or a function of DJH RUSURILFLHQF\ LQGHQHV¶ LLWWDQJXDJH $GGWRQDO ZHQHHG WR investigate the effect of individual signals on the reading comprehension of different text types to find out the contributory effect of each signal in HDFK SDUWLFXODU WH[W RI WH[W/ RJLFDO UHODWRQKLSV P D\ EH HDVLHU WR FRPSUHKHQGLQQDUUDWLYHWKQLH[SRVLWRU WH[W * HYD $QRKHU consideration for research is that most of the research findings in this UHJDUGUHDWHWR/ QDWLYHVSHDNHUVRI(QJOLVK)XUWKHUHVHDUFKLVQHHGHG to examine how non-native readers of English or other languages process different types of logical relationships.

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%UDWRQ% . *OQ6 0 0 H\HU% -) 3HQ/DQG0 -

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)DLJOH\ / 0 H\HU 3 5KHWRULFDO WKHRU\ DQG UHDGHUV classifications of text types. *Text, 3* (4), 305-25.

*HYD (&RQQHFWLRQ EHWZHHQ VFKRRO FKLOGUHQ¶V RUDO ODQJXDJH DQG UHDGLQJ ,Q 5 +RURZLW] (G *Talking texts: how speech and writing interact in school learning* SS : KLWH 3ODLQV 1 < /RQJPDQ

*HYD (5\DQ (% 8VH RI FRQQHFWLRQV LQ H[SRVLWRU\ WH[WV by skilled and less skilled readers. *Journal of Reading Behavior, 17*, 331-346.

*ROGPDQ 6 5 9DQ KDHQ & . 0HPRU\ IRU HPEHGGHG DQG sequential story structures. *Journal of Memory and Language, 25*, 401-418.

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*RONDU + *The impact of explicit, implicit, and highlighted FRQQHFWRUV RQ ,UDQLDQ (67 VWXGHQWV¶ UHDGLQJ FRPSUHKHQVLRQ* 8QSXEOLVKHG 0 $ WKHVLV 7KH 'HSDUWPHQW RI)RUHLJQ /DQJXDJHV ,UDQ 8QLYHUVLW\ RI 6FLHQFH DQG 7HFKQRORJ\ 7HKUDQ ,UDQ

*UDHVVHU $ & *ROGLQJ * 0 /RQJ ' / 1DUUDWLYH UHSUHVHQWDWLRQ DQG FRPSUHKHQVLRQ ,Q 5 %DUU 0 . DPLO 3 0 RVHQWKDO 3 3HDUVRQ (GV *Handbook of reading research II* SS : KLWH 3ODLQV < / RQJPDQ

*UDHVVHU $ & 0 LOOLV . . =ZDDQ 5 $ 'LVFRXUVH comprehension. *Annual Review of Psychology, 48*, 163-189.

*URV] % - 6LGQHU & / $WWHQWLRQ LQWHQWLRQV DQG WKH VWUXFWXUH RI GLVFRXUVH &RPSXWDWLRQDO /LQJXLVWLFV

+DOOLGD\ 0 $. +DVDQ 5 *Cohesion in English*. /RQGRQ /RQJPDQ

+REEV - 5 /LWHUDWXUH DQG FRJQLWLRQ &RKHUHQFH DQG FRQIHUHQFH

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-LVD + ,QFUHDVLQJ FRKHVLRQ LQ QDUUDWLYHV D GHYHORSPHQWDO VWXG\ RI PDLQWDLQLQJ DQG UHLQWURGXFLQJ VXEMHFWV LQ)UHQFK *Linguistics, 38,±*

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