

Effects of Schematic Factors on the EFL Reading Comprehension

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Abstract: This paper reports an experimental study on the effects of EFL reading proficiency (PROF), text structure (TEXT), and prefatory Framework (PREF) on the EFL reading comprehension (COMP) of expository texts. The subjects of the study were the intermediate and advanced readers of the English Department students of FKIP Unika Widya Mandala Surabaya. Results of the study significantly reveal the independent effects of EFL PROF, TEXT, and PREF on the COMP of expository texts. Based on the findings of the study, some suggestions intended for the reading instructors, developers of the written instructional materials, and area of further research are offered.

Keywords: reading proficiency, text structure, prefatory framework, reading comprehension

Studies dealing with the effects of schematic factors on reading comprehension have shown that reading is an interactive process between the reader's background knowledge and the text: an interaction between information obtained by bottom-up decoding and information provided by means of top-down analysis, both of which depend on certain kinds of prior knowledge and certain kinds of information-processing skills called schemata (see Eskey 1988; Carrell and Eisterhold 1988; Johnston 1983; cf. Rumelhart 1980). Schemata can be differentiated into three areas: linguistic schemata (the reader's knowledge of the language used in text), content schemata (the knowledge of the content area of the text), and formal schemata (the knowledge of the rhetorical organization of the text).

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A considerable number of studies dealing with the effects of schematic factors on reading comprehension has been performed. Research findings dealing with the effects of linguistic schemata on comprehension have shown that these types of schemata play a significant role in facilitating reading comprehension of English texts (Meyer 1975; Clarke 1988; Hudson 1988). Such research findings have also revealed evidence that inadequate linguistic schemata in L2 seems to be a potential limiting factor in comprehending English text (Clarke 1988; Hudson 1988).

In the area of formal schemata, a number of research findings (Meyer 1975; Carrell 1984; Lee 1986) show empirical evidence that different types of rhetorical organization of expository prose differentially affect reading comprehension and recall. Meyer (1975) and Meyer (in Carrell 1984) recognized five basic ways of organizing expository texts that have specific kinds of impact on reading comprehension in English as a native language. They are collection, description, causation, problem-solution, and comparison. The Carrell's (1984) study reveals empirical evidence that (1) each text structure type resulted in statistically significant difference in the amount of idea units recalled by the subjects, (2) recall is better for the texts with the three types of more tightly organized rhetorical structure (problem-solution, and comparison, and causation) compared to that of the collection of description type.

The effects of content schemata on reading comprehension have also been investigated by several researchers. Carrell (1983), who examined the use of three components of background knowledge (prior knowledge in the content area, prior to reading knowing that a text is about a particular content area, and the degree to which the lexical items in the texts reveal the content area) found that: (1) on the version of the text in which the subjects were familiar with the content area of the text, advanced students were better than level-4 students in recalling the passages, (2) only the native speakers were able to make use of all three types of background knowledge, (3) for the advanced ESL students enrolled in regular university classes, familiarity with the content area proved to be significant factor affecting recall, and (4) for the level-4 ESL students, none of the component of background knowledge contributed significantly to the amount of the recalled idea units. In line with the research findings of Carrell (1983), Johnson (1982) has also shown that a text on a familiar topic is better recalled by ESL readers than a similar text on an unfamiliar topic. Similarly, Alderson and Urquhart (1988) have also found discipline-specific effect on content schemata on reading comprehension.

Research dealing with the effects of content and formal schemata on reading comprehension reported in the literature has been performed by Carrell (1987). Based on the data, Carrell (1987) concludes that each component, content and form, plays a significant, but different, role in the comprehension of text, especially the narrative one (cf. Miller and Perkins 1990).

Schema availability and schema activation are two of the prerequisites of reading comprehension. Schema availability alone is not sufficient to enhance reading comprehension unless they are activated, because reader is not moving from words to meaning, but rather is moving from meaning to words (Smith 1971). One method to activate schemata is by presenting clarifying content prior to reading. Hartley and Davies (in Lee and Riley 1990) describe content clarifying as a type of text adjuncts in the forms of pictures, prefatory frameworks, and titles designed to activate or induce schemata. Several studies have attempted to investigate the effects of content clarifying on reading comprehension.

In a research concerning the transfer of reading skills from L1 to L2, Clarke (1988) found that the lack of linguistic schemata in L2 prohibited the readers from making use of content and formal schemata, and thus hampered comprehension process, because instead of reading in the top-down mode, such readers would use the bottom-up mode. Based on such findings, that Clarke introduces the notion of **short circuit** (limited language proficiency in L2 prohibits readers from making use of content and formal schemata) and **language ceiling** (a threshold of language proficiency for successful L2 reading).

Hudson (1988) examined the effects of three types of text adjuncts on the reading comprehension of a passage. The subjects comprised ESL students population of beginning, intermediate, and advanced level readers. The Hudson's (1988) research treatments are in the forms of (1) cue pictures and a set of focus questions, (2) List of Vocabulary, and (3) Read-Test/Reread- Retest. Based on the data analyses, Hudson concluded that the use of content clarifying in the forms of cue pictures and focus questions proved to be effective in aiding comprehension for the readers in beginning and intermediate levels. The list of vocabulary treatment proved to be more effective for advanced readers than for those in beginning and intermediate levels. In that study, Hudson has also reevaluated the findings of Clarke (1988). According to the Hudson's data analyses, the notion of short circuit as claimed by Clarke (1988) was only partially true, because it did not apply to the L2 advanced level of language proficiency.

Lee and Riley (1990) investigated the effects of prefatory framework (no framework, minimal framework, and expanded framework), text structure (collection of description and problem-solution), and utilization of text structure on the reading comprehension of students studying French as a foreign language. In that study, they found that the subjects provided with the expanded framework recalled significantly more than those provided with either the minimal framework or the no framework. No significant difference was found between the number of idea units recalled by the minimal framework and no frame groups. No significant difference was found between the number of idea units recalled by any of the frameworks for the problem-solution passage. Meanwhile, in case of collection of description passage, the subjects provided with the expanded framework recalled significantly more than those provided with either the minimal framework or the no framework. Here the group of subjects provided with expanded framework recalled almost twice as much as the other two groups. Based on such results, Lee and Riley argue that the more highly structured the passage, the less the impact of a prefatory framework, and conversely, the more loosely structured the passage, the greater the impact of a prefatory framework.

What has been discussed thus far shows that most of the studies primarily only deal with the effects of a single schematic factor (either linguistic, content, or formal schemata) on reading comprehension. The conduct of research dealing with the simultan effects of schematic factors on reading comprehension, especially concerning reading comprehension of expository text, seems to be neglected. It also shows that some studies concerning the effects of schematic factors on the reading comprehension are methodologically and/or statistically invalid.

The present study deals with the following main problems: What are the interaction effects of Reading Proficiency (PROF), Text Structure (TEXT), and Prefatory Framework (PREF) on the Reading Comprehension (COMP) of expository texts? What is the main effect of either PROF, TEXT, or PREF on the COMP of expository texts? What are the different effects of each level of either PROF, TEXT, or PREF on the COMP of expository texts? Which of the factors of PROF, TEXT of expository texts, and PREF that plays a more significant role in facilitating the COMP of expository text?

METHOD

The subjects of the present study were the English Department students of FKIP Universitas Katolik Widya Mandala Surabaya, comprising a total of 182 subjects. Using a standardized placement test of RFU (Thurstone 1969), the subjects were then classified into two subpopulations of PROF: intermediate (INT) readers (92 subjects), and advanced (ADV) readers (90 subjects). In the experiment, three subjects belonging to the ADV EFL readers failed to participate the experimental treatments, so that the subjects were randomly sampled from the sample frame of 92 subjects of INT EFL readers and the sample frame of 87 subjects of ADV EFL readers.

Twelve experimental groups to be compared were employed in the study: six of which were composed of the INT EFL readers, and the other six experimental groups were composed of the ADV EFL readers. Each experimental group composed of fourteen subjects. Thus a total sample of 168 subjects was employed in the present study. The identities of the subjects belonging to each experimental group are recorded in order to ease the administration of the experiment.

The instrument for assessing the subjects' English reading comprehension was a COMP test using free written recall technique. The COMP test were in the forms of six texts to be free recalled by the subjects in written form using Indonesian. The six texts were identical in content, but the first three texts were written in three types of TEXT (CAUSAT, PROSOL and COLDES), and were provided with PREF, whereas the other three texts were similar to the first three texts, except that they were not provided with PREF. The modification of the TEXT of the texts were performed by modifying the top-level structure of the respective texts.

The appropriateness of the six texts to be free recalled by the subjects were judged by seven experts of English language teaching. Of the seven judges, five of whom are EFL teachers of the Program Pascasarjana IKIP MALANG, and two are EFL teachers at the English department of FKIP Universitas Katolik Widya Mandala Surabaya. The judges were asked to indicate their judgments in terms of vocabulary difficulty, syntactic complexity, and background knowledge of the text content required according to their degree of appropriateness, and revealed evidences that the texts to be recalled by the subjects can be classified as fairly appropriate.

The idea units of the texts to be recalled by the subjects were identified following Meyer's (1975) and Grimes (1975), in which the analyses of argu-

ments of propositions were done to the extent to which they represented the substance of the ideas and their relationship. Based on the results of text structure analysis of the three versions of the texts in the reading comprehension tests, a list of a total 52 idea units common to the three passage version were identified. Since the recall were carried out in Indonesian, the subjects' native or second language, a list of common idea units written in Indonesian was developed based on the English version of the common idea units.

The subjects' ability in recalling the information in the texts they had read were scored for the presence or absence of the idea units listed in the list of common idea units. Distortions and embellishments of the original text content were not allowed, because they would mean that either the information was recalled incorrectly or was not in the text itself. Paraphrases were allowed, because the idea units were recalled in the subjects' native language, Indonesian. The idea units recalled by the subjects were scored by two independent raters: rater 1 (the writer) and rater 2 (a student of S2 PPS IKIP MALANG when the scoring was performed). Therefore, the subjects' final scores were the average scores of the scores obtained from rater 1 and rater 2.

Guided by the research design and the list of subjects, at the beginning of the experiment the subjects were randomly assigned to perform the COMP tests (the research treatments). The subjects were first instructed to read the COMP tests instructions as their regular reading instructor read them aloud. After reading the instructions, the instructor explained the meaning of the instruction. Then, on the blank writing paper provided, the subjects were asked to write in complete sentences as much as they could remember of the text they have read. The recall tasks were done in Indonesian. The subjects' recall protocols were then scored and analyzed in order to determine the effects of the investigated schematic factors on the subjects' COMP.

Prior to conducting the experiment, a pilot study was performed and, among others, yielded evidences that supported the construct and content validity of the instruments used in the experiment. To establish the criterion validity, the try out test scores of the COMP test were correlated with those of the PROF test using the Pearson Product Moment Correlation Coefficient. The correlation test between those two type of scores yielded a high positive correlation coefficient of $r = .7498$ at $P < .05$. Therefore, the COMP Tests has been proved to have criterion validity.

Since the COMP test (free written recall tests) are subjective in nature, the reliability is determined using inter-rater consistency procedure (Bachman

1990:178-80). To perform such reliability analysis, the subjects' COMP scores from the experiment that were scored by rater 1 (the writer) was correlated with those scored by rater 2 (a student of S2 PPS IKIP MALANG when the scoring was performed). The correlation of which yielded a very high positive correlation coefficient of $r = .9850$ at $P < .05$. Thus, the scoring of the COMP Test results is reliable.

RESULTS

The present study is a basic scientific research, experimental in nature, and was performed using a multiple-treatment triple-factor design, specifically a $2 \times 3 \times 2$ factorial design, which was statistically realized as a $2 \times 3 \times 2$ anova. The factors and the levels involved in this study included (1) the subjects' English PROF comprising two levels: INT and ADV level of PROF, (2) text rhetorical structure comprising two levels: causation (CAUSAT), problem-solution (PROSOL), and collection of description (COLDES), and (3) PREF comprising two levels: with PREF and without PREF. The index used to measure the magnitude of the experimental effect in the present study is omega squared ω^2 .

The statistical analyses applied in this study were performed with the statistical package of SPSS for Windows Release 6.0. To control the probability of committing Type I error (rejection of a true null hypothesis) in testing the hypotheses, the significant level chosen in this study was set at $\alpha = .05$. Computations of the power (1β) of each F-test and the magnitude of the effects of the independent variables on the dependent variable were performed, with a conventionally accepted level of $\beta = .20$, and therefore the minimal power value of .80. (see Hinkle, Wiersma and Jurs 1988: 311, 351).

The results of the three-way anova using PROF, TEXT, and PREF as factors, and COMP as dependent variable can be summarized in Table 1.

As indicated by the value of adjusted R Squared shown in the summary anova, approximately 57 percent of the variability in COMP can be accounted for by the factors of PROF, TEXT, and PREF. This value of approximately 57 percent is, in fact, none other than the total sum of the effect size magnitude of the significant effects in the anova performed. In terms of interaction effects, the F and P values of the anova computation for the three-way and two-way interaction effects yielded nonsignificant effects.

Table 1 The Summary Analysis of Variance

Source of Variation	SS	DF	MS	F	P
PROF	2407.71	1	2407.71	145.74	.000
TEXT	780.25	2	390.12	23.61	.000
PREF	542.88	1	542.88	32.86	.000
PROF x TEXT	62.82	2	31.41	1.90	.153
PROF x PREF	25.93	1	25.93	1.57	.212
TEXT x PREF	15.94	2	7.97	.48	.618
PROF x TEXT x PREF	33.46	2	16.73	1.01	.366
WITHIN CELLS	2577.29	156	16.52		
TOTAL	6446.29	167	38.60		
MODEL	3869.00	11	351.73	21.29	.000

R-Squared = .600 Adjusted R-Squared = .572

Source of Variation	Part η^2	f	ω^2	α	β	Power
PROF	.483	.9666	.370	.05	.000	1.000
TEXT	.232	.5502	.116	.05	.000	1.000
PREF	.174	.4590	.081	.05	.000	1.000
PROF x TEXT	.024	.1561	.005	.05	.610	.390
PROF x PREF	.010	.1003	.001	.05	.765	.235
TEXT x PREF	.006	.0784	-.003	.05	.869	.131
PROF x TEXT x PREF	.013	.1138	.000	.05	.777	.223

where:

Part η^2 = Partial ETA squared = Partial magnitude of treatment effect

f = Cohen's treatment effect size index

ω^2 = omega squared = magnitude of treatment effect

α = probability of committing Type I error

β = probability of committing Type II error

As expected, all main effects were proved to be significant. The anova computation for the main effect of PROF on COMP yielded parameters as follows: $F = 145.74$, $P = .000$, $\beta = .000$, $f = .9666$, $\omega^2 = .370$. The anova computation for the main effect of TEXT on COMP yielded parameters as follows: $F = 23.61$, $P = .000$, $\beta = .000$, $f = .5502$, $\omega^2 = .116$. Meanwhile, the significant main effect of PREF on COMP yielded parameters as follows: $F = 32.86$, $P = .000$, $\beta = .000$, $f = .4590$, $\omega^2 = .081$.

The testing the differences between and or among the levels of the factors can be reported as follows. Since the factor of PROF comprises only two levels, ADV and INT readers, the significant main effect of PROF has lend itself to give sufficient information that the effects of PROF levels on COMP were different from each other. Thus it can be stated that the mean of ADV level of PROF (mean = 24.57) was significantly different from that of INT level of PROF (mean = 17.00), at $\alpha = .05$. To determine which of means of the TEXT levels differed, a Tukey-HSD test at .050 significance level was performed. Based on the test results, the differences among the means of CAUSAT (mean = 23.32), PROSOL (mean = 20.98), and COLDES (mean = 18.05) are significant at $\alpha = .05$. Since the factor of PREF comprises only two levels, with and without PREF, the significant main effect of PREF has lend itself to give sufficient information that the effects of PREF levels on COMP were significantly different from each other. Thus it can be stated that the mean of with PREF level of PREF (mean = 22.58) is significantly different from that of without PREF level of PREF (mean = 20.79), at $\alpha = .05$.

The research results concerning the relative importance of each factor in facilitating COMP can be reported as follows. The values of ω^2 of PROF, TEXT, and PREF are respectively $\omega^2 \text{ prof} = .370$, $\omega^2 \text{ text} = .116$, and $\omega^2 \text{ pref} = .081$. Based on these values of ω^2 , the proportion of the percentage accounted for by each factor in explaining COMP is as follows: (1) approximately 37 percent of the variability in COMP was accounted for by PROF, (2) approximately 12 percent was accounted for by TEXT, (3) approximately 8 percent was accounted for by PREF, and (4) approximately 43 percent was accounted for by unknown factors. This means that: (1) PROF was more influential than TEXT in affecting the COMP, (2) PROF was more influential than PREF in affecting the COMP, and (3) TEXT was more influential than the factor of PREF in affecting the COMP. In other words, the differences in the relative importance of the factors of PROF, TEXT, and PREF in facilitating COMP did exist. The relative importance of each factor in affecting the COMP can be ordered from high to low as follows: PROF, TEXT, and PREF.

DISCUSSION

In the present study, the nonsignificant three-way and two-way interaction effects of PROF and TEXT and PREF on COMP indicate that these three factors affect COMP independently. Thus the effect of each independent variable on the dependent variable needs not to be qualified by specifying the nature

of the respective effect for each level of the other independent variables. In other words, the effect of the three way interaction was generalizable across the levels of other factors. The same condition also existed for the two-way interactions. Therefore, the effect of all two-way interactions were generalizable across the levels of other factors.

The generalizability of the two-way interaction between the factor of TEXT and PREF found in the present study, however, conflicts with one finding of Lee and Riley (1990), who studied the effects of TEXT (Lee and Riley called it Passage), PREF, and utilization of the writer's TEXT in recalling a passage. Based on their study, Lee and Riley (1990: 32) found a nonadditive relationship between TEXT and PREF. Specifically, they state that their data suggest that the more highly structured the passage, the less the impact of a rhetorically-oriented framework, and conversely, the more loosely structured the passage, the greater the impact of a rhetorically-oriented framework. The Lee and Riley's finding, however, should be examined any further due to the fact that such interpretation was made by Lee and Riley by violating the procedures in interpreting the anova results.

According to the Lee and Riley's (1990:32) anova computation, all three main effects were significant, but all interaction effects did not. In this case, the values of P for the main effects of Passage, Framework, and Utilization are $P = .0103$, $P = .0241$, and $P = .003$, respectively. Meanwhile, the interaction effects of Passage x Framework, Passage x Utilization, Framework x Utilization, and Passage x Framework x Utilization are $P = .2014$, $P = .8496$, $P = .5187$, and $P = .3876$, respectively. This means that the relationship between or among the factors were additive, and consequently, valid interpretation could only be made based on the results of main effects. Therefore, the validity of the nonadditive relationship between TEXT and PREF as reported by Lee and Riley (1990) is arguable.

As has been mentioned, all the main effects tested in the present study were proved to be significantly present. The presence of the significant effect of PROF on COMP proved in the present study has directly confirmed the claim stated by, among others, Hudson (1980) and Clarke (1988), that PROF does play a significant role in facilitating COMP of English texts. The significant main effect of TEXT on COMP found in the present study has confirmed previous research findings reported by, among others, Carrell (1984), Lee (1986), and Lee and Riley (1990), that TEXT does play a significant role in facilitating COMP of English texts. In the present study, it has been proved

that the means of CAUSAT (mean = 23.32), PROSOL (mean = 20.98), and COLDES (mean = 18.05) were significantly different from each other at ($= .05$). Therefore, it can be stated that, in the one hand, the use of CAUSAT TEXT is more facilitating COMP than the use of both PROSOL and COLDES TEXT. On the other hand, the use of PROSOL TEXT is more facilitating COMP than the use COLDES TEXT. The significant effect of PREF on COMP claimed by, among others, Hudson (1988), Taglieber, Johnson, and Yarbrough (1988), and Lee and Riley (1990) were confirmed by the present study.

In relation to the significant main effects found in the present study, an interesting point concerning the notion of short circuit as claimed by Clarke (1988) and Hudson (1988) is worth considering any further. In the one hand, Clarke (1988: 120), based on his study concerning the transfer of reading skills from L1 to L2, found that the lack of linguistic schemata in L2 prohibited the readers from making use of content and formal schemata, and thus hampered comprehension process, because instead of reading in the top-down mode, such readers would use the bottom-up mode. In other words, the lower the language ceiling in L2, the worse the short circuit that is resulted in. On the other hand, Hudson (1988) stated that the notion of short circuit claimed by Clarke (1988) was only partially true, because it did not apply to the L2 ADV level of language proficiency. The statement ADV by Hudson, however, should be examined any further for several reasons as follows.

First, by using a repeated measurement design, Hudson (1988) investigated the effects of three reading treatments in the forms of text adjuncts that allowed schemata reconciliation on the COMP of ESL students population of beginning, INT, and ADV level readers. In the first treatment the subjects were given cue pictures, in the second treatment the subjects were given a list of vocabulary items which would appear in the reading passage, and in the third treatment no text adjuncts were given. In this case, the variable of reading treatments served as the within-subjects treatment, while the subjects' PROF level and the order of exposure of the reading treatment served as the between-subjects portion of the design. The results of the Hudson's anova computation showed that (1) the interaction effect of Treatment by Level by Order was significant at $P < .05$, with $F(8, 142) = 3.16$, (2) the interaction effect of Treatment by Order was significant at $P < .05$, with $F(4, 142) = 3.43$, (3) the interaction effect of Treatment by Level was significant at $P < .05$, with $F(4, 142) = 3.34$, and (4) the main effect of Treatment was significant at $P < .05$, with $F(2, 142) = 12.27$. Such result directly suggests that the subjects' scores in the dependent

variable partly reflected the carry-over effect of the order of the reading treatment exposures, and, therefore, any interpretation derived from such anova results would be inconclusive and misleading (see, among others, Keppel 1973: 394-400; Winer 1971: 517-18).

Second, in his research, Hudson used three reading texts as the main parts of the three reading treatments. In this case, each of the three reading texts was adjusted to each of the three PROF levels of the subjects. However, it is not reported that there any attempts to adjust the three reading passage in terms of text content and TEXT. Such condition has lent itself to the interpretation that Hudson seemed to have confounded the variables of text adjuncts, text content, and TEXT. As a result, it is impossible to determine whether it was either text adjuncts or text content or TEXT that actually have affected the subjects' COMP in the Hudson' research.

The condition of the Hudson's research described above suggests that the claim that the limited proficiency in L2 for the L2 ADV level of PROF would not prohibit such readers from making full use of his/her content and formal schemata in constructing meaning from what has been read is debatable, because they are methodologically and statistically questionable. In other words, such findings can be categorized as internally invalid.

Based on the discussion above and on the findings of the present study, in which the effect of PROF was independent from that of PREF, the writer believes that the lack of linguistic schemata in L2 do not prohibit the readers from making use of content and formal schemata, as far as those content and formal factors represent comprehensible input.

As has been described earlier, based on the values of ((, the data suggest that: (1) approximately 37 percent of the variability in COMP was accounted for by the factor of PROF, (2) approximately 12 percent by the factor of TEXT, (3) approximately 8 percent by the factor of PREF, and (4) approximately 43 percent variability in COMP that left unexplained. One possible explanation to the unexplained variability in COMP is that it was caused by: (1) the use of limited levels for the factors of PROF, TEXT, and PREF, and (2) the exclusion of Text Content from the present study.

CONCLUSION AND SUGGESTIONS

Conclusion

The factors of PROF, TEXT, and PREF independently affect COMP significantly. Thus, the relationship among these three factors in affecting COMP can be said to be additive. In terms PROF, the success in COMP is attributed to the ADV readers. In terms of TEXT, the more highly structured the text, the greater its effect in facilitating COMP. Ordered from the most facilitating to the least facilitating, the TEXT types can be ordered as follows: CAUSAT, PROSOL, and COLDES. The use of PREF has a significant effect on COMP.

Among the three factors in facilitating COMP, PROF is the most important factor, TEXT is less important than PROF, but it is more important than the factor of PREF, and PREF is the least important factor in facilitating COMP. The proportion of the percentage accounted for by each factor in explaining COMP can be described as follows: approximately 37 percent of the variability in COMP was accounted for by PROF, 12 percent by TEXT, 8 percent by PREF, and 43 percent was left unexplained by the current study. It is speculated that the 43 percent of unexplained variability was due to the use of limited levels for each factor involved in the present study, and the exclusion of Text Content factor.

The notion of short circuit, the condition concerning the lack of linguistic schemata in L2 that is claimed to prohibit the readers from making use of content and formal schemata, and thus hampered comprehension process, was not confirmed by the present study. This is due to the evidence that the factor of PROF and PREF independently affect COMP.

Suggestions

Considering the findings of this study, some suggestions can be proposed. The suggestions are intended for the reading instructors, developers of the written instructional materials, and area of further research.

The reading instructors are suggested to give explicit teaching about TEXT in teaching reading, in order to provide the students with the knowledge of various types of TEXT and to train them to cope with the textual nature of the text. This is so, because reading a text with the knowledge of its TEXT will enable one to make a more accurate prediction of, for example, where to find specific information in the text. In addition, the reading instructors are

also expected to provide PREF in the texts used in teaching reading. The use of PREF may provide the reader with the condition concerning either TEXT to interact with, or the topic of the respective text, or both of them. Providing the students with PREF will mean providing them with access to the TEXT used in the text they dealt with, or to the content of the text. Logically, such strategy, in terms of providing the students with TEXT to deal with, will indirectly familiarize the students with various TEXT used in the texts.

Some attempts may be performed by the developers of the written instructional materials to help the reader in coping with the written instructional materials by applying the following alternatives.

First, the instructional texts should be written by using tightly organized TEXT types (CAUSAT and/or PROSOL), rather than using a loosely organized TEXT (COLDES). Second, the instructional texts should be provided with PREF concerning the schemata desired to be activated (either content or formal schemata, or both) so that the readers can make full use of their schemata. Whenever the content and the TEXT of the instructional text is novel to the readers, the use of PREF may serve as a vehicle to deliver the prerequisite information (in terms of either content or formal schemata, or both) needed to cope with that instructional text. Third, the best effort can be performed in facilitating the reader's COMP is by using more tightly organized TEXT types in writing the instructional texts as well as providing those instructional texts with PREF concerning the content and/or the TEXT types of the respective instructional texts.

In the present study, it was found that approximately 43 percent variability in EFL COMP was left unexplained. Since the levels of the factors employed in the present study were limited, and the factor of text content has not been included in the present study, it is very probable that the unexplained variability in COMP can be attributed to them. Further research of the same type, but with the use of a more detailed levels for the factors of PROF, TEXT, and PREF, and the inclusion of the factor of Text Content is recommended in order to throw more light on the schematic factors' effects on the EFL COMP, and the unexplained variability in COMP.

The effects of schematic factors on the COMP of English texts are theoretically closely related to those on the COMP of Indonesian texts. Thus, it is worth considering to conduct a research on the effects of schematic factors on the COMP of Indonesian texts. Such attempt should result in specific

information concerning the theory of COMP of Indonesian texts, that in turn can be used to develop and improve the Indonesian reading instruction.

Regarding the results of the present study, in which Indonesian was used in the test instruction and PREF, and in recalling the English texts, it is worth considering to conduct a research concerning the comparison between the use of Indonesian in the test instructions, PREF, and in recalling the English texts; and the use of English in the test instructions, PREF, and in recalling the English texts. Such research should result in additional information useful to decide whether the reading test instruction and the respond to the COMP test should be written in English or in Indonesian.

The subjects of the present study were the English Department students, so that they were homogeneous in terms of discipline background. A logical question arising from the use of subjects with homogeneous discipline background in relation to the TEXT types is whether TEXT type is discipline-specific. Therefore, it is worthwhile to conduct a research on the effects of TEXT of expository texts on the COMP of the students with different discipline background. Such research should result in, among others, information useful to provide insights in selecting the best instructional texts, in terms of their TEXT types, for the students belong to a specific discipline.

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