



Australian International Academic Centre, Australia

The Impact of Teaching Instructional and Environmental Strategies on Iranian EFL Young Learner's Grammar Achievement

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Received: 07-08-2016 Accepted: 04-10-2016 Advance Access Published: November 2016

Published: 10-12-2016 doi:10.7575/aiac.ijalel.v.5n.7p.77 URL: http://dx.doi.org/10.7575/aiac.ijalel.v.5n.7p.77

Abstract

The present study attempted to investigate the possible effects of Instructional (INS) and Environmental (ENS) strategies on Iranian EFL young learners' grammar achievement. For this purpose, 82 female language young learners ranged between 8 to 12 years of age were selected and randomly assigned into INS, ENS and Control groups in this study. After taking EPT, INS and ENS groups received EFL grammar structures accompanied by INS and ENS strategies, respectively, while Control group received only conventional instructions to English grammar. After conducting the treatment, all participants took a grammar post-test. The Null hypotheses 1 and 2 in this study assumed that the INS and the ENS strategies had no impact on Iranian EFL young learners' grammar achievement. They were successfully rejected due to different performance of INS and ENS groups from Control group on the post-test. Statistical results did support the superiority of INS over ENS strategies. Therefore, the researcher was able to rectify that INS strategies caused higher impact on the young learners' grammar achievement than ENS strategies. She concluded her work with some pedagogical implications and recommended topics for further research.

Key words: Bulletin boards, Cooperate Learning, Environmental Strategy, Grammar Achievement, Instructional Strategy, Young Learners

1. Introduction

Grammar in English as a Foreign Language situation was an early obstacle to overcome for a long time. More importantly, it was considered a vital issue in Foreign Language context too. The process of learning grammar however was different among FL learners.

As Skehart (1989), Larsen-Freeman and Long (1991), Ellis (1994), stated learning grammar was totally different among learners in the EFL situation. As it goes, a lot of interest has been growing among EFL teachers and researchers in the young learner's learning foreign language (Hui, 2013).

Despite unattractiveness and mostly unpleasant phase in classroom, many EFL teachers have tried to make grammar teaching imaginative moments for the EFL students. Previous studies have emphasized disparity between students and teachers. While EFL students were interested in error correction, EFL teachers did agree on communicative activities (Brindley, 1984; Kumaravadivelu, 1991; Leki, 1995; Schultz, 2001).

Studies confirm that complete removal of native language in foreign language classrooms is not appropriate. Freeman (1991), Nation (2003), Schweers, (1999). They emphasize that when the mother tongue used appropriately, the use of L1 can be very beneficial.Brown (2000) claims that "First language can be a fascinating factor and not just interfering factor". Schweers (1999) calls teachers to integrate the mother tongue into lessons to influence the classroom dynamic, and suggests, "Starting with L1 provides a sense of security and validates the learner's lived experiences, allowing them to express themselves". Much research has been published in the field of teaching foreign language by using monolingual approach in ESL teaching.

According to Verghese (1989) "A knowledge of grammar is perhaps more important to a second language learners than to a native speaker". Because of the procedure of acquiring the language is different; the native speaker has creatively internalized the grammar of the language while the second language learner has to make a conscious effort to master those aspects and parts of the language grammar.

EFL Students' expectations have favored by many EFL teachers, as Burgess and Etherington (2002, p.440-441) stated that students favor explicit teaching just for the sake of security. The study indicated that EFL teachers mostly favored communicative activities whereas EFL students found it difficult to develop grammatical knowledge. Moreover, throughout communicative activities, EFL students have not acquired complete grammatical knowledge.

Instructional strategies included all approaches that an EFL teacher might take to engage EFL students in learning. These strategies drove an EFL teacher's instructions to meet specific objectives and helped EFL students to be more independent to use effective strategies to accomplish their specific goals. In other words, it would motivate EFL students to have a better understanding and remembering. In order to make successful EFL learners, EFL students needed to follow strategies step by step and tried to make a connection between skills, and real life (Alberta, 2011).

Instructional strategies could have an extreme effect on educational programs. As Marzano (2009) presented nine highly yielded instructional strategies to facilitate learning process.

- 1. Identifying similarities and differences
- 2. Summarizing and note taking
- 3. Reinforcing effort and providing recognition
- 4. Providing homework and practice
- 5. Representing nonlinguistic features
- 6. Learning cooperatively
- 7. Setting objectives and providing feedback
- 8. Generating and testing hypothesis
- 9. Presenting questions, cues, and advance organizers

According to Marzano (1998), who summarized over 100 researches to design the above mentioned categories. The first category included comparing, classifying, creating metaphors and creating analogies. In order to help EFL students identifying similarities and differences, three different tasks were presented to them: teacher-directed tasks, student-directed tasks and graphic organizers. Teacher-directed tasks were useful to help EFL students to gain specific information for completing the task whereas student-directed tasks required less guidance and graphic organizers have given EFL students better understanding and visualizing at the same time (Marzano, Gaddy & Dean, 2000).

Summarizing and note taking belonged to the same category which required EFL students' effort to analyze the information which was vital for making notes. In order to achieve the specific goal, EFL students were asked to make their notes as brief as possible to acquire the effects of note taking (Crooks, Powlie & Tripp, 1984).

Unlike reinforcing effort and providing recognition which dealt with EFL students' engagement, homework and practice gave EFL students an opportunity to learn practice skills. Nonlinguistic representations were the next important category which required kinesthetic activities and using pictures and pictographs. EFL teachers were going to teach EFL learners special skills to use pictures and graphs for better understanding. Next following categories except the last one focused on the importance of cooperation and EFL student's engagements. Final category has brought EFL student's prior knowledge to the field of the study to retrieve what they already know about topics and they were presented the advance organizers to learn how to use this background knowledge (Dean, Gaddy & Marzano, 2000).

Majority of Asian countries have treated English as a foreign language which was the subject to be studied rather than a living language. Moreover, "The lack of a surrounding community of English speakers outside the classroom has increased the challenge for EFL instructors immensely" (Wu& Wu, 2008, p.212). As Parker, Babbs and Cohen (1995) suggested the opportunity for communication in authentic situations and settings, especially with native speakers, was a major factor for second-language acquisition by adults (Wu & Wu, 2008, p. 212).

As Wu and Wu (2008) believed in several ways to improve practicing, the main focus was given to cooperative learning, such as scaffolding and students-students interaction. However the impact of non-academic location such as department stores, churches and restaurants could increase the availability of native English language speakers.

Long before, Bejarano (1987) pointed out different cooperative techniques for 665 pupils in seventh grade classes for cooperative learning. The DG (Discussion Group) technique which required group participation, peer ideas, sharing information demanded a great deal of EFL teachers' facilitation to reach the specific goals. Unlike the difficulties, the findings supported the link between communicative approach and cooperative learning in small groups. The technique demonstrated the great result which EFL students were more motivated with a significant involvement in meaningful communication in comparison with the whole-class involvement.

A good example of meaningful communication was an Environmental education which was applied for many purposes. Lucas (1972) presented environmental education to facilitate learning and considered this as an umbrella term which incorporated different strategies from natural science to social science. Besides, it could help EFL learners for social learning and Adaptive management (Andrews, Beidenweg & Monore, 2007).

Then after, Wells (2007) claimed a teaching strategy which was used for adults through the use of "Bulletin Boards". Bulletin boards were visual displays which provided information through pictures and words for all ages (Rains & Williamson, 2012). In order to create Bulletin Boards, different factors had to take into account such as, font style and size, color, lightening, pictures.

2. Method

The participants in this study were 82 Iranian female EFL learners at the basic level of English proficiency, studying at Simin Language School in Karaj during the summer semester, 2015. They were between 8 to 12 years of age. The

researcher used three intact groups as the participants in this study. Each group attended fifteen-session English classes. They were provided EPT as a pre-test and their final examination as a post-test.

Group 1: Those who received English grammars through Instructional strategy. (INS Group, n=35)

Group 2:Those who received English grammars through Environmental strategy. (ENS Group, n=25)

Group 3:Those who received English grammars followed by a number of comprehension questions in post-grammar phase. (Control group, n=22)

3. Result and Discussion

The data collected for three groups of INS, ENS and Control groups on the Pre and Post tests are descriptively analyzed and tabulated in Table 1.

Table 1. Descriptive Statistics for INS, ENS and Control Groups

	N	Minimu	Maximu	Mean	Std.	Skewness		Kurt	osis
		m	m		Deviation				
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
INSPre	34	14.00	20.00	17.8971	1.68676	244	.403	857	.788
INSPost	34	18.00	20.00	19.7059	.49417	-1.941	.403	3.719	.788
ENSPre	22	16.00	20.00	18.3409	1.53053	293	.491	-1.622	.953
ENSPost	22	14.50	20.00	18.2727	1.75748	-1.284	.491	.411	.953
ConPre	18	15.00	20.00	19.0833	1.30891	-1.953	.536	4.667	1.038
ConPost	18	13.50	19.50	17.4444	1.89340	642	.536	823	1.038
Valid N (listwise)	18								

As Table1demonstrates, the size of the groups in this study was various in three groups (N_{INS} =34, N_{ENS} =22, $N_{Control}$ =18). In the performance of INS, ENS and Control groups on Pre-test and Post-test in this study, the scores have ranged from 14.00 to 20.00, with the broadest range belonging to Control Group (13.50 to 20.00).

Regarding mean scores, a considerable improvement is seen for the INS group from Pre to Post test (\bar{X}_{INSPre} =17.89, $\bar{X}_{INSPost}$ =19.70). The mean scores for the ENS group remained rather stable from Pre to Post test (\bar{X}_{ENSPre} =18.34, $\bar{X}_{ENSPost}$ =18.27). Finally, the mean scores for the Control group show a considerable decrease from Pre to Post test (\bar{X}_{ConPre} =19.08, $\bar{X}_{ConPost}$ =17.44).

To graphically compare the performance of the groups on Pre and Post-tests, an assembly of boxplots were created in Figure 1.

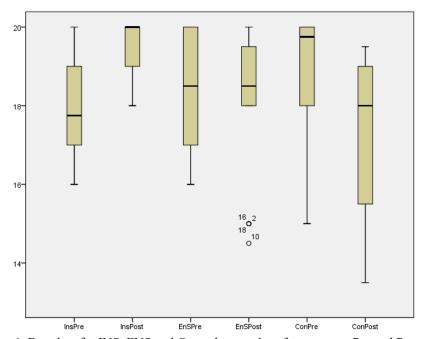


Figure 1. Boxplots for INS, ENS and Control groups' performance on Pre and Post Tests

Figure 1 demonstrates the relative homogeneity of variances in the 6 sets of scores in this study. At the first glance, the negative skewness and asymmetrical performance of all groups on Pre and Post tests show up. The shrink of the hinges for INS and ENS groups from Pre to Post-test show a similarity of performance on Pre and Post-tests with an improved homogeneity on Post-test. A number of outliers in ENS group is the point of departure between the two groups. On the other side, the Control group has moved from a more symmetrical performance on Pre-test to a weaker performance and more heterogeneity on Post-test. To Compare the normality of INS, ENS and Control groups on Pre-test and Post-test, a normality test of Kruskal-Wallis was run.

Table 2 (a, b). Mean Ranking and Normality of INS, ENS and Control groups on Pre Test

Ranks	
Group	N

	Group	N	Mean Rank
Pre	InsGroup	34	33.35
	EnsGroup	23	44.37
	ConGroup	17	36.50
	Total	74	

Test Statistics ^{a,b}		
	Pre	
Chi-Square	4.477	
df	2	
Asymp. Sig.	.107	
a. Kruskal Walli	s Test	

b. Grouping Variable: Group

As Table 2(a) demonstrates, the ENS group with the highest mean is ranked as the first performance on Pre-test $(\bar{X}_{Rank}=33.35)$, the Control group, the second $(\bar{X}_{Rank}=36.50)$ and the INS group, the third $(\bar{X}_{Rank}=33.35)$. In Table 2(b), the measure of Chi-Square (χ^2 =4.477, p-value=.107) shows an insignificant difference among the groups. Therefore, the assumption of normality is not violated in the scores of INS, ENS and Control groups on Pre-test. The same analysis was done with the INS, ENS and Control Groups' scores on Post-test.

Table 3 (a, b)

Group)	N	Mean Rank
Post	InsGroup	34	49.46
	EnsGroup	23	30.52
	ConGroup	17	23.03
	Tota1	74	

(a) Mean Ranking and Normality of INS, ENS and Control groups on Post Test

Test Statisticsa,b

	Post
Chi-Square	22.302
df	2
Asymp. Sig.	.000
a. Kruskal Wallis	s Test

b. Grouping Variable: Group

As Table 3 (a) displays, the INS group with the highest mean is ranked as the first performance on Post-test $(\overline{X}_{Rank}=49.46)$, the ENS group, the second $(\overline{X}_{Rank}=30.52)$ and the Control group, the third $(\overline{X}_{Rank}=23.03)$. In Table 2(b), the measure of Chi-Square (χ^2 =22.302, p-value=.000) shows a significant difference among the groups. Therefore, the assumption of normality is violated in the scores of INS, ENS and Control groups on Post-test which led the researcher to run a test of ANOVA to measure the size of this meaningful difference among the groups' performance on Post-test later by means of a test of ANOVA. At the next step, the two null hypotheses in this study are statistically testified. The Null Hypothesis 1 and 2 in this study, assumed no meaningful effect of either Instructional Strategy (INS) or Environmental Strategy (ENS) on EFL young learners' grammar achievement. The descriptive statistics demonstrated a meaningful difference among the performance of the three groups in favor of INS strategy in this study.

Table 4. One Way ANOVA for INS, ENS and Control groups on Post test

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26.961	2	13.481	9.913	.000
Within Groups	96.552	71	1.360		
Total	123.514	73			

As Table 4 shows, the index of F=9.913, df=2, is significant at the p-value=.000 for the INS, ENS and Control groups' performance on Post-test. To measure the effect size, Measures of Association (Eta Squared) was calculated.

Table 5. Measures of Association

			Eta	Eta Squared
Post	*	INS-	.441	.195
ENS				

To interpret the measure of Eta Squared in Table 5, a reference is made to Pierce et al (2004). Accordingly, Eta²=.195 is considered as a small effect size. It can be concluded that the difference in the performance of the INS and ENS groups on Post-test is significant but not very considerable. To further investigate the INS, ENS and Control groups performance on Post-test, a LSD post-hoc test was run.

Table 6. Multiple Con	nparison among INS	ENS and Control	groups on Post test

(I) Group	(J) Group	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
		(I-J)			Lower Bound	Upper Bound
InsGroup	EnsGroup	.94501*	.31484	.004	.3172	1.5728
	ConGroup	1.44118*	.34640	.000	.7505	2.1319
EnsGroup	InsGroup	94501*	.31484	.004	-1.5728	3172
	ConGroup	.49616	.37299	.008	2476	1.2399
ConGroup	InsGroup	-1.44118*	.34640	.000	-2.1319	7505
	EnsGroup	49616	.37299	.008	-1.2399	.2476

^{*.} The mean difference is significant at the 0.05 level.

As Table 6 demonstrates, the three groups have performed significantly different from one another. The statistical comparison between INS and ENS groups shows the mean differences (I-J) is .945 which is significant at p-value=.004. The INS and Control groups performed differently with a mean difference of 1.441, significant at p-value=.000, too. Similarly, the performance of ENS and Control groups shows a mean difference of .494, significant at p-value=.008. These significant differences and the better effect of INS over ENS strategies are graphically demonstrated with means plots.

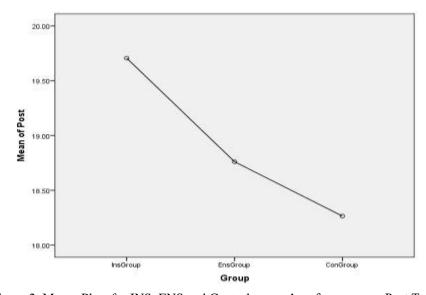


Figure 2. Means Plots for INS, ENS and Control groups' performance on Post Test

The finding in this study is subject to speculation as the size of the Environmental group (ENS) was much smaller than the Instructional, therefore the conclusion is drown cautiously thus the researcher's explanation for the obtained results was indisputable in the sense that the INS strategy has significant effect on grammar achievement. One possible cause for the positive impact of INS strategy on EFL learners' grammar achievement is that applying INS strategy especially non-linguistic representation results in deeper thinking and better understanding. The study in San Diego in Charter school demonstrates that INS strategies like photographs, political cartoons, graphic organizers, provide EFL students with the chance to illustrate understanding and create mental images without being concerned about grammar, spelling and their English proficiency (Rosenzwelg, 2010-2015).Moreover, Nonlinguistic representation of new information have priorities over Environmental strategies. In the hundreds of action research projects that were conducted by EFL teachers throughout the years, specifically across 129 studies in which EFL teachers used nonlinguistic strategies such as graphic organizers, sketches, and pictographs the average effect was 17 percentile point gain in EFL student achievement (Haystead & Marzano, 2009). Besides, it can reflect individual thinking, improves memory, facilitate creativity and increase retention (Marzano, 2009).

On the other hand the study by Hill and Bjork and Mccrel and Denver (2013) illustrates the same result. The study worked on ELL students on 6 levels with students up to 7 years. The result revealed that non-linguistic representation could help ELL students to enhance their understanding. Besides, it would increase academic language and enable EFL students to talk about their choices and it could consider as a tool for language development.

Rejected Null Hypothesis 2 supports the fact that Environmental strategy (ENS) does have significant impacts on the participants' grammar achievement improvement. The study in 2013 by Anthony Graham in north Chrolina has proven

the effectiveness of using bulletin boards on EFL students' improvement. In this study, bulletin board was located in the front of the classroom where everyone was able to see that completely and the materials were changed weekly according to the topics. Students were young and worked collaboratively and were able to see and participate in the class activities. The result presented the effect of using bulletin boards on EFL student's achievements and benefited their progress (Graham, 2013).

Similarly, in 2002 a teacher of fourth grade used bulletin boards in order to enhance writing process in students. The study proved the positive impact of using bulletin boards on the writing process. Besides in comparison with before, a teacher could teach a lot through bulletin boards (Goodnouoh, 2002).

The result of this study supported positive effect of Instructional strategy (INS) and Environmental strategy (ENS) on young learner's grammar achievement. Young children can learn better throughout activities which they can find funny. EFL teachers should be aware of the grammar and structures and teach minimum of grammar (Scott & Ytreberg, 1990). If teachers use grammar structures in their lessons as much as possible and provide EFL students more games and participation in class activities, they can notice and learn better the new language including its grammar (Povjakalova, 2012).

As it was proven before Instructional strategies have positive impact on student's achievement. The Mcrell study (2000) identified Instructional strategies which had impact on student's achievement. Twenty studies have proven the effectiveness of nine Instructional strategies some with the highest and some with the lowest effect. However, no Instructional strategies have equal effect in all situations. The effectiveness of Instructional strategies all depend on the skill and thoughtfulness which teacher applies to the strategy. Instructional strategies are the tools which EFL teachers should not be expected to work on equally in all the situations with all the students (Marzano & Gaddy, 2000).

Moreover, ENS strategy can benefit EFL students if EFL teachers follow the essential instructions in creating the bulletin boards. In other words, EFL teachers should be aware of classifying the content from simple to difficult and highlight the most important issues. Besides, to make EFL students aware of the content revisit the board with EFL students and check the readability of the board (www.makinglearningvisible, 2005).

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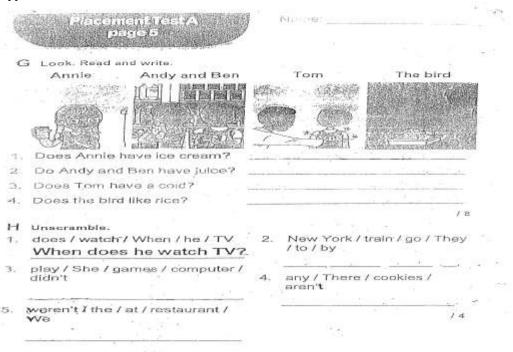
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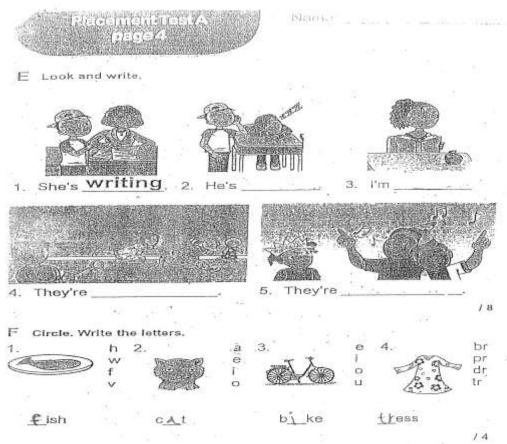
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Appendix

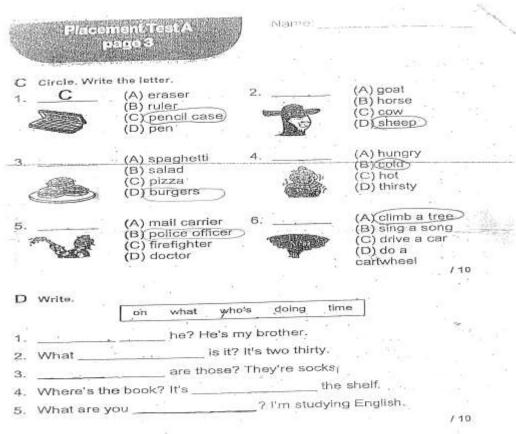
Appendix A



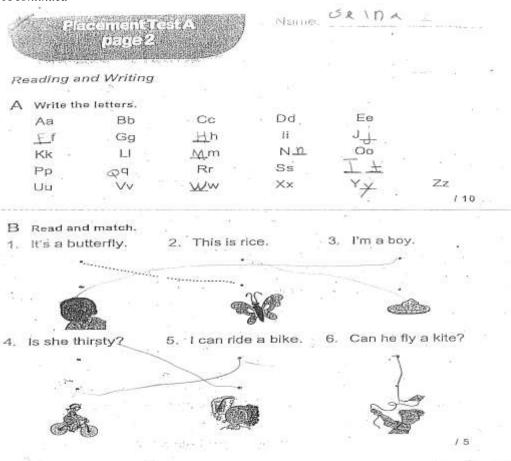
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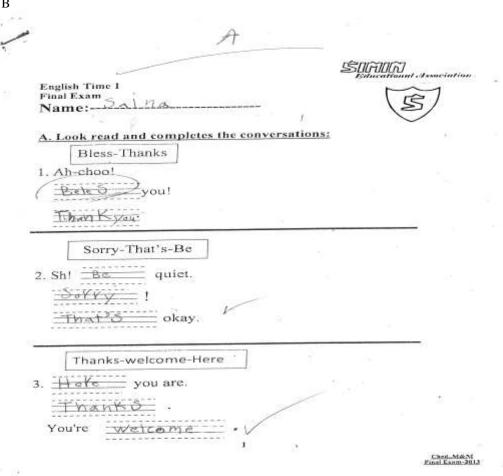
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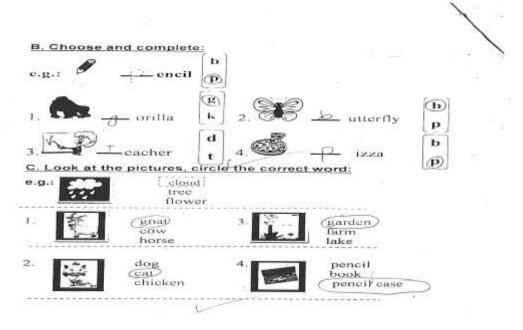
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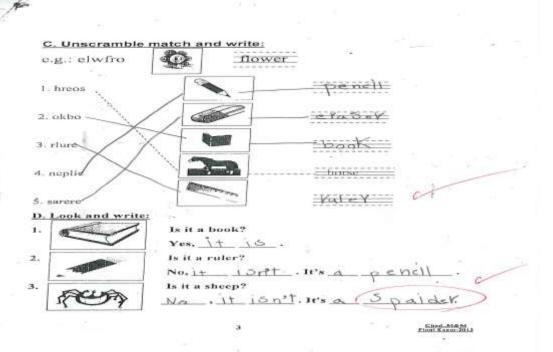


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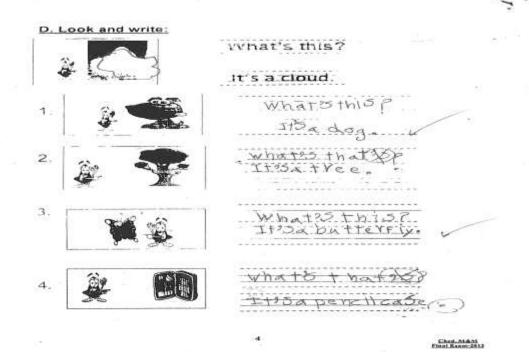


Ched. MAM Final Execution

Appendix B continued



Appendix B continued



Appendix C



Appendix C continued

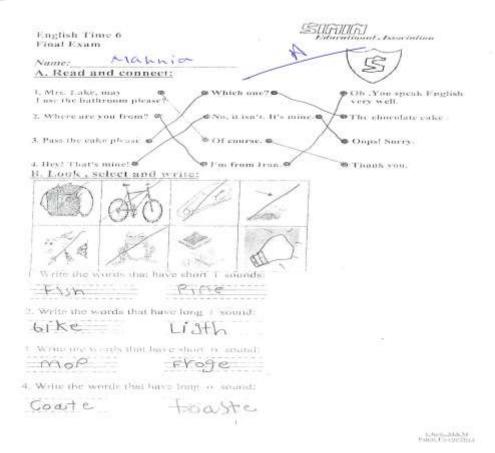


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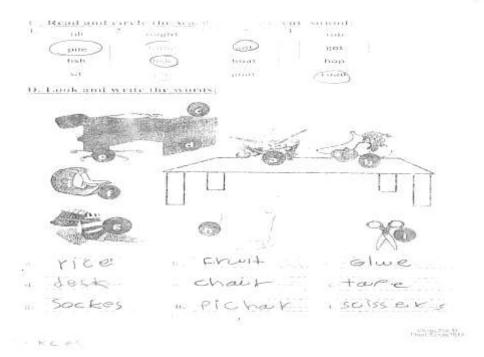
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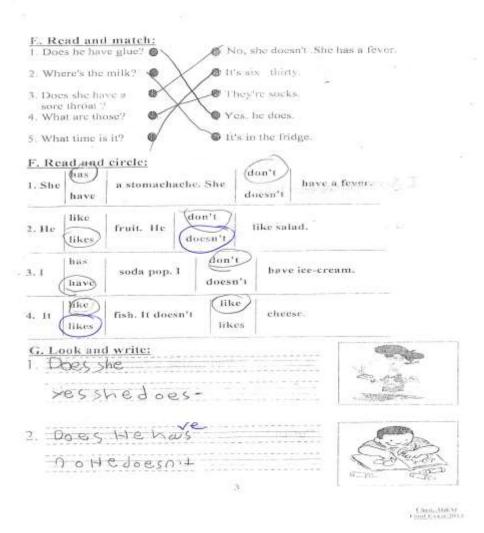
Appendix D



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Appendix D continued



Appendix D continued

H. Unsecomble and service. It's LIKES-FICE. decent ∫ w ∫ Sher | neversion | the shedoesnit Liteice overm . a time to themat down I don this knowled a title to a south the He doesnithavierasn -L. Chouse and scrite the words in the correct columns. speck ridentfilke yokow-skies-cheese-blue-leansnice lee gream drive water to howin colurs actions clothes fourt Mellow Shoes 141CE blace brown W autobaty Jeans

Links, Add by

Appendix D continued

J.Read and answer:

J-Does she have a circle?

noshedoesny.

2-Is this a square? Doitdoesnit.

What shape is it?

1+15+era xarate

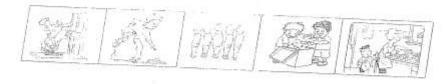
K. Read and complete

cleary up- share-politetake turns -help

Are you a nice person ?

1 I-Clean my toys with my friends

- Shell P .. my mother in the kitchen.
- 3 1 + cuske+ cuking in playing games.
- 4 1 Palit Q my room on Fridays.
- 5 Please, be Show We and knock at the door



Final Stay St.