University of New Hampshire **Scholars' Repository**

Languages, Literatures, and Cultures Scholarship

Languages, Literatures, and Cultures

1-1-1994

L2 writing: Using pictures as a guided writing environment

Lina Lee
University of New Hampshire, Durham, lina.lee@unh.edu

Follow this and additional works at: https://scholars.unh.edu/lang_facpub
Part of the Spanish and Portuguese Language and Literature Commons

Recommended Citation

Lee, Lina. L2 writing: Using pictures as a guided writing environment. ERIC Clearinghouse on Language and Linguistics (ED 386951), Spring 1996. http://files.eric.ed.gov/fulltext/ED386951.pdf

This Article is brought to you for free and open access by the Languages, Literatures, and Cultures at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in Languages, Literatures, and Cultures Scholarship by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact nicole.hentz@unh.edu.

DOCUMENT RESUME

ED 386 951 FL 023 268

AUTHOR

Lee, Lina

TITLE

L2 Writing: Using Pictures as a Guided Writing

Environment.

PUB DATE

94

NOTE

22p.; Paper presented at the Rocky Mountain Modern

Language Association Conference (1994).

PUB TYPE

Speeches/Conference Papers (150) -- Reports -

Descriptive (141)

EDRS PRICE

MF01/PC01 Plus Postage.

DESCRIPTORS

*Classroom Techniques; College Students; Higher Education; Instructional Materials; Prior Learning; Questionnaires; Second Language Instruction; Second Language Learning; Spanish; *Visual Aids; Writing (Composition); *Writing Improvement; *Writing

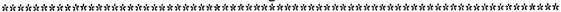
Skills

ABSTRACT

This article addresses the learning of second language (L2) writing skills to show how pictures can be used as an effective guided writing tool to facilitate students' writing process and to improve their writing proficiency. A study was conducted with 53 university students who had a prior knowledge of Spanish in secondary school. All students were enrolled in an intensive review course. Writing ability questionnaires were administered before and after the writing instruction, in addition to a final review of the writing tasks involved. Writing assignments were both topic-selected and picture-guided; students found the activities valuable, absorbing, and helpful. Results demonstrate that the instruction of using pictures as a guided writing environment assisted beginning foreign language students to develop and improve their writing skills as well as to lower the anxiety level of expressing oneself in the target language. Findings suggest that foreign language teachers should be encouraged to use the pictorial approach for L2 writing education. (Contains 22 references.) (Author/NAV)

aft a fire take a fire a fire

ж





^{*} Reproductions supplied by EDRS are the best that can be made from the original document.

8778807J

L2 Writing: Using Pictures as a Guided Writing Environment

Lina Lee State University of New York, Plattsburgh

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION Office of Educational Research and Improvement EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization organization.

originating it.

☐ Minor changes have been made to improve reproduction quality

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Abstract

With the popular proficiency-based approach to language teaching, much emphasis has been placed on listening, speaking and reading skills rather than writing skills. Well-designed L2 writing instruction is often neglected, especially for the elementary language courses. This article addresses this issue and shows how pictures can be used as an effective guided writing environment to faciliate students' writing process and to improve their writing proficiency. In addition, this paper reports the results of the study conducted by the researcher in order to investigate the following questions: (1) Do pictures as a guided writing environment assist students in L2 writing process?, (2) Is there a change in attitude or motivation after receiving the pictorial instruction for L2 writing, (3) How do students react to the pictorial instruction, particulary in relation to their overall language proficiency? The results show that the instruction of using pictures as a guided writing environment assisted beginning foreign language students to develop, to improve their writing skills as well as to lower their anxiety of expressing themselves in the target language. The research suggests that foreign language teachers should be encouraged to use the pictorial approach for L2 writing.



L2 Writing: Using Pictures as a Guided Writing Environment

Introduction

The popular proficiency-based instruction approach demands that second language learners demonstrate functional target language skills. However, it is difficult to incorporate four language skills equally into the teaching process as well as ensure adequate practice opportunities for each student. In addition, the notion of the Oral Proficiency Interview represented in the ACTFL guidelines and the emphasis of "comprehensible input" on Krashen's theory of second language acquisition led foreign language teachers to stress speaking, listening, and reading skills rather than writing skills. Hence, well-designed L2 writing instruction is often neglected, especially for the elementary language courses. L2 writing skills either are not taught until advanced courses or are learned in a particular composition course.

The stress on speaking, listening, reading and writing skills reflects a general belief about the natural order of second language acquisition. When any writing activities occur in the beginning language classes, the primary focus of writing practice is considered as skill-getting, which is defined as sentence-level practice of target language forms by Rivers (1975). In addition, it appears that the goal of writing as a support skill is to reinforce vocabulary and discourse features. The aim is also to support grammatical structures-learning as well as to develop oral skills. However, L2 writing has an importance greater than the aims to reinforce



vocabulary and grammatical concepts. L2 writing should go beyond skill-getting or practicing what has been learned in the classroom. Dvorak (1986) declares that writing includes focusing on both form and communication of ideas. Furthermore, Omaggio (1994) argues that "one needs to write for communicative purposes in order to acquire the higher level of proficiency in L2 writing." Writing for communication involves not only linguistic skills but also cognitive and conceptual skills which require writers to share information with a reader and to deliver messages expressively and coherently.

As Rivers (1989) states, "Learning to write is not a natural development like learning to speak." The fact is that not everyone is capable of being expansive and expressive in writing or even of writing from inner inspiration. Obviously, beginning L2 writers often struggle with constructing ideas or being over-concerned about grammatical forms. Therefore, L2 writing instruction needs to be more constructive and guided for students, especially for beginners to become skilled-writers as a substantial part of language proficiency development.

Much research has been conducted on the issues of the relationship between L2 reading and L2 writing (Krashen,1984). More specifically, the the distinction between skilled and unskilled writers in both the native and target language has been studied (Kroll, 1990; Shaughnessy, 1977; Zamel, 1983). There is also research on the positive and negative effects of the instructor's feedback (Chastain, 1990; Cohen, 1987; Fathman & Whalley,1990; Zamel, 1985). Also of interest is the relationship between



3

L1 and L2 writing process, one which consists of pre-writing, writing and re-writing (Krapels, 1990). These previous findings demonstrate that students plan little and often focus on grammatical correctness rather than communicative purpose (Fathman and Whalley, 1990). In conclusion, much of research on writing in the second language relates to the composing processes of advanced learners of ESL and focuses on feedback strategies.

However, the results of these studies are still inconclusive and the research on L2 writing instruction is still limited. The major concern is the method by which one can guide L2 learners to write effectively and efficiently. From the pedagogical point of view, little research, if any, has been particularly addressed to L2 writing instruction for beginning college students. Therefore, the main purpose of this study is to present the use of pictures as a guided writing environment to facilitate students' writing process and to improve their writing proficiency. In this study, the researcher investigated the following questions:

- (1) Do pictures as a guided writing environment assist students in L2 writing process? If yes, why?,
- (2) Is there a change in attitude or motivation after receiving pictorial instruction for L2 writing?
- (3) How do students react to the pictorial instruction, particularly in relation to their overall language proficiency?



Pictures as a guided writing environment

Pictures or drawings have been widely used to facilitate the teaching process and to enhance learning outcomes. Pictures often are used as a visual stimulus to attract learners' attention, to increase their motivation as well as to assist them in development of analytical thinking skills (Duchastel & Waller, 1979; Levie, 1987; Winn, 1982). Pictures provide contextual cues that allow viewers to interpret, to organize and even to create ideas behind the context (Bransford & Johnson, 1972; Peeck, 1980). In addition, pictures can be manipulated in a variety of ways to facilitate L2 writing process from the novice to the advanced level. Previous research on the use of pictorial materials for L2 learning has proved the positive effect on listening, speaking, and especially reading skills (Omaggio, 1994). However, the type of pictures used for this study emphasizes not only "skill-getting" but also "skill-using" activities as defined by Rivers (1975). In other words, pictures as a "guided" writing environment not only reinforce the learning of vocabulary and grammatical structures, but also evoke learners' cognitive skills to organize, compose and express ideas for communicative purposes. As writing in L2 can be stressful and anxiety-provocative, the pictorial instruction can provide learners a model environment of less-anxiety for writing in the target language.

Study Design

This study was conducted during the Spring 1994 at SUNY Plattsburgh. The sample group involved 53 students with a prior



knowledge of Spanish in the secondary schools. They were enrolled in the intensive review course. Most of students were rated as either Novice-High or Intermediate-Low writing proficiency using the ACTFL Guidelines. Students were familiar with basic vocabulary and grammatical structures of Spanish language. The data was collected through two student questionnaires, writing assignments and individual interviews designed and conducted by the researcher.

The students were asked to complete the first of the two questionnaires before the writing activities began. This first questionnaire sought background information about the students, including years of foreign language experience, and whether or not Spanish is spoken in the home as well as their beliefs about L2 writing instruction in relation to the development of language proficiency. The questionnaire also attempted to examine their attitude and motivation toward L2 writing as well as their experiences in L2 writing in secondary schools (see Appendix A).

The second questionnaire was administered to all participants after the completion of the writing assignments. This questionnaire was designed to investigate their improvement in L2 writing using self-rating and the relationship between the change of attitude toward writing assignments provided for this study. In addition, they were asked to describe what types of L2 writing instruction they have experienced and what types they believed were the most efficient and effective (see Appendix B). The interviews followed up the second questionnaire in order to obtain further information about the students' views of pictorial



instruction and to ascertain the effectiveness of the pictorial instruction for L2 writing.

All participating students were assigned a total of six writing assignments as part of the requirement for the course during the semester of Spring 1994. They were given two types of tasks: topic-selected and picture-guided writing.¹ Both types of tasks were accompanied with guided instructions. Specific grammatical structure and vocabulary were required for each writing assignment. In selecting both topics and pictures for writing, instructors were asked to choose familiar topics based on the content of the textbook for the course, for instance, my favorite restaurant and an unforgettable ----(date, trip, summer, etc.). Three black and white realistic line drawings for this study were chosen based on the selected topics. Line drawings are defined as visual representations consisting of a line or series of lines that portray objects, people and/or ideas in the simplest possible way.²

Prior to the first writing, students were advised to write for communication but not for error-free writing. In addition, a sheet of handout for tips for writing strategies were presented to all participants. For each writing, students were allowed to write for 30 minutes and to use the dictionary in class. The students' writing assignments for this study were evaluated based on the clarity, coherence, and effectiveness of content as well as grammatical accuracy. According to Dvorak (1986), the evaluation of student writing should be focused on the effectiveness of content rather than the accuracy of grammatical structures. Students



should not limit their goals to practicing error-free writing. Formally, the instructor assigned grades to each student based on the above criteria and informally, students self-evaluated their overall proficiency of L2 writing using the rating scale provided in the second questionnaire (see Appendix B). The results of the rating from the question number eight of the second questionnaire was compared to the question number six of the first questionnaire (see Appendix A).

Immediately after each writing assignment, students were asked to indicate their beliefs and opinions about the writing instruction and process. The questionnaires, writing assignments and interviews that were gathered were all related to the following issues. First, whether the pictorial instruction for L2 writing facilitated their writing process. Second, whether students' attitude and motivation toward the pictorial instruction had been changed. The third issue was concerned with whether the students believed that the use of pictures as a guided writing environment influenced the development of their four skills proficiency.

Findings

The results of the data for writing assignments from individual instructors is not available at the present time. Therefore, the findings described in this study are based on two questionnaires and the final interview. The first research question is to find out whether pictures facilitate L2 writing process. The results show that the students were in favor of the pictorial instruction. Table 1 summarizes the results of the percentage of the selected questions from both questionnaires. The letter



and the number in the parentheses on the table indicate the appendix and the number of the question of each questionnaire. I will briefly comment on Table 1:

Table 1
Percentage Distribution of Students' Beliefs, Attitudes Toward the Effectiveness of the Pictorial Instruction of L2 Writing

Question	Strongly Agree	Agree	Agree Somewhat	Disagree	Strongly Disagree
I enjoyed writing	rigico		Comewhat		Diougree
about the pictures.	31%	28%	16%	20%	5%
I believed using	(A10)				
pictures as guided-	22%	18%	29%	18%	13%
writing facilitated writing process.	(B 4) 32%	21%	30%	8%	· 9%
I enjoyed more topic-selected than picture-guided writing.	13%	19%	18%	34%	16%
I found my writing skills improved by using pictures as guided writing.	24%	28%	19%	18%	11%
Both topic-selected and picture-guided writing activities enhanced my writings.	29%	23%	22%	12%	14%

More than 50% of the students pointed out that they enjoyed writing using the pictures with vocabulary and grammatical structures provided. This particular type of pictorial instruction helped them to think more in the target language than in the native language. Students pointed out that



using pictures as contextual cues was an effective method to evoke their thinking processes while they were composing ideas.

In addition, they found L2 writing more fun and less stressful when their expectation of learning outcomes was perceived by constructive instruction through pictures. Interestingly, students felt that pictures actually kept them from being over-concerned about grammatical forms, while they were focusing intensively on the content of pictures. This assertion is consistent with one of the hypotheses of more efficient composing strategies for second language acquisition. The hypothesis concerns the avoiding of focusing on "form" but instead on "meaning" as proposed by Krashen (1981).

The second issue concerned any change in their attitude toward the use of pictures. A comparison of the results of both questionnaires showed that students demonstrated a more positive attitude toward the use of pictures for writing by the end of this study. Only 32% students preferred to write by mean of topic-selected instruction. This latter group--35% of students--appeared to have higher language proficiency in four skills than those who preferred to write about the pictures based on the results of their final grades. This confirmed the assumption that students who needed more help in L2 writing benefitted from the pictorial instruction. Surprisingly, more than 50% of the students showed marked improvement in their overall writing ability by having pictures as a guided-writing instruction. On the other hand, more than 44% of the students believed their writing skills improved from both types of writing activities.



Table 2 summarizes some of the potential functions of pictures provided from the responses of the students. The definition of each function of pictures is based on the classification scheme proposed by Duchastel and Waller (1979).

Table 2
Potential Functions of the Pictures as Guided Writing Instruction

Function	Related Response	Non-related Response			
Attentional	44%	56%			
Cognitive/ Organizational	72%	28%			
Retentional	59%	41%			

When asked to identify the most helpful things found through the use of pictures as a guided writing, a surprising 72% of the students found pictures extremely helpful to them to organize, express their thoughts and even to develop their writing skills. Fifty-nine percent of the students pointed out that pictures served as a visual stimulus and increased their recall of learned vocabulary and grammatical structures. A total of 44% of the students indicated that pictures attracted their attention and gave an impetus to write. Perhaps, the potential functions of pictures were the major effects on the L2 writing process.

When asked to evaluate their belief about the effectiveness of pictures on L2 writing in relation to the development of the four skills proficiency, most students considered the use of pictures for L2 writing as



11

making a significant contribution to other skills, especially to speaking skills. While they were composing ideas from the pictures, they were dealing with the content and were aware of their audience as readers to whom they delivered messages. This type of writing focuses on "functional skills" that require learners to use the target language in a meaningful way. Pictures created a guided environment which enabled students to communicate and negotiate with their readers as if they were speaking with them. Moreover, it seemed that some students were able to write as a reader-based writing rather than a writer-based writing. Finally, the majority of students supported the pictorial instruction for further inclusion in advanced language courses.

While pictorial instruction showed the effectiveness on L2 writing, topic-selected instruction with guided grammatical structures also highlighted the improvement of students' writing skills. Students felt that writing became easier when they were familiar with the topics and vocabulary. Overall, students felt that their learned grammar structure and vocabulary were reinforced through writing by either pictorial or selected topic instruction. In particular, students emphasized that they became more aware of the writing process as both picture and topic served as organizer.

Conclusion

The unique instruction of using pictures as a guided writing environment, in summary, assisted beginning foreign language students to develop and to improve their writing skills. While it is a fact that most



students do not write in the target language as well as in their native language, or even do not know how to write in L2, the results of this study proved the positive effects of pictorial instruction for L2 writing. The positive responses found in this study are consistent with previous research, which indicates that pictures facilitate and enhance L2 learning (Omaggio, 1994). It is no small matter that the students felt their experiences were not intimidating. Their feelings were positive and they felt satisfied. Overall, students found the activities valuable, absorbing and helpful.

However, some students still found L2 writing difficult, even with pictures as a guided writing instruction. They claimed that they did not receive much benefit from the pictorial instruction due to their existing low writing abilities and skills in the target language. On the other hand, learners' learning styles and visual ability need to be taken into account when planning writing instruction. A few students commented that they did not benefit much from pictorial instruction because of personal preference for another learning style. They preferred to have selected-topic instruction so that they could write about their personal experiences. Furthermore, selected-topic instruction allowed them to elaborate and create with their thoughts without the limitations of pictorial content.

The data for this study were drawn and examined from two questionnaires and the final interview. Further study is needed to incorporate more specific data such as the students' writing scores assigned by instructors in order to ensure the accurate measurement of



their improvement in L2 writing. A total of fifty-three students participated in this study and accomplished six writing assignments for one semester. The results of this study underscore the need for a follow-up study using a larger number of subjects in order to increase the generalizability of the study in the same subject area. Pictorial approaches for L2 writing can lead students toward expansiveness in the sharing of messages with the reader. Further research on other types of pictorial instruction for L2 writing is needed to increase better understanding of the effect of pictures on L2 writing and to investigate just how L2 writing skills can be developed at the first stage of language learning through the pictorial instruction.

Notes

- ¹ More detailed information about the pictorial instruction described in this article can be found in Supplementary Materials to Accompany: *Puntos de Partidas* (1993) by Sharon Foerster and Jean Miller.
- ² More detailed information about the line drawing can be found in the textbook *Escenas Cotidianas* (1983) by María Canteli Dominicis.



REFERENCES

- Bransford, J. D., & Johnson, M. K. 1972. "Contextual prerequisities for understanding: Some investigations of comprehension and recall."

 Journal of Verbal Learning and Verbal Behavior 11: 717-726.
 - Chastain, Kenneth. 1976. Developing Second Language Skills: Theory to Practice. Chicago: Rand-McNally.
 - _____. 1990. "Characteristics of Graded and Ungraded Compositions."

 The Modern Language Journal 74: 10-14.
 - Cohen, Andrew D. 1987. "Student Processing of Feedback on Their Compositions." In A. Wenden and J. Rubin, eds. *Learner Strategies in Language Learning*, 3-36. Englewood Cliffs, NJ: Prentice Hall.
 - Dominicis, M. C. 1983. Escenas Cotidianas. New York: Random House.
 - Duchastel, P. C., & Waller, R. 1979. "Pictorial illustrations in instructional texts." *Educational Technology* 29: (11), 20-25.
 - Dvorak, Trisha. 1986. "Writing in the Foreign Language." In B. Wing, ed.

 Listening, Reading, Writing: Analysis and Application, 145-167.

 Reports of Northeast Conference on the Teaching of Foreign

 Languages. Middlebury, VT: Northeast Conference.
 - Fathman, Ann K. and Elizabeth Whalley. 1990. "Teacher Response to Student Writing: Focus on Form versus Content." In B. Kroll, ed. Second Language Writing: Research Insights for the Classroom, 178-190. Cambridge: Cambridge University Press.
 - Foerster, S and Jean Miller. 1993. Supplementary Materials to Accompany: Puntos de Partidas. New York: McGraw-Hill, Inc.
 - Krapels, Alexandra R. 1990. "An Overview of Second Language Writing



Process Recearch." In B. Kroll, ed. *Second Language Writing: Research Insights for the Classroom*, 37-56. Cambridge: Cambridge University Press.

- Krashen, Stephen D. 1981. Second Language Acquisition and Second Language Learning. Oxford: Pergamon Press.
- _____. 1984. Writing, Research, Theory and Applications. Oxford:
 Pergamon Press.
- Kroll, Barbara, ed. 1990. Second Language Writing: Research Insights for the Classroom. Cambridge: Cambridge University Press.
- Levie, W. H. 1987. "Research on pictures: A guide to the literature." In D. M. Willows & H. A. Houghton (Eds.), *The psychology of illustration*: vol 1, basic research (pp. 1-50). New York: Springer-Verlag.
- Omaggio, Alice H. 1994. *Teaching Language in Context*. Boston, Massachusetts: Heinle & Heinle Publishers.
- Peeck, J. 1980. "Experimenter-provided and learner-generated pictures in learning from text." Paper presented at the annual meeting of the American Educational Research Association, Boston.
- Rivers, Wilga M. 1975. A Practical to the Teaching of French. New York: Oxford University Press.
- _____. 1989. Teaching Spanish: A Practical Guide. Lincolnwood, Illinois: National Textbook Company.
- Shaughnessy, M. 1977. *Erros and Expectations*. New York: Oxford University Press.
- Winn, W. D. 1982. "Visualization in learning and instruction: A cognitive approach." *Educational Communication and Technology Journal* 30: (1), 3-25.



Zamel, Vivian. 1983. "The Composing Processes of Advanced ESL Students:

Six Case Studies." *TESOL Quarterly* 17: 165-187.

_____. 1985. "Responding to Student Writing." *TESOL Quarterly* 19: 79-101.



APPENDIX A

First Questionniare (Samples questions)

Ple	ase answer the fol	llowing	g ques	tions	as hoi	nestly a	s pos	ssible.		
1.	I am taking this co	ourse f	or							
	degree	requir	ement	Ţ					•	
	genera	l educa	ation r	equire	ement					
	teache	r certif	ication	requ	ireme	nt				
	other			_						
2.	The foreign langu	age(s)	I lear	ned in	seco:	ndary s	choo	l was(v	vere)	
	Spanish									
	Italian									
				other(s)					
3.	The language(s) I									
	English			Spanis	h		Gern	ıan		
	French					othe				
4.	Year(s) of the fore	eign la	nguag	e(s) I	had ir	i the se	cond	ary sch	iool	
	was (were)	_						•		
	(Please specify th	e lang	uage i	n the	blank)			•	
	1	year			2 ye	ars			3 y	ears
	 4	4 years			m	ore thai	14 ye	ears	·	
5.	I intend to take n	nore Sp	panish	cour	ses aft	ter this	seme	ester.		
	yes		N	Ю		U	ndeci	ded		
6.	My language abil	ity in t	he fol	lowin	g area	s is				
		Exc	<u>ellent</u>			<u>Poor</u>				
	Listening	5	4	3	2	1				
	Speaking	5	4	3	2	1				
	Reading	5	4	3	2	1				
	Listening Speaking Reading Writing	5	4	3	2	1				
+0					-~			~	1 4	 (3)
	A=strongly agre			-		_	ree :	somew	nat	(3),
D=	-disagree (2), SI)=stro	ngly	disag	ree (1)				
									_	
_				_		SA				SD
7. L2 writing is very important for second language learning.			5	4	3	2	1			
0	I ambassad 172 souts		41			~	4	3	2	•
8. I enjoyed L2 writing in the secondary school.					5	4	3	2	1	
9.	Writing composite understand better		_		e.	- 5	4	3	2	1



10. I believe using drawings or pictures as 5 guided-writing facilitates writing process.
11. It is difficult for me to write in Spanish. 5 4 3 2 1 Why? (Briefly explain)

APPENDIX B

Second Questionnaire

(Samples questions)

Please circle the answers as honestly as possible.

*SA=strongly agree (5), A=agree (4), AS=agree somewhat (3),

D. disagrae (3), SD, agree 11, agree (4).

D=disagree (2), SD=strongly disagree (1)	_	ree so	mew	nat (:	5),
 I enjoyed writing about the pictures for this course. 	SA 5	A 4	AS 3	D 2	SD 1
2. Writing compositions helped me understand better Spanish language.	5	4	3	2	1
3. I found the drawings for the compositions were interesting and comprehensible to me.	5	4	3	2	1
4. I believed using drawings or pictures as guided-writing facilitated writing process.	5	4	3	2	1
5. I found my writing skills improved by using pictures as guided writing.	5	4	3	2	1
 Both topic-selected and picture-guided writing activities enhanced my writing skills. 	5	4	3	2	1
7. I enjoyed more topic-selected than picture-guided writing.	5	4	3	2	1
8. Overall, I rate my writing abiltiy	Excel 5	lent 4	3	2	<u>Poor</u> 1

- 9. What are the most three helpful things you found through the use of pictures as guided writing?
- 10. What do you believe about the effectiveness of pictures on L2 writing in relation to the development of the four language skills proficiency? (Briefly explain)

