The Effect of Teacher's Scaffolding and Peers' Collaborative Dialogue on the Acquisition of English Tenses in the Zone of Proximal Development: *A Sociocultural Perspective*

Abolfazl Khodamoradi (Corresponding Author)
Department of Foreign Languages, Payame Noor University, Tehran, Iran
khodamoradia@yahoo.com
Hassan Iravani
Department of Foreign Languages, Payame Noor University, Tehran, Iran
Manoochehr Jafarigohar
Department of Foreign Languages, Payame Noor University, Tehran, Iran

Abstract

This study investigated the extent to which teacher's scaffolding and peers' collaborative dialogue could contribute to the acquisition of English tenses in Iranian EFL learners with different levels of grammatical knowledge. To fulfill this objective, 142 college students were selected through convenience sampling to constitute the scaffolding and collaborative groups. After the participants' initial level of grammatical knowledge was measured by a pre-test, they received their respective treatment and their achievement was measured by a series of immediate post-tests and a final post-test. The results indicated no significant difference between the performances of the two experimental groups. When the collected data were analyzed for high achiever and low achiever subgroups formed based on their interlocutors, no significant differences were observed between high achiever subgroups. But it was found that those low achievers who received assistance from the teacher and those who collaborated with high achievers had significantly better performances than those low achievers who collaborated with low achievers. Therefore, it can be concluded that the knowledge and expertise needed for helping the learners move ahead in their ZPD can be provided in those dyadic configurations in which at least one of the interlocutors exceeds a threshold level of knowledge.

Key words: acquisition, collaborative dialogue, scaffolding, tense, the ZPD

Introduction

From a sociocultural perspective, learning and development are studied within the social and cultural context. Its pioneer, Vygotsky, believed that "human learning cannot be understood independently from the social and cultural forces that influence individuals" (Barnard & Campbell, 2005, p. 76). According to this perspective, individuals use different tools to learn and to regulate their mental activities, and any kind of learning occurs through dialogues in the Zone of Proximal Development (ZPD) which Vygotsky (1978) defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

According to this definition, what paves the way for a learner's inherent capacity for development to be actualized is through the social interaction with significant others who are more capable than the learner. Such carefully attuned assistance which may be provided by significant others for a novice was initially referred to as *scaffolding* by Wood, Bruner and Ross (1976). In more pre-

cise terms, scaffolding is defined as a process "through which assistance is provided from person to person such that an interlocutor is enabled to do something she or he might not have been able to do otherwise" (Ohta, 2000, p. 52).

Referring to the original notion of scaffolding which presupposes a relationship between an expert and a novice, some educators (e.g., Donato's, 1994; Swain, 2000) have argued that this conceptualization of the scaffolding may not exceed the boundary of teacher-fronted instruction. Therefore, in order to remove such a deficiency from the scaffolding metaphor, they have proposed some other notions so as not to abandon the whole metaphor. Among the proposed notions, Swain's *collaborative dialogue* has received the most attention.

From an interaction perspective, collaborative dialogue is a "dialogue in which speakers are engaged in problem-solving and knowledge building" (Swain, 2000, p. 102). Such an expanded notion of scaffolding, like the original notion, is based on the widely-accepted concept of *intersubjectivity* or shared understandings between two interlocutors. But what distinguishes the notion of scaffolding from collaborative dialogue on the issue of intersubjectivity is that in the former a main prerequisite for intersubjectivity is unequal status between the interlocutors while in the latter this state is more obtainable if expertise, knowledge, or power resides symmetrically in both interlocutors.

The issue of equal-unequal knowledge or expertise is one of the large discrepancies between the leading cognitive and social constructivists, Piaget and Vygotsky. For Piaget, a child's asymmetrical interactions with adults can be counter-productive to learning because they usually generate compliance to adults' authority and consequently prevent cognitive reconstructing (Granott, 1993). On the contrary, Vygotsky focused on a "master-slave or supervisor-subordinate relationship which is markedly asymmetrical and hierarchical" (Cheyne&Tarulli; as cited in Daniels, 2005, p. 133).

These two major interaction patterns can be actualized in educational settings in a variety of configurations. Bronfenbrenner (1994) referred to these interaction configurations as *proximal processes* in his ecological models of human development. van Lier (2004) has viewed both major proximal processes viable in the immediate environment of the classroom and noted four scenarios of the interaction between a teacher and a learner, peers of similar competency, peers of unequal competency, and a learner and himself or what Soo and Bonk (1998) have called learner-self interaction.

Definitely, the quantity and the quality of these proximal processes or interaction patterns are the functions of contextual factors. According to Bronfenbrenner (1994), the proximal processes should be studied in ecological models in which interaction is studied in socially-organized subsystems, ranging from the micro system of the immediate classroom to the macro system of the cultural and historical context. Therefore, a considerable number of research studies have been conducted to see which of the interaction patterns brings about the highest level of achievement in a specific sociocultural context. In what follows, the most recent and relevant ones are discussed.

Storch (2002) conducted a longitudinal study to investigate the nature of the dyadic interaction among intermediate ESL learners and their learning outcomes. Applying Damon and Phelps's (1989) dimensions of equality and mutuality, she found four distinctive patterns of interaction based on her data: collaborative, dominant/dominant, dominant/passive, and expert/novice. Among these patterns, collaborative and expert/novice had more instances of knowledge transfer and fewer instances of missed opportunities for learning than the other two interaction patterns. Therefore, she concluded that certain interaction patterns are more conducive than others for second language development.

In another study, Leeser (2004) investigated the effect of the interlocutors' proficiency level on the number, type, and outcome of their language related episodes (LREs). His findings revealed

that the high-high dyads produced the highest total number of lexical and grammatical LREs while their low-level counterparts had the least number of LREs. The results also indicated that the former group produced the highest number of correctly-solved LREs and the lowest number of unresolved and incorrect LREs. Based on the results, he concluded that as the overall proficiency of the dyad decreases, so does the mean number of total LREs.

In 2008, Kim and McDonough conducted a similar study and explored the collaborative dialogue between intermediate Korean L2 learners and their intermediate and advanced interlocutors in terms of the occurrence and resolution of lexical and grammatical LREs, and the patterns of interaction. The results revealed that the collaborative dialogue with the advanced interlocutors resulted in more lexical LREs and correctly resolved LREs. It was also indicated that the patterns of interaction were dynamic because they changed when the interlocutors collaborated with interlocutors from different proficiency levels.

In the Iranian EFL context, which is the context of the current study, two relevant studies have been conducted. The first one was done by Maftoon and Ghafoori (2009) on the effect of homogeneous (symmetrical) and heterogeneous (asymmetrical) collaborative interaction on the development of EFL learners' writing skill. Their findings showed that although the writing skill of both groups increased significantly as the result of interaction, no significant difference was observed between the two groups. The findings of this study were not completely supported by those by Pishghadam and Ghadiri (2011) who investigated the effect of symmetrical and asymmetrical scaffolding on the reading skill of Iranian EFL learners. The results of this study indicated that the participants in the asymmetrical group which was composed of partners of unequal proficiency outperformed their counterparts in the symmetrical group.

As the findings of the previously-mentioned empirical studies show, there is no consensus among the researchers on the effect of some variables such as interlocutors' level of proficiency and interaction patterns on the academic achievement of EFL learners. The context of studies becomes even more complex if the teacher is supposed to be one of the interlocutors in interaction configurations or proximal processes. To the researchers' knowledge, no research study has been conducted on the proximal processes to compare the efficiency of teacher's scaffolding with peers' collaborative dialogue when the learners' level of knowledge is viewed as an influential variable. This research study tries to address this untouched area.

Research Questions
The research questions for the current study are as follows:

1. Do teacher's scaffolding and peer's collaborative dialogue have significantly different immediate and delayed effects on the acquisition of English tenses for Iranian EFL learners?

2. Do high achievers show a significantly different improvement if they interact with the teacher, high achievers, or low achievers?

3. Do low achievers show a significantly different improvement if they interact with the teacher, high achievers, or low achievers?

Methodology
Participants
One hundred and forty-two college students (82 males and 60 females) who had enrolled in an EGP (English for General Purposes) course at Azad University in Iran constituted the sample of this study. The participants who ranged in *age* from 18 to 31 (M = 20.34, SD = 2.6) had at least six years of studying English as a foreign language in junior high school and high school. The participants

had been distributed in five intact classes before the study began. Two classes were randomly selected as the teacher's scaffolding group and the three remaining classes as the peers' collaborative dialogue group (henceforth referred to as *the scaffolding group* and *collaborative group* respectively).

The whole sample were also divided into high achievers and low achievers based on the results of a pre-test and further constituted three subgroups of low achievers and three subgroups of high achievers based on the interlocutors they had. Every low achiever or high achiever might interact with the teacher, a high peer, or a low peer. What came out of these interaction patterns were three subgroups of low achievers whose interlocutor was the teacher (L-T), low achievers whose interlocutors were high achievers (L-H), and low achievers whose interlocutors were low achievers (L-L). The same subgroups of H-T, H-H, and H-L were made for the high achievers when they formed dyads with the possible interlocutors.

Teaching material

The material used in this study was a pamphlet which was developed by the researchers and contained the most applicable nine English tenses. In the pamphlet, each of the tenses was presented in a two-section unit. In the first section, the underlying meaning and the basic structures were elaborated on. Then in the second section, different types of exercise were designed to provide a situation for practicing the given grammatical points.

Instrumentation

In order to gather appropriate data, three research instruments were employed in this study: a pre-test, a series of weekly post-tests, and a final post-test. All of the instruments had been designed and validated by the researchers in a pilot study before they were used in the study.

The pre-test was a researcher-made diagnostic test which aimed at evaluating the participants' entry behavior in the domain of English tenses. The purpose of the pre-test was twofold. First, the results of the pre-test were an indicator of the participants' level of grammatical knowledge before the treatment. Second, the results were used for classifying the participants into low achievers (below the mean) and high achievers (above the mean) in terms of the initial level of grammatical knowledge in the given domain. The weekly post-tests and final post-test were, in fact, achievement tests which aimed at measuring the participants' improvement at the end of each treatment session and the treatment period respectively.

In terms of the test layout, all the three tests included two sections of multiple choice items and one or two cloze passages. In the first section, the participants were required to answer multiple choice items (four in each weekly post-test and 36 in the pre-test and final post-test) while in the second section they were provided with cloze passage(s) (one in the weekly and two in pre-test and final post-test) to fill in the blanks with appropriate forms of the given verbs in parentheses.

Procedure

Data in this study were collected during a period of twelve weeks. In the first session, the participants of each group were informed about the purpose of the study, the instructional material, and their own instructional procedure. In the second session, the pre-test was administered to all the participants. In the third session through the eleventh session, the participants received their own instruction.

The instruction in each of these treatment sessions was given during a period of sixty minutes in three phases: In the first phase, the English tense was presented similarly by a teacher to participants of both groups for fifteen minutes. In the second phase, the participants of both groups were asked to do the exercises in thirty minutes. The participants in the scaffolding group were required to do the given exercises and received the teacher's assistance if necessary while their counterparts

in the collaborative dialogue group were asked to do the exercises in collaboration with a fixed partner. Finally, in the third phase, all the participants were given fifteen minutes to answer the questions of the weekly post-test.

After the treatment period, the final post-test was administered to all the participants in the twelfth session. Then all the papers were scored and those participants who were absent in the pre-test, the final post-test, or in more than two treatment sessions were excluded from the study and the data from the remaining qualified ones were submitted for further analyses.

Validity and reliability

In order to assure the validity of the instruments, compelling evidence of content validity was collected. To gather such evidence, a group of four content area experts were provided with some information about the study and then asked to comment on the tests specifications. Based on their comments and justifications, the tests were designed and modified in several stages.

In order to establish the reliability of the instruments, a group of thirty-three college students who had enrolled in an EGP course of another university participated in a pilot study. The same procedure was followed for the pilot group and they took the pre-test, weekly post-tests, and final post-test twice. The results of data analysis showed a correlation coefficient of $r = .88$, $p < .05$ for the pre-test and $r = .82$, $p < .05$ for the weekly post-tests and $r = .90$, $p < .05$ for the final post-test.

Results

The descriptive statistics in Table 1 shows the participants' achievements in the pre-test, nine weekly post-tests, and final post-test in both scaffolding group and collaborative group.

Table 1.Descriptive Statistics of Both Experimental Groups

Tests	Scaffolding Group			Collaborative Group		
	M	SD	n	M	SD	n
Pre-test	46.62	13.0	74	47.38	12.8	68
Weekly post-test	67.61	11.6	74	65.04	14.3	68
Final Post-test	55.59	17.5	74	51.49	18.2	68

Table 2. Descriptive Statistics of Subgroups

Subgroups	n	Pre-test		Weekly Post-tests		Final Post-test	
		M	SD	M	SD	M	SD
Low-achievers							
(L-T)	34	34.8	8.7	61.70	11.8	47.16	16.5
(L-H)	16	35.41	6.2	60.97	12.2	47.42	10.4
(L-L)	15	36.48	5.8	49.05	11.6	29.95	11.4
High-achievers							
(H-T)	40	56.66	5.4	72.63	8.9	62.76	15.1
(H-L)	22	56.43	7.4	73.18	7.9	62.31	14.2
(H-H)	15	57.75	9.5	73.45	11.0	61.50	15.4

When the participants' initial level of grammatical knowledge in the domain of English tenses was selected as another independent variable, six subgroups including three subgroups of low achievers and three subgroups of high achievers were identified. Table 2 displays the performances of these subgroups in the given tests.

Because the participants of the two groups were tested at more than one time, a repeated-measures ANOVA (mixed between-within subjects ANOVA) was used. Before running the test, it was necessary to see whether the collected data fitted the standard assumptions of normality of data, homogeneity of variances, and sphericity. All data sets from the groups met the required assumptions for parametric tests.

A mixed between-within subjects analysis of variance was conducted to assess the impact of two major interaction patterns on the achievement of the scaffolding group and collaborative group across three time periods (the pre-test, weekly post-tests, and final post-test). There was no significant interaction between the interaction type and time, Wilks' Lambda = .97, F (2, 139) = 2.147, p > .05. There was a significant main effect for time, Wilks' Lambda = .24, F (2, 139) = 220.06, p < .001, partial eta squared = .76, with both groups of participants showing an increase in achievement from the pre-test to the weekly post-tests and a decrease from weekly post-tests to the final test (see Table 3). The main effect comparing the two groups of participants was not significant, F (1, 140) = 0.84, p > .05, partial eta squared = .006, suggesting no difference in achievement between the scaffolding group and collaborative group. Table 4 shows the relevant results.

Table 3. Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.	ηp^2
Time	Wilks' Lambda	.240	220.063[a]	2	139	.000	.760
Time * group	Wilks' Lambda	.970	2.147[a]	2	139	.121	.030

a. Exact statistic
b. Design: Intercept + group
Within Subjects Design: time

Table 4. Tests of Between-Subjects Effects

Source	df	Mean Square	F	Sig.	ηp^2
Intercept	1	1315778.532	2688.760	.000	.951
Group	1	413.182	.844	.360	.006
Error	140	489.363			

To find any significant differences between the subgroups of high-achievers, a mixed between-within subjects ANOVA was conducted to assess the impact of interaction with different interlocutors on the achievement of high-achievers across three time periods (the pre-test, weekly post-tests, and final post-test). There was no significant interaction between the interaction type and time, Wilks' Lambda = .99, F (4, 146) = .119, p> .05. There was a significant main effect for time, Wilks' Lambda = .25, F (2, 73) = 107, p< .001, partial eta squared = .75, with all subgroups of participants showing an increase in achievement from the pre-test to the weekly post-tests and a decrease from weekly post-tests to the final test (see Table 5). The main effect comparing the three subgroups of high-achievers was not significant, F (1, 74) = 0.005, p □ .05, partial eta squared =

0.00, suggesting no significant differences in achievement among the three high-achiever subgroups (see Table 6).

The same analyses were done on the low-achiever subgroups. There was no significant interaction between the interaction type and time, Wilks' Lambda = .71, F (4, 122) = 5.78, $p > .05$. There was a significant main effect for time, Wilks' Lambda = 023, F (2, 61) = 104.11, $p < .001$, partial eta squared = .77 (see Table 5). But the main effect comparing the three subgroups of low-achievers was significant, F (1, 62) = 6.3, $p \square .05$, partial eta squared = 0.17, suggesting significant differences in achievement among the three low-achiever subgroups (see Table 6).

Table 5. Multivariate Tests[b.c]

Effect		Value	F	Hypothesis df	Error df	Sig.	ηp^2
			High-achiever Subgroups				
Time	Wilks' Lambda	.254	107.075[a]	2	73	.000	.746
Time*High-achievers	Wilks' Lambda	.994	.119[a]	4	146	.976	.003
			Low-achiever Subgroups				
Time	Wilks' Lambda	.227	104.109[a]	2	61	.000	.773
Time*Low-achievers	Wilks' Lambda	.707	5.780[a]	4	122	.000	.159

a. Exact statistic
b.c. Design: Intercept + High-achievers/Low-achievers
Within Subjects Design: time

Table 6.Tests of Between-Subjects Effects

Source	df	Mean Square	F	Sig.	ηp^2
		High-achiever Subgroups			
Intercept	1	808515.699	3908.151	.000	.981
Subgroup	2	.999	.005	.995	.000
Error	74	206.879			
		Low-achiever Subgroups			
Intercept	1	341353.098	1403.947	.000	.958
Subgroup	2	1532.035	6.301	.003	.169
Error	62	243.138			

To locate the exact difference(s) between the low-achiever subgroups, pair wise comparisons were done using Sidak post-hoc test which is "slightly more powerful than Bonferroni" (Larson-Hall 2010, p. 282). Comparisons found a statistical difference between the L-L and L-T subgroups (mean difference = -9.394, 95% CI = -16.241, -2.546, p < .05), and between the L-L and L-H subgroups (mean difference = -9.439, 95% CI = -17.379, -1.499, p < .05) but not between the L-Tand L-H subgroups (mean difference = -.046, CI = -6.743, 6.652, p = 1.0). The results indicate that low-achievers who interacted with the teacher or with high achievers had significantly better performances than low achievers who interacted with low achievers. Table 7 shows the relevant results.

Table 7. Pair wise Comparisons

(I) interlocutor	(J) interlocutor	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower	Upper
L-L	L-T	-9.394[*]	2.790	**.004**	-16.241	-2.546
L-L	L-H	-9.439[*]	3.235	**.015**	-17.379	-1.499
L-T	L-H	-.046	2.729	1.000	-6.743	6.652

*. The mean difference is significant at the .05 level.
a. Adjustment for multiple comparisons: Sidak.

Discussion

This research study was an attempt to see which degree of knowledge distance between the possible interlocutors in educational settings resulted in better improvement in EFL learners in the domain of English tenses. The obtained results indicated that there was no significant difference between those learners who received assistance from the teacher and those who collaborated with their peers. When comparisons between subgroups of similar level of knowledge were done, the results revealed that low achievers who interacted with the teacher or low achievers had statistically better performance than low achievers who collaborated with low achievers. No significant differences were observed between other subgroups especially the high achiever subgroups.

These findings provide support for the claim made by the genetic law of development which postulates that the development of higher mental functions arises out of the interaction between two interlocutors in the zone of proximal development (Vygotsky, 1978). Observing no significant difference between the scaffolding group and collaborative group can be regarded as convincing evidence that, in addition to teachers, peers can also play the role of mediators for the learners in achieving higher mental functioning. Such evidence provide a firmer ground to accept the extended notions of Vygotsky's scaffolding which have been proposed by some educationalists like van Lier (1996) and Swain (2000).

When it comes to pinpointing exactly the most desirable knowledge distance between the interlocutors, the findings of this study indicate that the reality resides neither in the Piagetian front which views the learner's asymmetrical interaction with adults as counter-productive nor in the Vygotskian front which regards the expert-novice interaction as an essential ingredient of achieving higher mental functioning. In this study, the poorest performances were those of low achievers who collaborated with low achievers. This supports Vygotsky's sociocultural theory which focuses on heterogeneous pairs or expert-novice interaction as an integral part of optimal scaffolding. On the other hand, significant improvement on part of the high achievers who collaborated with high achievers provides some kind of counter evidence for Vygotsky's claim.

Based on these findings, it can be concluded that the level of learners' grammatical knowledge is an influential variable when both interlocutors are low achievers while this variable can be ignored if both dyads are high-achievers. One probable implication of such a conclusion is that there is a *knowledge threshold for optimum collaboration* which the interlocutors should exceed if they want to mutually assist and scaffold each other's performance. In other words, if the learners' symmetrical knowledge is collectively supposed to be complementary, it should cross a threshold which is not obtainable in low achiever dyads.

The observed performances in other dyads in which both or only one of the interlocutors was a high achiever also provide reliable evidence for such a knowledge threshold because no significant

difference was found among the high achiever subgroups and among the low achiever subgroups in which one of the interlocutors had crossed the given threshold. Interestingly, the degree of collective expertise was not found to be an influential factor because none of the high achiever subgroups showed better performance than the others in both the weekly and final post-test.

Another interesting finding of this study was lack of a significant difference between the L-T subgroup and the L-H subgroup. The most likely conclusion drawn from this finding is that regardless of the direction of knowledge transfer in asymmetrical dyads, high achievers and the teacher have equal contributions to the acquisition of grammatical knowledge in low achievers. If the teacher is more knowledgeable and pedagogically much more experienced, how can equal contribution in behalf of high achievers be justified?

Such an equal contribution can be attributed to two factors. First, the teacher's knowledge and expertise should be distributed among a large number of learners whose needs should be met. Definitely, such dispersed scaffolding cannot be of high quality especially in large classes while peers' one-to-one scaffolding or collective scaffolding in peers' collaborative dialogue does not have such a deficiency. Second, the asymmetries in knowledge between the teacher and the learners may prevent them from achieving the state of intersubjectivity or shared understanding. If we accept that there is an *optimal distance for quality intersubjectivity,* the perceptual gap between the teacher and learners can be detrimental to achieving this state. This is an untouched area which can be investigated in the future studies.

The findings of this study support those parts of Leeser's (2004) findings which indicated that the high-high dyadic interaction is much more fruitful than its low-low counterpart in terms of the learning outcomes. These findings are also in line with those of Williams (2001) which suggested that learners from higher proficiency levels were more likely to reach correct resolutions to their linguistic problems than less proficient learners. Therefore, it can be logically concluded that low achievers are not as able to resolve their linguistic problems as more-proficient learners.

In the case of heterogeneous dyadic collaboration, the findings of this study are in partial agreement with those of Storch (2001), Kim and McDonough (2008), and Pishghadam and Ghadiri (2011) which have indicated that better results can be obtained if unequal partners instead of equal partners are paired up. In this study no significant difference was found between the high-high subgroup and high-low subgroup which indicates that an equal level of success can be achieved in both heterogeneous and homogenous pairs. But statistically better performance in low-high subgroup in comparison to the low-low subgroup indicates the superiority of the heterogeneous pairing to the homogenous pairing and provides additional support for the findings of the previously-mentioned studies.

The findings of this study have some pedagogical implications for the use of peers' collaboration as a mediating tool for the acquisition of L2 grammar. If high achievers are capable enough to create the required scaffolding for their interlocutors and creating such scaffolding makes the scaffolders progress in their own ZPD, such interaction configurations should be selected as viable alternatives to the teacher's scaffolding. Fortunately, the number of the interaction configurations which are advantageous to both parties is more than the unproductive ones because the only configuration which does not seem to be conducive to learning is a dyad of low achievers. Therefore, the teacher can give the learners a wider choice to choose those partners with whom they are more willing to collaborate.

What the current study did was measuring the learning outcomes associated with different types of dyadic configurations in an academic setting. Due to the large number of participants, the issue of pair dynamics, which according to the related literature can be collaborative, domi-

nant/dominant, dominant/passive, and expert/novice, was not investigated. Although learning is our main goal and the quality of interaction is a means for achieving this goal, investigating the process can pave the way for better product. Therefore, future studies can investigate the extent to which pair dynamics can be actualized in a variety of interaction configurations. Moreover, because interaction is a culture-bound phenomenon, additional studies are needed to explore the learners' perceptions about various interaction configurations in the sociocultural context of educational settings.

In conclusion, this study revealed that the required knowledge or expertise for scaffolding does not necessarily reside within teachers but can be constructed collaboratively by peers. To achieve such quality collaboration, at least one of the peers should exceed a knowledge threshold to provide a sound base from which collective scaffolding can be created. If this essential requirement is satisfied, both heterogeneous and homogenous dyads can provide each other with assistance as if it were provided by the teacher. Definitely, any innovations in interaction patterns should be implemented by taking the sociocultural factors into account. Needless to say, a sociocultural perspective in which both cognitive and social aspects of learning and development are incorporated can be the best theoretical framework at hand.

References
Barnard R. &L. Campbell. 2005. Sociocultural theory and the teaching of process writing: The scaffolding of learning in a university context. The TESOLANZ Journal, 13, 76–88.

Bronfenbrenner U. 1994. Ecological models of human development. In T. Husen& T. N. Postlethwaite (Eds.), International encyclopedia of education (2nd ed., Vol. 3, pp. 1643–1647). Oxford: Pergamon.

Damon W. &E. Phelps. 1989. Critical distinctions among three methods of peer education. International Journal of Educational Research, 13, 9–19.

Daniels H. 2005. *An Introduction to Vygotsky (2nd edition).* London: Routledge.

Donato R. 1994. Collective scaffolding in second language learning. In J. P. Lantolf, (Ed.), Vygotskian approaches to second language research (pp. 33-56). London: Ablex Publishing.

Granott N. 1993. Patterns of interaction in the co-construction of knowledge: Separate minds, joint effort, and weird creatures. In R. H. Wozniak & K. W. Fischer (Eds.), Development in context: Acting and thinking in specific environments (pp. 183–207). Hillsdale, NJ: Erlbaum.

Kim Y. &K. *McDonough.2008.* The effect of interlocutor proficiency on the collaborative dialogue between Korean as a second language learners. *Language Teaching Research*, *12, 211–234.*

Larsen-Hall J. 2010. A guide to doing statistics in second language research. New York: Rutledge.

Leeser M. J.2004. Learner proficiency and focus on form during collaborative dialogue. Language Teaching Research, 8, 55–82.

Maftoon P. &G. Ghafoori. 2009. A comparative study of the effect of homogeneous and heterogeneous collaborative interaction on the development of EFL learners' writing skill. The Journal of Applied Linguistics, 2(1), 128–158.

Ohta A. S. 2000. Rethinking interaction in SLA: Developmentally appropriate assistance in the zone of proximal development and the acquisition of L2 grammar. In J. P. Lantolf (Ed.), Sociocultural theory and second language learning (pp. 51–78). Oxford: Oxford University Press.

Pishghadam R. &S. Ghardiri. 2011. Symmetrical or asymmetrical scaffolding: Piagetian vs. Vygotskian views to reading comprehension. Journal of Language and Literacy Education [Online], 7(1), 49–64. Available:http://www.coe. uga.edu/ jolle/2011_1/pishghadam_ghadiri.pdf

Soo K. &C. J. Bonk. 1998, June 20-25. Interaction: What does it mean in online distance education? Paper presented at the ED-MEDIA/ED-TELECOM 98 World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunications (10th), Freiburg, Germany. (ERIC Document Reproduction Service No. ED 428724

Storch N. 2001. How collaborative is pair work? ESL tertiary students composing in pairs.Language Teaching Research, 5(1), 29–53.

Storch N. 2002. Patterns of interaction in ESL pair work. Language Learning, 52(1), 119–158.

Swain M. 2000. The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), Sociocultural theory and second language learning (pp. 97–114). Oxford: Oxford University Press.

vanLier L. 1996. Interaction in the language curriculum: Awareness, autonomy and authenticity. London and New York: Longman.

vanLierL. 2004. The ecology and semiotics of language learning: A sociocultural perspective. Boston: Kluwer Academic Publishers.

Vygotsky L. S. 1978. Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Williams J.2001. The effectiveness of spontaneous attention to form. System, 29, 325–340.

Wood D. Bruner, J. S. &G. Ross. 1976. The role of tutoring in problem solving. Journal of Child Psychology and Psychiatry, 17, 89–100.