

# The Effect of Different Planning Conditions versus Explicit Grammar Instruction on Teenage EFL Learners' Oral Production of a Picture Promoted Task and Grammar Gain

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# Abstract

This study examined the effects of three task conditions on teenage EFL learners' oral performance of a picture prompted task and their grammatical knowledge gain. To this end, 34 EFL learners were randomly assigned into three experimental groups, namely online planning, pre-planning, and explicit instruction, and one control group. Pictures were employed as prompts to implement the tasks in all groups. A Grammatical Judgment Test was used to compare students' knowledge of simple present passive structure before and after the treatment. Learners' oral task performance was measured in terms of Complexity, Accuracy, and Fluency (CAF). The findings demonstrated significant differences among groups as for CAF measures. However, no significant differences were spotted in GJT posttest scores. The paper calls for the incorporation of diverse prompt-based planning conditions in task-oriented teaching practices in order to target learners' higher levels of oral competence.

## Introduction

Researchers have recently highlighted the importance of communicative language learning in L2 learning. Many approaches have attempted to bring communication to the center of the classroom. Task-based language teaching (TBLT), for instance, has been among the methods aiming to create an authentic atmosphere for language learners. TBLT is known to be a strong version of the communicative approach in which students acquire the language they need when they feel the need to use it. TBLT challenges common understandings of language education assuming that "language learning will progress most successfully if teaching aims simply to create contexts in which the learner's natural language learning capacity can be nurtured rather than making a systematic attempt to teach the language bit by bit" (Ellis, 2009, p. 222). In contrast to traditional methodologies, in which language was based on teaching units of language in decontextualized units, is a process-based approach in which the task is considered to be the unit of focus, where the emphasis is placed on interaction, meaning, and what learners can do with language when they feel the need. Tasks appear to be an ideal construct to link the fields of SLA and language pedagogy (Ellis, 2003; Slimani-Rolls, 2005).

Effects of designing and implementing task variables on task performance have been a primary concern in task-based research. Many SLA researchers (e.g., Ellis, 2003, 2005; Ortega, 1999; Robinson, 2001a, 2001b, 2005; Skehan, 1998) acknowledge that various factors can contribute to task performing. These factors can be classified into four different categories. Structure of task (structured or unstructured), task modality (oral or written), planning condition (pre-planning, online-planning, or no-planning), and learner attributes (such as gender, age, etc.) (Ellis, 2003). Planning condition is among the factors which have received substantial attention in SLA research. Time to plan can be provided to students before doing the task as pre-task planning time or while they are completing the task as online (within-task) planning time. Most planning research has attempted to measure its effect on the oral production in terms of complexity, accuracy, and fluency (CAF) (Housen, Kuiken, & Vedder, 2012; Michel, Kuiken, & Vedder, 2012). These studies indicated that giving learners the opportunity to plan a narrative task prior to oral performance (i.e., pre-task planning) leads to significant progress in both fluency and complexity.

Grammar and how to teach it has also been the other concern of L2 research in recent years (Benati, 2020; DeKeyser, 1998). For Dickens and Woods (1988), grammatical competence is viewed as a component of communicative competence, and that explicit knowledge of grammar is essential for communication. Implicit and explicit approaches have been used to teach L2 grammar and pre-teaching grammatical structure of a focused task is one of the task implementation variables. Below we provide a very brief account of literature comparing task planning with explicit grammar instruction.

## Literature Review

Planning is an indispensable element in completing a task and the efficacy of the oral production of learners (Ellis, 2003). Extensive literature has dealt with the effects of planning time on task performance from different perspectives with the general conclusion that when learners have the opportunity to plan for a task before they perform it, the language they produce is more fluent and more complex than when no planning is possible. Yuan and Ellis (2003), for example, investigated the effects of pre-task and careful online planning on learners' accuracy, complexity, and fluency in performing a narrative task. The learners were required to narrate a story orally based on a picture composition task. The researchers found that the pre-task planning group produced more fluent language than the online planning group.

A good number of studies have also investigated the effects of explicit grammar instruction on grammar knowledge gain and oral production. Researching the effects of the type of instruction on production, Van de Guchte, Rijlaarsdam, Braaksma, and Bimmel (2017) studied the effects of pre-task modeling on oral task performance of 48 ninth grade German learners. Students were put in groups of focus on language (FoL) and focus on content (FoC) and were asked to watch two videos including the use of prepositions as the target grammar of the study. The results indicated that the FoL group was better at attempted and accurate use of target structure than the FoC group. Syntactic complexity was reported higher for the FoC group. However, the study showed a negative effect on global complexity as a result of pre-task instruction. Ellis, Li, and Zhu (2018) investigated the impact of explicit instruction at the pre-task stage on performing a focused task. The results showed that overall performance was affected. However, the findings did not indicate more accurate production, but more attempts to use the target structure were reported for the group with explicit grammar instruction prior to task completion.

Few studies have however compared task planning with grammar instruction prior to completing the task. Author (2018) investigated the effect of pre-task planning and explicit instruction on complexity, accuracy, lexical complexity, and fluency and linguistic knowledge gain of learners. They found no significant effect of explicit grammar instruction on students' oral performance measures. Mochizuki and Ortega (2008) examined the effects of pre-task instruction on accuracy, complexity, and fluency of learners' oral production. 112 Japanese EFL learners were asked to retell a story orally. Learners were in three groups, 1) without prior planning, 2) 5 minutes of unguided prior planning, and 3) after 5 minutes of planning with guided planning because they had grammar instructions written on a piece of paper. The accuracy was higher in the guided planning group but results of complexity and fluency were similar in all groups.

There are numerous studies that have investigated the efficacy of the planning time condition on task performance, yet the findings are still inconclusive. The effect of planning time on grammar knowledge gain is among the intact areas in planning time research, which is the concern of the present study. Besides, little is known about differential effect on oral production of the learners as the result of performing a task with prior explicit instruction as compared to task performance under different planning conditions. To bridge these gaps, this study investigates the effects of picture prompted tasks under different planning time conditions (on-line vs. pre) comparing these to explicit grammar instruction and their effect on oral performance and grammar knowledge gain of EFL learners. The following research questions guided the present study:

1. Is there any difference between task planning (pre versus online) and explicit grammar instruction in their effect on picture-prompted task performance?
2. Is there any difference between task planning (pre versus online) and explicit grammar instruction in their effect on grammar gain?

## Method

### Participants

Thirty-four (16 male and 18 female) students from an English language institute in Urmia, Iran, ranging in age from 13 to 15 years, voluntarily participated in this study. The participants in this study had previous exposure to the English language in the institute setting for about 2 years and were considered as pre-intermediate level learners (A1-B2 in terms of CEFR, based on institute placement). They spoke different first languages (i.e., Turkish (Azeri), Persian, and Kurdish) and none had ever been to an English-speaking country. Additionally, they had virtually no opportunity to use the English language for communicative purposes outside the classroom context. They had 3 hours of English classes per week, 42 weeks per year. These students were randomly assigned into three experimental groups and one control group.

### Materials

A narrative (descriptive) task was used in the study as the main apparatus of oral production elicitation, the task (in the form of picture prompts) required the participants to plan a narrative on making a pancake. The task required the participants to describe how pancakes are made, using seven picture prompts including the ingredients of pancakes provided to them in tandem. The task was a focused one and designed so as to provide the participants with situations to use the target structure (simple present passive form) in the production of their story. Instructional materials were adopted from the *Family and Friends* series (book 5) by Naomi Simmons, Tamzin Thompson, and Jenny Quintana (2014). A Grammatical Judgment Test (GJT) was used as a pre-test to homogenize participants and the same GJT was used as a post-test as well. The GJT was composed of 25 items, from which 15 included simple present passive form as the target structure (6 grammatical, 9 ungrammatical) and 10 with irrelevant structures (6 grammatical, 4 ungrammatical). In addition, a narrative task with some picture prompts was used as the main apparatus in groups.

# Procedure

The study was set out to investigate the impact of using picture-prompted planning and explicit grammar instruction on oral task performance (complexity, accuracy, and fluency) and grammatical knowledge gain of teenage learners of English as a Foreign Language (EFL). The participants were randomly assigned into four groups: 1) group with picture prompts and online planning 2) group with picture prompts and pre-task planning time 3) group with picture prompts and explicit grammatical instruction (without planning) and 4) control group which received the picture prompted task without any planning time and with no grammar instruction also learners in this group were left to their own devices and process while completing the task. In order to ensure that participants were homogenous in terms of their grammatical knowledge at the outset of the study, the GJT was used as a pre-test.

To complete the task the first group received the task and prompts with online planning time, the second group received the task with picture prompts and five minutes pre-task planning time, the third group which did not have any planning time (neither online nor pre-planning) received explicit grammar instruction before conducting the picture prompted task. The control group just received the task without any planning time, and with no explicit grammar instruction. Students in the online planning time group received the task/ pictures and started to describe the recipe for a pancake, while the students in the pre-task planning group had five minutes to plan their narration before they described the recipe. The explicit grammar instruction group described the recipe after being provided with the target grammatical structure although they did not have any time to plan to describe the task. The members of the control group described the recipe with no additional facility in terms of the target structure and planning time. Oral performance of all groups was recorded for later analysis. To measure the grammar knowledge gain, the GJT was given as post-test two weeks after task completion.

The participants' oral production in all groups was measured for complexity (CAF) following and Yuan and Ellis (2003). The framework of analysis is presented in Table 1.

Table 1

## Measures of CAF used in the study

Complexity measures	Accuracy measures	Fluency measures
Syntactic complexity (the ratio of clauses to T-units)	Error-free clauses	Syllables per minute
Lexical complexity	Correct verb forms	Meaningful syllables per minute

Besides, in order to measure the possible effects of the picture-prompted task under different planning time and explicit grammar instruction on oral task performance (in terms of CAF) and grammar learning

(as measured by GJT), we used various statistics as descriptive statistics, one-way ANOVA, and Kruskal-Wallis H test as reported in the next section.

## Results

In this study, we delved into the effects of planning conditions (in performing picture prompted tasks) and explicit grammar teaching on the oral performance and grammatical knowledge gain of EFL learners. Below we provide descriptive as well as inferential statistics on the performances of different groups first for their oral production and then for their performance on the GJT. Before task performance and post-test statistics, the groups' performance on the pre-test is provided to ensure their comparability at the start of the study.

Table 2  
Descriptive statistics of groups' performance on GJT at pretest

Groups	Mean	SD	Min	Max	N
Explicit instruction group	8.3750	1.84681	6.00	11.00	8
Preplanning group	8.0000	2.62467	4.00	11.00	10
Online planning group	7.6000	2.63312	4.00	12.00	10
Control group	8.6667	2.44949	5.00	12.00	6

Table 3  
ANOVA test for groups performance at GJT of pretest

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	22.263	4	5.566	.846	.504
Within Groups	276.375	42	6.580		
Total	298.638	46			

### *Oral performance in terms of CAF measures*

Descriptive statistics of the study groups' oral production (in terms of CAF) are reported in Table 4.

Table 4  
Descriptive statistics of groups' oral production

		<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error</b>	<b>Minimum</b>	<b>Maximum</b>
Fluency (syllables/min)	Online Planning group	50.0980	7.07463	2.23720	45.00	63.00
	Preplanning group	49.8800	8.60335	2.72062	34.18	57.07
	Explicit Grammar group	39.6575	4.90362	1.73369	35.34	46.58
	Control group	40.7767	9.17267	3.74473	29.16	50.00
Fluency (meaningful syllables/min)	Online Planning group	50.0980	7.07463	2.23720	45.00	63.00
	Preplanning group	49.8800	8.60335	2.72062	34.18	57.07
	Explicit Grammar group	39.6575	4.90362	1.73369	35.34	46.58
	Control group	39.5567	9.47226	3.86703	27.50	48.00
accuracy error-free clauses	Online Planning group	52.4980	39.15535	12.38201	11.11	100.00
	Preplanning group	75.8320	23.96093	7.57711	33.33	100.00
	Explicit Grammar group	97.2200	5.14756	1.81994	88.88	100.00
	Control group	41.0033	9.94663	4.06069	28.57	50.00
accuracy correct verb forms	Online Planning group	51.7280	39.24348	12.40988	11.11	100.00
	Preplanning group	72.9400	28.55744	9.03065	27.20	100.00
	Explicit Grammar group	90.0000	10.69045	3.77964	80.00	100.00
	Control group	37.8500	14.16947	5.78466	25.00	55.55

		Mean	Std. Deviation	Std. Error	Minimum	Maximum
Syntactic complexity	Online Planning group	4.4380	.69013	.21824	3.40	5.14
	Preplanning group	4.4980	.90692	.28679	3.75	6.16
	Explicit Grammar group	4.7675	.47252	.16706	4.11	5.30
	Control group	4.3933	.82007	.33479	3.37	5.14
lexical complexity	Online Planning group	.5576	.06740	.02131	.44	.61
	Preplanning group	.6274	.03381	.01069	.57	.66
	Explicit Grammar group	.5558	.06273	.02218	.51	.66
	Control group	.3573	.06364	.02598	.29	.43

In order to test the possible effects of picture prompted task performance under different planning conditions as compared to explicit instruction on oral production (in terms of fluency and complexity of the participants), a one-way ANOVA was employed. The underlying assumptions of one-way ANOVA were not met for normality assumption in the case of accuracy component, however. The K-W test was accordingly used in the latter case. The results of the one-way ANOVA are shown in Table 5.

Table 5

*ANOVA test for groups' oral performance (fluency and complexity)*

		Sum of Squares	Df	Mean Square	F	Sig.
Fluency (syllables/min)	Between Groups	803.842	3	267.947	4.713	.008
	Within Groups	1705.620	30	56.854		
	Total	2509.462	33			
Fluency (meaningful syllables/min)	Between Groups	886.676	3	295.559	5.115	.006
	Within Groups	1733.549	30	57.785		
	Total	2620.225	33			
Syntactic complexity	Between Groups	.657	3	.219	.396	.757
	Within Groups	16.615	30	.554		
	Total	17.272	33			
lexical complexity	Between Groups	.281	3	.094	28.442	.000
	Within Groups	.099	30	.003		
	Total	.380	33			

A one-way analysis of variance ( $p < .05$ ) indicated that there was a significant difference in fluency aspect of performance of the groups (both in syllables/min and meaningful syllables/min). The results also demonstrated a significant difference in lexical complexity of oral production of the groups; however, the analyses failed to demonstrate a significant difference in the syntactic complexity of the groups' oral production. A Post hoc test was used in order to determine the location of the differences in places where a difference was observed.

According to Tukey HSD test, the results of which appear in Table 6, there are no significant differences between the performance of online planning group and pre-planning group in terms of their fluency of oral production (neither in the case of syllables/min nor meaningful syllables/min fluency condition). However, these two groups (online planning and pre-planning) were significantly different in fluency with the other two groups (explicit instruction and control groups),

Table 6

*Results of Tukey HSD test for groups' oral performance (fluency and complexity)*

Dependent Variable	(I) Experimental Participants	(J) Experimental Participants	Mean	
			Difference (I-J)	Sig.
Fluency (meaningful syllables/min)	Online Planning Time	Pre-Planning Time	.21800	1.000
		explicit grammar group	10.44050	.032
		control group	9.32133	.100
	Pre-Planning Time	Online Planning Time	-.21800	1.000
		explicit grammar group	10.22250	.036
		control group	9.10333	.112
	explicit grammar group	Online Planning Time	-10.44050	.032
		Pre-Planning Time	-10.22250	.036
		control group	-1.11917	.993
	control group	Online Planning Time	-9.32133	.100
		Pre-Planning Time	-9.10333	.112
		explicit grammar group	1.11917	.993
Fluency (meaningful syllables/min)	Online Planning Time	Pre-Planning Time	.21800	1.000
		explicit grammar group	10.44050	.033
		control group	10.54133	.054
	Pre-Planning Time	Online Planning Time	-.21800	1.000
		explicit grammar group	10.22250	.038
		control group	10.32333	.061
	explicit grammar group	Online Planning Time	-10.44050	.033
		Pre-Planning Time	-10.22250	.038
		control group	.10083	1.000
	control group	Online Planning Time	-10.54133	.054
		Pre-Planning Time	-10.32333	.061
		explicit grammar group	-.10083	1.000
lexical complexity	Online Planning Time	Pre-Planning Time	-.06980	.050
		explicit grammar group	.00185	1.000
		control group	.20027	.000
	Pre-Planning Time	Online Planning Time	.06980	.050
		explicit grammar group	.07165	.061
		control group	.27007	.000
	explicit grammar group	Online Planning Time	-.00185	1.000
		Pre-Planning Time	-.07165	.061
		control group	.19842	.000
	control group	Online Planning Time	-.20027	.000
		Pre-Planning Time	-.27007	.000
		explicit grammar group	-.19842	.000

\*. The mean difference is significant at the 0.05 level.

which indicates that both the online planning and preplanning group outperformed the explicit grammar instruction group as well as the control group in terms of fluency of their oral production. However, the results are not the same for the lexical complexity of the groups. In terms of lexical complexity, there was a statistically significant difference between the pre-planning group and the other groups. There was no significant difference between online planning, explicit instruction, and control groups, which indicates that the pre-planning group outperformed the other groups in terms of lexical complexity of their oral production following a picture prompted task.

<b>Table 7</b>		
<b><i>Kruskal-Wallis H Test for groups' oral performance (accuracy)</i></b>		
	accuracy error-free clauses	accuracy correct verb forms
Kruskal-Wallis H	14.426	10.597
Df	3	3
Asymp. Sig.	.002	.014

According to the nonparametric post hoc test, there was a significant difference between the control group and explicit instruction group as well as between the online planning group and explicit instruction group. The results indicate that the explicit instruction group outperformed both online planning and control groups.

Table 8  
Nonparametric post hoc Test for groups' oral performance (error-free clauses accuracy)

	<b>Test Statistics</b>	<b>Std. Test Statistics</b>	<b>Sig.</b>	<b>Adj. Sig.</b>
Control group - Online planning group	4.73	.934	.350	1.000
Control group – Preplanning group	8.73	1.72	.085	.508
Control group – Explicit instruction group	18.58	3.507	.000	.003
Online planning group – Preplanning group	-4.00	-.912	.362	1.000
Online planning group – Explicit instruction group	-13.85	-2.976	.003	.018
Preplanning group – Explicit instruction group	-9.85	-2.11	.034	.206

According to the nonparametric post hoc test, there was also a significant difference between the control group and explicit instruction group in terms of their correct verb forms accuracy. The results indicate that the explicit instruction group outperformed the control group in terms of the correct verb form but there were no significant differences between the other groups. The results are shown in Table 9.

Table 9  
Nonparametric post hoc Test for groups' oral performance (correct verb forms accuracy)

	Test Statistics	Std. Test Statistics	Sig.	Adj. Sig.
Control group- Online planning group	4.400	.868	.385	1.00
Control group- Preplanning group	10.40	2.05	.040	.241
Control group- Explicit instruction group	15.50	2.92	.003	.021
Online planning group - Preplanning group	-6.00	-1.36	1.72	1.00
Online planning group –Explicit instruction group	-11.10	-2.38	.017	.103
Preplanning group –Explicit instruction group	-5.10	-1.09	.273	1.00

*Grammatical knowledge gain*

Descriptive statistics associated with students' performance on GJT post-test across four groups are illustrated in Table 10.

Table 10  
Descriptive statistics of groups' performance on GJT at post-test

Post-test Participants		Statistic	
Post-test scores	Online planning group	Mean	12.3000
		Median	10.0000
		Std. Deviation	5.01221
	Preplanning Group	Mean	16.3000
		Median	16.0000
		Std. Deviation	4.27005
	Explicit grammar group	Mean	13.5000
		Median	12.0000
		Std. Deviation	4.86973
	Control Group	Mean	11.3333
		Median	11.5000
		Std. Deviation	1.21106

In order to test the possible effects of different task conditions (planning versus grammar instruction) on grammatical gain rate, the Kruskal-Wallis H test was used (the assumptions of ANOVA were not met for

normality assumption). The results of the K-W test are depicted in Table 11 which reveals that the differences among the groups are not statistically significant in terms of learners' grammatical knowledge gain.

Table 11  
Kruskal-Wallis H test for groups'  
performance at GJT of post-test

	<b>Post-test scores</b>
Kruskal-Wallis H	5.678
Df	3
Asymp. Sig.	.128

## Discussion

This study investigated task performance with regard to delivery of picture-prompted tasks under different planning conditions (online planning, pre-planning) versus explicit grammar instruction through 1) investigating measures of CAF as aspects of language production, and 2) examining grammatical knowledge gain.

Concerning the first research question, we found that fluency of the learners' oral production demonstrated a significant increase as a result of planning conditions compared to explicit instruction. The post hoc test revealed that both online and strategic planning contributed to the fluency of oral production of pertinent groups. This means that planning time aids the learner to be more fluent in their language production, which can be due to a smaller need for online linguistic monitoring of the produced language. As for the complexity of oral production, there was no significant difference among the groups in terms of their syntactic complexity, which means neither planning condition nor explicit grammar instruction affects the complexity of the learners' oral production differently. However, in terms of lexical complexity, the experimental groups all outperformed the control group. Among experimental groups, the pre-planning group outperformed the online planning group and explicit instruction group. This indicates that strategic planning aids the learners to increase the variety of the vocabulary they use in their language production and contributes to the expansion of formulaic language as well as non-formulaic vocabularies in their oral language production. The results indicated that the accuracy of oral production of the groups was significantly different in terms of both accuracies of correct verb forms and accuracy of error-free clauses. The post-hoc analysis revealed that the explicit instruction group outperformed both online and pre-planning groups as well as the control group. This indicates that picture-prompted tasks that are accompanied by explicit instruction of grammar lead to better accuracy of oral language production.

The second research question investigated the difference between planning conditions (pre-planning versus online planning) and explicit grammar instruction in their effect on grammar knowledge gain. No

evidence was detected showing differences among the groups' improvements in explicit knowledge of grammar. In other words, neither planning (both pre-planning and online planning) nor explicit grammar instruction led to differences in grammatical knowledge gain.

The results of the present study are in line with most of the studies on CAF with the general finding that planning improves CAF. To be more specific, especially in terms of fluency, the findings of the current study are in full agreement with many of the research studies in the literature (e.g., Foster, 1996; Foster & Skehan, 1996; Skehan & Foster, 2005; Tavakoli & Skehan, 2005). A similar pattern of results was obtained regarding the effect of pre-planning of picture-prompted task on oral performance (Crookes, 1989; Foster & Skehan, 1996; Mehnert, 1998; Ortega 1995, 1999; Wigglesworth, 1997). Foster and Skehan (1996) for example investigated different conditions functioning during strategic planning time, and their results were in total agreement with those of the current study in terms of fluency of oral production.

Although some research studies are suggesting that pre-planning can lead to greater fluency (e.g., Foster & Skehan, 1996; Ortega, 1999), the current study suggests that there is no significant difference between online planning and pre-planning conditions, which means that both conditions lead the learners to higher fluency levels to the same extent. The findings of the study are in contrast with those of Yuan and Ellis (2003), in which they found the opportunity for online planning inhibited fluency. Similarly, the results of the study by Hulstijn and Hulstijn (1984) on the efficacy of oral narratives under two kinds of time conditions suggested that the time pressure could lead to better accuracy. Ellis (2008) justifies this as the result of monitoring utilizing explicit knowledge of well-learned rules.

The results also suggest that in terms of fluency of oral production both planning conditions (pre-planning vs. online planning) surpassed both the control group and the explicit grammar instruction group. This can be due to the nature of the task. The picture prompted tasks can act as a guided planning situation due to their nature, providing the online planning group a scheme to be followed and produce a language with a small number of pauses. Another reason could be due to the context of the study. As Ellis (2008) elaborated, most of the previous studies related to planning conditions were conducted in laboratory-like contexts in which the participants were asked to perform the task in a context outside their normal learning environment, or they sought the effects of planning condition in testing contexts (e.g., Elder & Iwashita, 2005; Iwashita, Elder, & McNamara, 2001; Wigglesworth, 1997, 2001). These studies failed to provide a consistent explanation of the efficacy of the planning conditions. It is plausible then that the context itself was acting as a modifier or intervening variable in these situations.

The findings of the first research question are in line with Skehan's Trade-off Hypothesis. According to Skehan (1998), it is difficult to pay attention to all areas of performance because attentional resources are limited, so three aspects of production namely fluency, accuracy, and complexity start a competition for where they allocate attention. As a result, "tasks which are cognitively demanding in their content are likely to draw attentional resources away from language forms" (Skehan & Foster, 2001, p. 189). According to this hypothesis when a task is cognitively complex, trade-off effects are shown between complexity and accuracy, and when output is linguistically complex, the result shows inhibition in

accuracy. Interestingly in the current study improvement for accuracy is seen following explicit grammar instruction without limitations of attentional resources. However, more research is needed to substantiate this claim.

This study also shed light on the extent to which planning time (pre-planning vs. online planning) and explicit instruction affect grammar knowledge gain. The results indicated that there is no significant difference among the groups in terms of their grammar knowledge gain. This means neither planning nor grammar instruction leads to improvements in explicit knowledge of the grammar of the learners. The results are in line with Reinders (2008) who found that explicit instruction through noticing prior to the performance of a task devastatingly inhibits the learning in the case of more complex grammatical structures. Similarly, Author (2018) found that neither planning nor explicit instruction led to significant changes in linguistic knowledge due to participants' lower language proficiency

However, contrary to our results, Martoccio's (2012) study revealed that explicit instruction led to better grammatical knowledge gain. However, this may be because of the processibility (Pienemann, 1998) of the target grammar structure. According to Pienemann (1998), that human beings intend to learn the languages hierarchically like their mother tongue. In other words, based on this theory, EFL learners' language generation is based on a hierarchical order. So the findings of the second research are in line with this theory as acuity of the passive voice is inhibited by processing procedures. Besides, it should be taken into account that the age range may also play a role in the results of the study, as a great number of studies investigated grammatical knowledge gain of the learners on adult learners with an age range between 19 and 50. In the case of our study, the participants were all teenagers with the age range of 13–15. Their age and the maturity of their mind may play an intervening role in the process. However, this cannot be asserted with confidence and further research is needed to test this claim.

## Conclusion

In the present study, we found significant differences in the oral performance of the four groups, indicating that picture-prompted tasks under different planning conditions can lead to higher levels of fluency and lexical complexity; and explicit instruction may lead to better accuracy of the oral production.

These findings have far-reaching pedagogical implications for EFL teachers, teacher trainers, material developers and language designers, and language researchers. Teachers and curriculum developers must bear in mind that overall planning conditions can be helpful in the process of implementation of the task. However, before providing some habitual pre-task planning chances, they should consider the nature, complexity, type of the task as well as the complexity of the target structure. These factors are very crucial in opting between providing on-line or pre-task planning time to learners. However, the study also finds value in integrative planning proposed by Bygate and Samuda (2005), advocating the use of simultaneous online and pre-planning conditions and exploiting the advantages of the mixed planning situation. The study reported here needs to be extended before the findings can be generalizable due to shortcomings inherent in all research of this category.

One of the limitations of this study was the limited sample size within each group. Further research can replicate the study with a bigger sample size to ensure generalizability. Additional research should be conducted on other proficiency levels, age groups, and gender as moderator variables before a more accurate picture of the effect of planning versus grammar instruction on picture-promoted task performance and grammar learning can be captured.

One interesting avenue for further investigation is the difference in the learners' oral production behavior if the same task is performed again by the same learners. Considering the importance of task repetition as a main rehearsal implementation factor involving in the process of task-based language learning and teaching, conducting research combining planning with task repetition is another fruitful road to take up.

## Declarations

- Availability of data and material

The study was voluntary; participants were informed about benefits; there were no risks involved; the participants gave concern for participation; English Department of Urmia University approved the study.

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