

## The Role of Translation-based, Meaning-based, and Hint-based Instructions in Vocabulary Acquisition: A Mixed-Methods Study

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### Abstract

The present study, adopting a mixed-methods design, aimed to compare three types of task instruction entailing translation-based, meaning-based, and hint-based instructions for vocabulary acquisition. In so doing, a pool of 45 male Iranian intermediate L2 learners, which were divided into three groups, participated in the study based on convenient sampling. The treatment phase lasted for 20 sessions, allocating the last 45 minutes of each class to teaching vocabulary. Each class was exposed to a different treatment taking the experimental condition it was assigned into account. The treatment consisted of two tasks. The results obtained from one-way ANOVA confirmed that there was a statistically significant difference in learners' vocabulary scores for the three sets of scores. Moreover, following the coding reliability and agreement, 12 common themes emerged from the students' responses to the semi-structured interview questions. At the end, the study offers some practical implications for L2 learners and teachers.

**Keywords:** instruction, vocabulary learning, language tasks, scaffolding

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## 1. Introduction

Research into Second Language (L2) vocabulary acquisition has regained attention in the field of Second Language Acquisition (SLA) (Gu, 2018; Larsen-Freeman & Long, 1991; Webb, 2020). According to Nation (2018), in the last 120 years, over 30% of the research into L1 and L2 vocabulary acquisition have carried out in the last 12 years. Indeed, vocabulary plays an important role in learners' development of receptive skills (Nation, 1990). During the last decades, studies in vocabulary acquisition have focused more on task activities (Laufer & Girsai, 2008; Meara & Miralpeix, 2017). According to Ellis (2009), vocabulary receives adequate attention in task-based instruction and tasks can be output-prompting that engage learners in producing linguistic items.

Task activities may include meaning-based tasks, translation-based tasks or so. The association between L2 vocabulary acquisition, as a major component of language, and translation, as an instructional activity, has always been a subject of debate in SLA (Laufer, & Aviad-Levitzky, 2017). Yet, L2 to First Language (L1) translation practice and vocabulary acquisition have not been argued sufficiently (Goundareva, 2009). The effective role of vocabulary in the L2 learning process has been widely documented by scholars in the field, and a number of detailed strategies have been suggested for learning vocabulary (see Schmitt, 2019). Moreover, Schmitt (2008) emphasized, "a large vocabulary is necessary to function in English: 8000–9000 word families for reading, and perhaps as many as 5000–7000 families for oral discourse" (p. 329).

Recently, many English Language teachers and theorists have been examining the value of translation as an activity in L2 classrooms (e.g., Joyce, 2015; Shook & Marian, 2012; Modarresi et al., 2021). Additionally, Ellis (2001) noted that the teaching methodology of meaning-focused instruction to L2 teaching could be seen as an alteration of communicative language teaching based on which comprehensible input and meaning-oriented tasks are essential and adequate for language acquisition. Furthermore, the idea of providing learners with mediation refers back to Vygotsky's (1978) writings on the Sociocultural Theory of mind. In Vygotsky's writings, a perfect setting for development is the Zone of Proximal Development (ZPD). To reword the recognized explanation of the ZPD, it is the distance between what an individual can do independently and what he or she can do with help or mediation (Lantolf & Poehner, 2004). Fundamental to the ZPD, is the influence of mediation through which the learners are provided with hints, prompts and leading questions so that the learners could provide the answers to the questions themselves (Poehner & Lantolf, 2013).

One of the main concerns about vocabulary presentation techniques is the way teachers introduce the meaning of unknown vocabulary to the L2 learners that would be more effective in learning, retaining and recalling the words. For example, Susanto (2017) stated that receptive vocabulary should be presented differently from productive vocabulary since productive vocabulary encompasses the words that the students understand and can use in speaking and writing. In this respect, Henriksen and Danelund (2015) concluded that many second language learners of English

possess low levels of vocabulary knowledge and slow rates of vocabulary development in a range of contexts. In the Iranian context, Zohrabi et al., (2018) concluded that the words are memorized and tested in some traditional ways so that the result is most likely nothing but forgetting the words and their meanings. Therefore, this study is an attempt to investigate different types of task instruction in teaching vocabulary to L2 learners.

Actually, new ways of teaching techniques and instructions are needed for learning new words. The teacher is most likely the most influential figure in classroom settings and instruction provided by him or her is the cornerstone of the teaching agenda. The mediation offered in the form of hints and prompts seems to be an effective way of teaching English (Lantolf & Poehner, 2004), based on which the researchers developed the concept of 'hint-based instruction' as a creative novel instruction type, which is rooted in the cake format of dynamic assessment (Lantolf, 2000). Hint-based instruction is closely related to teaching methodology because it is against spoon-feeding education. A good teacher does not teach from A to Z; but he/she offers the students hints and leading questions (Modarresi & Alavi, 2014). The study intends to address the above-mentioned concerns clearly manifested in recent foreign and second language research by applying translation-based, meaning-based and hint-based instructions to vocabulary acquisition. In this study, translation-based instruction is operationally defined as the ability to present the form of the target words or sentences for the original text including text-oriented activities. The meaning-focused instruction is operationally defined as presenting vocabulary by means of two communicative tasks entailing reading comprehension and pair/group discussion. Hint-based instruction is operationally defined as teachers' mediating the learners' performance using prompts, hints, and questions during the assessment period.

## 2. Review of Related Literature

### 2.1 Vocabulary Acquisition in SLA

A large number of published studies show that vocabulary is fundamental in learning a new language, and it is of utmost significance to language learners (e.g., Alijanian et al., 2019; Coady 1997; Derakhshan & Malmir, 2017; Schmitt 2019; Modarresi, 2021). As explained by Nation (2005), there are several ways to learn a new vocabulary, including comprehension and production exercises, dictionary use, glosses, and computer-aided tools such as online dictionaries. The most recent and detailed account of research into vocabulary can be found in the work of Schmitt (2019) who developed six areas of vocabulary research and maintained that these areas are useful for doing further research and he suggested nine tasks to conduct research on these six research directions.

Much of the greater part of the literature acknowledges the distinction between the intentional vs. incidental learning of vocabulary (see Barcroft, 2015). In the literature on L2 vocabulary acquisition, intentional learning falls under the heading of *language-focused learning*, one of Nation's (2013) four strands of a well-balanced program for learning an additional language.

As concluded by Webb (2020), research into incidental vocabulary acquisition mainly focused on the frequency of occurrence. Conversely, previous research also supported that intentional learning could result in more effective results than incidental learning (Cobb, 2007; Joyce, 2015). According to Schmitt (2008), taking the previous research into account, it is now well-recognized that vocabulary acquisition in any educational program must entail “both an explicit, intentional learning component and a component based around maximizing exposure and incidental learning” (p. 329). However, Nation (2013) developed a structure to integrate intentional and incidental vocabulary acquisition including four learning elements, namely meaning-focused input, meaning-focused output, language-focused learning, and fluency development.

## ***2.2. Instructions in Second Language Acquisition***

The number of studies investigating the effect of input-based and output-based instructions on vocabulary is not many (Shintani, 2011). As for translation-based instruction, in the domain of SLA, translation has been assumed as a common tool in the acquisition of new vocabulary (de Groot, 2006). The results obtained from the study carried out by Webb (2005) confirmed that providing the learners with an L1 equivalence for a target word and practicing it in a real context increase students' engagement in learning vocabulary. As for meaning-based instruction, Laufer and Girsai (2008) examined the difference between meaning-focused instructions, non-contrastive form-focused instructions and form-focused with translation and contrastive analysis and found that learners in the last group outperformed those of other groups in their post-test of vocabulary. In their experimental study, Mehrani Rad et al., (2018) compared form-focused with translation tasks, form-focused without translation tasks, and meaning-focused tasks on L2 vocabulary acquisition in the Iranian context, and they found that form-focused instruction with translation group had better performance in comparison to the two other groups, both on a vocabulary retention test and on an active recall translation test. As for hint-based instruction, significant studies in the literature have reported the use of mediation in second language acquisition (Lantolf, 2000; Poehner & Lantolf, 2013; Modarresi & Alavi, 2014). As Lantolf (2000) commented, the ZPD is a sort of co-mediation between an individual who possesses the knowledge to obtain a goal and an individual who has not such knowledge.

Having scrutinized the related literature that task-based instruction can be applied in teaching vocabulary for L2 learners, the researchers aimed to compare the three types of task instruction including translation-based, meaning-based, and hint-based instructions with respect to vocabulary acquisition. To yield more in-depth results, the study also utilized interview techniques to elicit more information from the students on the role of instruction types in vocabulary acquisition. To this effect, three learning conditions for comparison were set up:

- 1) Translation-based instruction
- 2) Meaning-based instruction

### 3) Hint-based instruction

Therefore, to achieve this goal, the study as an initial attempt posed the following research questions:

1. Is there any significant difference between translation-based, meaning-based and hint-based instructions in vocabulary acquisition?
2. How do the learners react to the role of instruction types in vocabulary acquisition?

## 3. Method

The present study made use of both qualitative and quantitative research methods by means of comparative descriptive study, descriptive statistics and inferential statistics so that it could yield more in-depth findings (Dörnyei, 2007). The quantitative part of the study examined the impact of instruction types on vocabulary acquisition in which instruction types were taken as the independent variables with vocabulary acquisition as the dependent variable. The study was complemented by the qualitative interview method based on which the responses emerged from the respondents.

### 3.1. Participants

The sample consisted of 45 male Iranian intermediate L2 learners (class A=15, Class B=15, class C=15) who were selected based on convenient sampling from Andisheh Sazan English Institute in Quchan city, located in Khorasan Province of Iran. They were Persian native speakers, aged between 15 and 18 ( $M=16.53$ ;  $SD:0.94$ ), and all of them had already studied English in the preceding years in the same institute. They had four hours of English per week, working on language skills, along with the vocabulary textbook “*504 absolutely essential words*”, written by Bromberg et al., (2012), as supplementary material in each session. For homogeneity purposes, the researchers administered the Oxford Quick Placement Test (OPT) to the participants. Moreover, six students were selected to participate in the interview phase of the study based on availability sampling. The sample size seemed to be adequate since, according to (Dörnyei, 2007), an interview study with a sample size of six to 10 might work well. Indeed, from each group, two students were chosen to participate in a face-to-face interview.

### 3.2. Instruments

The first instrument utilized to measure L2 learners' language proficiency was OPT a language proficiency test which contains 60 multiple-choice vocabulary and grammar items. The scoring criteria categorize the test takers into four levels of English language proficiency: elementary (1-14), pre-intermediate (15-29), intermediate (30-44), and upper intermediate (45-50). Those volunteers who were classified at an intermediate level were included in the present study. The second instrument used in this study was the pre-test of vocabulary consisting of 53 single

English words, selected from Bromberg et al. (2012) “*504 absolutely essential words*” used to find out the unknown words. The third instrument used by the researchers was the post-test of vocabulary consisting of 38 single words from Bromberg et al. (2012) “*504 absolutely essential words*” used to measure learners’ knowledge of vocabulary. The reliability estimates of both pre-test and post-test were acceptable ( $r=.73$  &  $.78$ , respectively), based on the results obtained from the pilot study.

Moreover, the researchers decided to include all of the vocabulary that was worked on during the course to take care of the content validity of the test. Finally, semi-structured interview questions were used to explore the learners’ perspectives on the role of instruction types in improving their vocabulary knowledge. The questions centered on their learning experience, the possible experience of and reflection on the type of task activities presented during the course, and the contents of the questions were checked by three experts in applied linguistics and three experts in assessment and testing who had been teaching English language courses at University levels. Having received the feedback from the experts, the researchers revised the questions to take care of the content validity.

### **3.3. Procedure**

During the first step of the study, the pre-test of vocabulary was administered to the three groups two weeks before the beginning of the treatment phase during the regular class time. This was done to discover if the target vocabulary was actually unknown to the students. The pre-test included 53 single words selected from Bromberg et al., (2012) “*504 absolutely essential words*”. The reason for selecting the words from this textbook was that its words are practical and useful in everyday communication, and each lesson introduces 12 new words with definitions, synonyms, sample sentences and how they are used in given contexts so that the researchers could investigate which type of instruction helps more in learning words not already seen or known by the learners. The words were selected from chapter one and chapter two which the researchers planned to employ in the experiment. The remaining words were used as distracters. They consisted of the vocabulary supposedly familiar to the learners since they were presented by their teachers in the previous terms. The test took approximately 45 minutes. Having assessed the students’ responses to the test, the researchers chose 38 single words which were unknown to all of the participants.

Indeed, the pre-test of vocabulary included 53 single English words, selected from Bromberg et al. (2012) “*504 absolutely essential words*”, from which 38 words were not answered correctly by the participants. This step was carried out during the regular class time, and the same amount of time was allotted to the three classes representing the three conditions. Therefore, the pre-test condition was identical in the three groups. The students were required not to have a dictionary with themselves and no marginal glosses were provided for the unknown vocabulary.

The treatment phase lasted for 20 sessions beginning from September 2018 to December 2018 during which the teacher in the three classes allocated the last 45 minutes of his time in each class to teaching vocabulary. Class A was taught through translation-based instruction, class B through meaning-based instruction, and Class C through hint-based instruction. Each time the learners needed new work to complete a task, they could elicit it from the context, or they could ask the teacher to provide them with the words' meaning. Actually, the teacher could verify the meaning of the target words included in the tasks as he examined carefully all the answers in the three groups. Each class was exposed to a different treatment taking the experimental condition it was assigned into account. The treatment consisted of two tasks.

The teacher supplied two translation tasks including a simple clear instruction for the group provided by translation-based instruction. The first task required the learners to translate a sentence from L2 to L1 in which the target item is bolded. As an example:

- *I put my coat on that **vacant** seat.*

The sentences in L2 were very similar to the ones in the source text.

In the second task, having collected the L2–L1 translations, learners were engaged in translating a word from the paragraph. Indeed, the second task was discourse and text-oriented. The students were free to fulfill the two tasks by themselves, or with their peers. After they accomplished the tasks, the teacher went over the answers and offered corrective feedback. The teacher also provided a brief clear instruction for the second task.

The teacher supplied two communicative tasks entailing reading comprehension and pair/group discussion for the group provided by meaning-based instruction. The following is a sample of reading comprehension questions:

- *Complete the sentence:*

*I felt nothing when the nurse stuck a pin in my .....*

The tasks were designed in difficulty level in accordance with the questions raised in the text so that the learners could reply to the tasks. Having done the task by the students, the teacher examined the answer carefully. Following this, the teacher asked them to take their texts away again and get ready for the discussion task. The following topic includes one of the two discussion topics:

- *With your partner, discuss the following:*

*Do you like gallant women? Why or why not?*

First, learners worked in pairs. They were required to discuss the topic after they had studied the reading passage of the lesson; therefore, they had already become familiar with the topic. Their knowledge of the target word (here, the word 'gallant') was measured in this way. Indeed, the teacher took part in a different pair each time to offer the necessary feedback. After finishing the pair work, the whole group participated in discussing the topic. There were students who employed some of the target words; however, these words were not selected for teaching. English was the only language used by the teacher in this group.

The group exposed to hint-based instruction received two hint-based tasks: Individual hint-based instruction provided by the teacher for each individual learner and group hint-based instruction through which the teacher provided mediation for all of the learners. Here is an example of hint-based instruction:

The king was **unaccustomed** to having people disobey him.

*Hint 1: Unaccustomed is a negative word.*

*Hint 2: Unaccustomed is the opposite of accustomed.*

*Hint 3: when someone is no more doing something, he or she is unaccustomed to it.*

*Hint 4: Unaccustomed means not used to something.*

The first hint was introduced as the most implicit while the last hint was offered as the most explicit one. The scaffolding was provided on a developmental scale from implicit prompts to explicit answers. Actually, each time a student responded to a question wrongly, the hint was offered with progressive explicitness. That is, the hints were provided to the learners from implicit to explicit to increase the students' autonomy. Whenever a task was completed by the students, the teacher checked the answers and provided feedback for them, if necessary. The feedback consisted of verifications and clarifications of the meaning of the words and sentences. The medium of interaction between the teacher and the students was just the English language. Following the treatment, the researchers distributed a test of vocabulary including 38 single words asking learners to write their English meaning or Persian translation to see if there was any difference between the three groups in the post-test. Before doing this, the test was administered to a similar group as the pilot study to determine the reliability estimate.

During the second step of the study, the researcher gathered data from six students (two students from each group) who were exposed to different types of instructions, employing a semi-structured interview method. Since, in qualitative research, "the researcher is the primary instrument for data analysis and collection" (Merriam, 2009, p. 15), the researchers adopted an unbiased perspective to reflect on their attitudes in general. The relevant data were gathered over a series of three weeks in January 2019. Each of the interviews varied in length so as for the researchers to make sure that the interviewees' responses to the questions reached saturation. The students were free to answer the questions in either English or Persian language; however, their responses were transcribed into English language and then analyzed by classifying, that is, by tracing commonalities across them.

### ***3.4. Data Analysis***

To analyze the data, as for the first objective of the study regarding the significant difference between translation-based, meaning-based and hint-based instructions in vocabulary acquisition, the researchers ran One-way ANOVA. Following this, the researchers made use of "theme-based categorization" (Dörnyei, 2007, p. 245) to categorize the responses that emerged from the open-



ended interview questions. The inter-rater agreement and inter-rater reliability for coded transcripts were also taken care of. It is worth mentioning that the inter-coder agreement requires that the two coders could reach an agreement through discussion (Garrison et al., 2006) and the inter-coder reliability is achieved when the two coders choose similar code for the same unit of text (Krippendorff, 2004).

## 4. Results

### 4.1. Instructions and Vocabulary Acquisition

After distributing the pre-test of vocabulary to the participants and selecting the unknown vocabulary for the treatment phase including 38 single words mentioned earlier, the researchers used One-way ANOVA to examine the significant difference between translation-based, meaning-based and hint-based instructions in vocabulary acquisition. Checking the significance value for Levene's test, since this number was *greater* than .05, the assumption of homogeneity of variance was not violated (Tabachnick & Fidell, 2001). Moreover, the researchers also performed the preliminary analysis to ensure no violation of the assumptions of normality and they found no violation of the assumptions of normality since the Skewness and Kurtosis were between +2 and -2 for the variable.

**Table 1**  
*Descriptive Statistics of Vocabulary Scores*

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
translation-based	15	23.46	2.38	.61	18.00	27.00
meaning-based	15	23.66	3.88	1.00	18.00	33.00
hint-based	15	29.13	2.26	.58	27.00	34.00
Total	45	25.42	3.91	.58	18.00	34.00

As shown in Table 1, the results of Descriptive Statistics showed the means and standard deviations of the scores for translation-based instruction (M=23.46; SD=2.38), meaning-based instruction (M=23.66; SD=3.88), and hint-based instruction (M=29.13; SD=2.26). The minimum and maximum scores for each group are also represented in the table. Since the data were confirmed to be normally distributed, the researcher ran One-way ANOVA to find out the significant difference between the three types of instructions.

**Table 2**  
*Results of ANOVA for Vocabulary Scores*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	310.17	2	155.08	17.95	.000
Within Groups	362.80	42	8.63		
Total	672.9	44			

As shown in Table 2, the results obtained from ANOVA test confirmed that there was a statistically significant difference at the  $p < .05$  level in learners' scores for the three sets of scores [ $F(2, 42) = 17.95, p = .00$ ]. Taking the mean scores for the three groups, the researchers concluded that learners exposed to hint-based instruction performed better than those of translation-based instruction and meaning-based instruction. However, Post-hoc comparisons using the Tukey HSD test was run to determine the exact difference between the three groups.

**Table 3**  
*Results of Multiple Comparisons for the Three Groups*

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
translation-based	meaning-based	-.20	1.07	.98	-2.80	2.40
	hint-based	-5.66*	1.07	.00	-8.27	-3.05
meaning-based	translation-based	.20	1.07	.98	-2.40	2.80
	hint-based	-5.46*	1.07	.00	-8.07	-2.85
hint-based	translation-based	5.66*	1.07	.00	3.05	8.27
	meaning-based	5.46*	1.07	.00	2.85	8.07

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

As displayed by Table 3, hint-based instruction was statistically significantly different from translation-based instruction and meaning-based instruction since the significant value was less than .05 for this factor. Although the mean of the scores for meaning-based instruction was a bit more than that of translation-based instruction, the difference between them fell short of significance. Therefore, the whole process confirmed that students exposed to hint-based instruction outperformed those exposed to translation-based and meaning-based instructions.

#### **4.2. Results Emerged from the Interviews**

As for the second objective of the study regarding the learners' reactions to the role of instruction types in vocabulary acquisition, the researchers constructed semi-structured open-ended questions, employing theme-based categorization, to analyze data (Dörnyei, 2007). Two learners were selected from each group based on convenience sampling, and they were interviewed for eliciting in-depth information. The main findings that emerged from the interviews are reported below:

As for the learners in the translation-based group, they mentioned that learning new vocabulary through translation activities makes the task of acquiring unknown words easy and the amount of pressure on their minds is low and learners can see the Persian equivalence of words that facilitates the task of learning. However, they are unable to recall the given words or use them in other contexts. One of the learners said:

[I cannot indeed imagine learning the words without resorting to the Persian equivalence of the words. Of course, the problem is that the Persian equivalences for a certain word presented by the teacher differ from those of the dictionary and this makes me confused at times].

The researchers found out that learners are accustomed to this type of vocabulary acquisition, and they jump to bilingual dictionaries whenever they do not know the meanings of the words. Moreover, the learners think of reading texts as being able to translate the passages well and they overlook the importance of understanding the word meanings in context as a matter of comprehending the text not just translating it. They confessed that they cannot recall the words' meanings easily and they complained about forgetting the meanings of the words they have already learned.

As for the learners in a meaning-based group, they stated that working on meaning can improve their vocabulary repertoire since they can reflect on and use the words more effectively, and this was supported by the statistics that the mean score of the meaning-based group increased more than that of the translation-based group following the treatment. One of the learners in the meaning-based group said:

[I was really satisfied with this type of activity especially while I was working on pair and group works since I did not concern about the form of the words and translation, but I was reflecting on the use of words in communication as a whole, and the teacher was there to help us convey the meaning of the words and sentence].

Actually, the learners in this group revealed that working on meaning-based activities is demanding for them since they were accustomed to translation activities, and the learners said that they become tired a bit sooner since they feel that they are not motivated to actively participate in doing the task, and it shows that the mental loading is a bit high for the learners in this type of activities.

As for the learners in the hint-based group, the researchers found out that providing the learners with prompts and hints galvanizes their minds, and they concentrate more on the task to find the answers to the questions and become highly involved in the learning process. One of the learners in this group said:

[Learning the new vocabulary in this way was really interesting and motivating. I can now work on the tasks more effectively since the teacher is not there to provide us with the correct answers soon so that I can find the answers myself with the help of the teacher, and I feel that I will become autonomous gradually].

The point is that learners were more interested in learning a language with hint-based instruction, and they believe that the teacher can offer hints from the most implicit to the explicit ones so that they can work on problem-solving activities themselves and in this way, they can become autonomous in the learning process.

Following this, having coded the data, the first researcher provided the second person with the data to code. Thereafter, the second researcher coded the responses by eliciting the

commonalities and formulated rather similar findings with minor differences. Because the two coders arrived at the same conclusion, the inter-coder agreement on the findings was taken care of. In doing so, initially, following the guidelines suggested by Campbell et al. (2013), the researchers divided the number of coding agreements by the number of agreements and disagreements combined, and they achieved 67 percent inter-rater reliability. There were 22 common themes that at least one of the researchers invoked a code and of these, there were 15 cases that both of the two coders had invoked the code. Therefore, the overall level of inter-coder reliability would have been 68 percent ( $15/22 = .68$ ). However, after negotiating discrepancies, they reached 80 percent inter-coder reliability ( $12/15 = .80$ ). Therefore, following the coding reliability and agreement, the number of common themes emerged from the students' responses reduced to 12 codes.

**Table 4**

*Common Themes Emerged from the Interviews*

Participants	Themes
Translation-based group	1) low mental loading, 2) confusing, 3) forgetting, 4) less productive
Meaning-based group	1) higher mental loading, 2) needing more time, 3) more productive 4) tedious
Hint-based group	1) challenging, 2) interesting, 3) involving, 4) self-discovery

As shown in Table 4, the content analysis of the interviews with the students exposed to translation-based instruction revealed that the learning of words achieved by means of translation activities had a low involvement load. This view was echoed by another student who stated that when they needed to know a word, they were more willing to search for it in a bilingual dictionary; meanwhile, they confessed that they cannot use the words in speaking skills. The commonalities that emerged from the interviews with the students in the meaning-based group showed that the students could find more opportunities to use the words while using the words to communicate in group works and the teacher was there to provide help with the English language. They believed that the learning of words achieved by means of meaning-based activities needed a bit higher cognitive load while the task of learning some unknown words was taxing, taking a lot of time and energy. Finally, the commonalities elicited from the interviews with the students exposed to hint-based instruction showed that the students found this type of instruction challenging and novel. They believed that the hints provided by the teacher developing from the implicit prompts to the explicit answers involve them in doing the tasks more effectively and increase their motivation to discover the answers in the classroom.

## 5. Discussion

The results of the study revealed that hint-based activities are more challenging and in this way, the study is in line with the 'task-induced involvement load' hypothesis (Laufer & Hulstijn,

2001), suggesting that tasks that require higher involvement loads contribute greatly to learning new words. The results obtained from the study are in agreement with the previous research confirming that the provision of prompts and leading questions develop the students' language skills and their potential for learning (Alavi et al., 2011; Poehner, 2007). The results of the study are consistent with the statement developed by Schmitt (2008) who concluded that the optimal way for fostering vocabulary acquisition is to intensify the amount of engagement students exert with lexical items. Likewise, Scanlon et al. (2017) provided a set of hints, ranging from more to less explicit, that could assist the learners to become increasingly independent in their word-solving attempts.

To be more specific, the results of the study are not in agreement with the study carried out by Mehrani Rad et al., (2018) who compared form-focused with translation tasks, form-focused without translation tasks, and meaning-focused tasks on L2 vocabulary acquisition in the Iranian secondary school setting and concluded that students exposed to form-focused instruction with translation performed significantly better than the other students on the vocabulary test. In a similar vein, the results obtained from the study are not aligned with that of Laufer and Girsai (2008) who examined the difference between meaning-focused instructions, non-contrastive form-focused instructions and form-focused with translation and contrastive analysis and found that students in the last group outperformed those of other groups in their post-test of vocabulary. Moreover, the results of the study are in disagreement with the study conducted by Jalilzadeh et al., (2020) who found that young L2 learners exposed to meaning-based instruction outperformed those exposed to translation-based and hint-based instructions with respect to reading comprehension skills.

The reason for the contradictory results may lie in the bitter fact that in some learning environments, L2 students are accustomed to such learning culture as memorization and repetition based on which they are used to memorizing the equivalence of decontextualized English words. As was revealed in the interviews, students believed that there are abstract words in the English language their meanings can be manifested by means of translation easily, and the researchers of the present study believe that the integration of meaning-based tasks with translation-based tasks is also effective and its usefulness has already been documented by professionals in SLA. It seems that, as Nation (2005) comments, "None of these ways is better than the other ones in terms of the accuracy of conveyed meaning" (p.3). Finally, it is encouraging to compare the findings of the present study with that of Schmitt (2019) who concluded that L1 translations can be used as an effective way to operationalize recall measures if one is testing a homogenous L1 group; however, alternative meaning-based prompts can be used with heterogeneous groups such as L2 definitions or higher-frequency L2 synonyms.

One of the most significant findings that emerge from the interviews with the students is that hint-based activity is new and creative attempt and offers more opportunities to answer the questions. Indeed, hint-based education is more effective than spoon-feeding education since it activates students' ZPD and increases their motivation. In the same vein, Nešić and Stojković (2017), in their qualitative study, have recently found that learning a foreign language is closely

related to how learners experience the learning which, in turn, influences their motivation for learning. As a matter of fact, nearly all of us have already experienced learning situations in which we would perform better if we were provided with more opportunities to respond to the questions. Tasks and activities designed based on hint-based instruction allow for an optimal amount of scaffolding based on which the mediation is offered in an ongoing movement from implicit to explicit design.

It is most likely that the students' engagement in a cognitively challenging task enables the learners to recall and then generate the correct lexical items. Hint-based tasks require more information processing in the minds of the learners. The present study revealed that such tasks could bring more challenges and improve problem-solving skills in the Iranian context. In the same vein, Laufer (2005) commented that scholars in the field of SLA employ certain kinds of task-based activities in specific contexts and different assessment types to measure learning. Nevertheless, as for the acquisition of vocabulary, the results of the study reported here by means of mixed-methods design confirmed that hint-based activities could substantially improve vocabulary knowledge and vocabulary knowledge is a crucial part of language learning.

## 6. Conclusion

The present study reinforces the conclusion that designing hints in English courses is a challenging task, and unfortunately, most of the teachers ask L2 learners to translate the given texts during the course. Indeed, this type of exercise is tedious for the learners since there is no variety, and learners would perform better if they are equipped with various types of tasks that could involve them in problem-solving activities, and the current study confirmed that such tasks are providing the learners with more fruitful materials during their academic studies. They not only improve their vocabulary knowledge but also could recall better the vocabulary by means of more effective methods. Even in translation-based instruction, the more students become involved in the translation tasks, the better they can choose the vocabulary equivalence from English to Persian language (Modarresi, 2019).

The current study set out to gain a better understanding of the new techniques in teaching vocabulary by exposing EFL students to different tasks designed by their researchers. Indeed, in the past two decades, there has been a shift in paradigm in SLA from reductionist, behavioristic perspectives to holistic and constructivist perspectives addressing interdisciplinary issues like the interaction between SLA theories and learning vocabulary. The focus on intervention tasks would result in more effective teaching and learning in SLA. The present study, employing an experimental study, came to the conclusion that hint-based instruction associates directly with vocabulary acquisition.

There are potentially helpful implications for language learners, teachers, and syllabus designers in relation to the provision of new activities. EFL students should find their own ways to

employ the activities that work best for them to produce fluent and precise communication in L2 since effective communication depends to a great extent on the knowledge of vocabulary. Students are recommended to reflect on the meaning of the words that are used as synonymous, and when they ponder on the meaning of words, they feel the complexity and difficulty of the task in which they are involved. In this way, they become aware that they should not take the task of reading comprehension as just translating the sentences. Hasty translation could lead to miscommunication. Actually, when they engage in challenging tasks, they would not forget what they learn.

L2 teachers are recommended to provide the students with activities and tasks that are derived from new findings in the field of SLA. They should design novel activities and tasks for the students in English courses. As long as mediation is offered to the learners, the concept of scaffolding is central that is defined as the process by which a more capable person assists a less capable one to perform a task. The point is that the quality of the hints provided by the teacher is more important than just offering the hints to the learners. Writing hints or prompts is a challenging and creative task. For instance, for a specific item, the hints could be written in a way that a learner answers the item correctly by the third out of the five hints or it can be written in a way that the same learner answers the item by the second hint so that writing prompts is a competitive task. An effective hint would direct the learner to the favorite outcome. Syllabus designers and material developers could incorporate theories of SLA with respect to hint-based instructions into classroom activities since the previous studies showed that students could perform better on vocabulary tests and oral tests using such instructions. They can use hint-based instruction along with traditional translation-based activities for teaching vocabulary to L2 learners to work towards an agreement between criterion-referenced evaluation and development-referenced assessment.

As Qian and Lin (2020) rightly comment, many topics are under-researched with respect to the association between vocabulary knowledge and language proficiency, and a fruitful area for further research is examining the extent to which learners are able to use memorized words appropriately in speaking and writing. Finally, in line with the 'development-based pedagogy' suggested by Poehner and Lantolf (2013, p. 15), we are in the rather initial steps of a challenging process, and now the door is open for carrying out further research concerning the role of hint-based education in language learning in order to create a comprehensive picture of this area in relation to learning foreign languages.

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