The Effect of Private Speech and Self-Regulation on Translation Quality among Iranian Translation Students: A Mixed-Methods Study

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Abstract

The current study presents findings from a mixed-methods study of investigating the self-regulatory role of private speech (self-talk) on students' translation quality. The aim of the study was to validate the adapted version of a self-verbalization questionnaire. The construct validity and reliability of the scale were supported by the CFA which revealed that all items reached the acceptable fit thresholds and had high reliability. The study utilized two phases of analysis. In the quantitative analysis, 151 undergraduate English translation students participated in this study. Two questionnaires including validated self-verbalization scale and self-regulation accompanying a text were distributed among the students to determine the influence of the self-regulatory role of private speech on translation quality. The results demonstrated that the students who used more private speech had a better translation quality that shows the self-guidance role of private speech. In the qualitative phase of the study, 21 English translation students attended an interview. The focus of the interview was on the potential functions of the self-regulatory role of private speech in translation. The results indicated that most students apply private speech as a facilitator of the difficult task. Retention and evaluation were also among the most often applied strategies by the students.

Keywords: Mixed-methods study; Private speech; Self-regulation; Translation quality

INTRODUCTION

There are many differences between students who have a better performance in the class and those who do not have a satisfactory performance. According to (Zimmerman, 1986), meta-cognitively, self-regulated learners are those who plan, organize, self-instruct, self-monitor, and self-evaluate at different phases during the process that learning takes place. Motivationally,

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self-regulated learners identify themselves as skilled, self-efficacious, and self-governing; behaviorally, self-regulated learners select, structure, and provide a situation that promotes learning. Analyzing self-regulation in many studies reveals that there is a strong relation between self-regulation and students' academic achievements as well as teachers' performance (Ghanizadeh & Ghonsooly, 2014; Ghanizadeh & Mirzaee, 2012; Ghonsooly & Ghanizadeh, 2013;

Nota, Soresi, & Zimmerman, 2004; Whipp & Chiarelli, 2004). In a study on learners, Zimmerman (1990)found out that the self-regulated learners approach an assignment with more self-confidenceand ingenuity. Moreover, self-regulated students often find a solution to their problems and can overcome difficult situations that they face during their study such as a poor study condition and a confusing teacher (Zimmerman, 1990).

Private speech (self-talk) history is traced back to the time of Vygotsky and Piaget. Vygotsky is the first psychologist who introduced private speech. Vygotsky (1986) indicates private speech or self-verbalization is a speech spoken to oneself for communication, self-guidance and self-regulation of behavior. In different studies, researchers use self-talk, self-verbalization, internal monologue and covert self-talk, and private speech alternatively. According to Vygotsky(1986), children utilize private speech to keep themselves away from distracting toys. In a similar vein, Winsler, Diaz, and Montero (1997) indicate that private speech assists children not to be influenced by their environment and aids them to self-control and monitor their behaviors.

Private speech is believed to enhance the developing early literacy skills and help to increase a child's task performance, success, and achievement(Vygotsky, 1986).Piaget (2005) used the term egocentric speech for private speech; he studied children in the classroom and made a record of children's speech with themselves. According to Piaget(2005), language allows people to transmit their ideas and thoughts to others and interact with them; however, there are those who are in the habit of talking to themselves and have an unreal listener, as well. When people talk to themselves which is a feature of a soliloquy, they do not talk to each other indeed; in other words, it does not serve social purposes but rather to strengthen as well as supplement their actions (Piaget, 2005).

Private speech is a good way to find out what goes on in translators' mind. Translation process research attempts to realize translators' performance, competence, expertise, and the cognitive process that addresses these factors(O'Brien & Saldanha, 2014). Translation process refers to everything that a translator applies to do the translation task such as using a dictionary, searching on the internet, seeking solutions, cognitive processes and utilizing problem-solving strategies that take place inside the mind of the translator(Hansen, 2003). Coping with all these activities requires high self-regulatory strategies. If a translator is capable of judging his translation as a whole, he enjoys a sense of effectiveness; a translator who is aware of his problems is capable of recognizing and finding a solution to the problem and evaluating provisional translation parts (Hansen, 2003).

Self-regulation

Self-regulation is the situation in which one observes, pays attention, preserves, and adapts his behavior to achieve the desired aims(Ilkowska & Engle, 2010). Self-regulation investigates the way students utilize the particular procedure to stimulate and lead their learning(Zimmerman, Bonner, & Kovach, 1996). The effect of self-regulation on behavior can be seen in students' performance. As Zimmerman (2002) indicates, "self-regulation is not a mental ability or an academic performance skill; rather it is the self- directive process by which learners transform their mental abilities into academic skill". Besides, self-regulated students are conscious of their strengths and weaknesses since they are directed by determining their goals and observing their behavior to find out how successful they are (Zimmerman, 2000). In other words, self-regulation investigates the ways students utilize the particular procedure to stimulate and lead their learning(Zimmerman et al., 1996).

Self-regulatory activities intermediate between personal and contextual features and actual achievement or performance; it is not external factors such as contextual setting and classroom environment or people's characteristics of the classroom setting that constitute achievement but also people's self-regulation of their cognition,

motivation, and behavior that intermediate the relationship between a person and a context and eventual achievement (Pintrich, 2000).

It is impossible to disregard the role of self-regulation in students' performance; it goes without saying that self-regulated students are completely different from other students. Self-regulated students have some different performances in the class. According to Zimmerman (1990), self-regulated learners are completely alert that whether they have some knowledge and ability or not; they are active which is exactly the opposite to their passive classmates and they try to be skillful in a piece of information. Moreover, whenever they face difficulties in their process of learning such as poor study conditions, confusing teachers, or abstruse textbooks they always find a solution for their problems (Zimmerman, 1990).

From the metacognitive point of view, Zimmerman (1986) indicates that self-regulated students are able to plan, organize, self-monitor, and self-evaluate themselves at different phases meanwhile learning happens; motivationally: they consider themselves capable, self-efficacious, as well as creative. Behaviorally they choose, organize and form environments that enhance their learning.

According to Pintrich (2000), there are some techniques that people apply to manipulate cognition. One of these strategies is manipulating self-efficacy through applying the self-talk. Regulation of behavior is a dimension of self-regulation that includes people's effort to manipulate their overt behavior. People can monitor their own behavior, observe it, and struggle to manipulate and regulate it and these efforts are regarded as a self-regulatoryrole for individuals (Pintrich, 2000). When students monitor the usefulness of a new method, they are not certain which components of the strategy resulted in a particular consequence; nevertheless, students gradually by wise self-monitoring through practice understand the different outcomes. According to(Zimmerman et al., 1996), self-monitoring of strategic outcomes is essential for self-regulation because it produces corrective cognitive, emo-

tional, and behavioral reactive effects, such as strategy improvements following unfavorable results.

Private speech
Vygotsky (1986) indicates that the produced speech in the early childhood is social and when the child reaches particular age, this social speech turns to two groups it becomes egocentric speech that it refers either to self-talk or speech for oneself and communicative speech that its purpose is to communicate with others.

As Feigenbaum (2009) mentions, private speech takes place simultaneously with the progress of community and public speech; individuals apply private speech when they encounter cognitive problems. According to Vygotsky(1986), private speech is a speech that people use to overcome the difficulty of their tasks and plays a self-regulatory role. As Fernyhough and Meins (2009) mention, there are three reasons for believing that there is a relation between the theory of mind and private speech; first, applying private speech in regulating the behavior needs realizing of "self" as a psychological factor whose performance is regulated through language; second, private speech assists individuals to differentiate themselves as a thinking mediator; third, private speech supplies a mechanism that enables a situation that interpersonal exchanges are internalized.

According to Pellegrini (1981), the primary form of self-regulation is regarded as private speech that is associated with actions; the other forms of self-regulation are that they take place before the action starts.

Additionally, private speech can play a vital role in future performances. As Vygotsky (1986) indicates, children utilize devices and symbols to regulate their behavior. So, it has some influences on their tasks that they apply it, and it is clear that they do this unconsciously. Vygotsky mentions that egocentric speech plays a crucial performance in the performing of human activities. As Flavell and Wong (2009)mention private speech means talking to ourselves which is applied to

explain any forms of speech, not the only one that addresses the particular person as an addressee; they indicate that speech serves two functions; first, social that aims at fulfil social purposes and private speech (self-talk) that has the self-regulatory role. Ohta(2001) indicates that private speech is different from other forms of speech that it is audible speech that does not address any other person.

From Piaget's(2005) point of view, as a child matures and becomes an adult, he gradually loses this monologue speech. However, Vygotsky (1986) casts doubt on Piaget's view and mentions that as soon as egocentrism in a child disappears it transfers to underground and resurface when individuals face complicated tasks.

Translation

If a translator is capable of judging translation components or his translation as a whole, he enjoys a sense of correctness. Translation monitoring occurs unconsciously which relates to skills, knowledge and translation competence of a translator. A translator monitoring skills refer to the translator capability to evaluate their translationas well as recognize and find a solution to the problem(Hansen, 2003).

In recent decades, theorists have attempted to find out what goes on in translators' mind while translating a text. The translation process includes all the things that take place from the time that a translator starts translating and working on the source language until he is done with the target language. In other words, the translation process refers to using a dictionary, searching on the internet, keystroke-logging, the solution and cognitive process that take place inside the mind of the translator(Hansen, 2003). Some common tools that are used to record the translation process can be such as think-aloud protocol and retrospective methods that apply a computer software such as translog that provides a situation for researchers to monitor all the things that a translator has done during the process of the translation (Hansen, 2003). Private speech can also be another element of the translation process that

affects students' translation quality. It takes place naturally without interrupting participants to report what they are doing.

Taken together, the above-mentioned studies and theories reveal that private speech and self-regulation play a significant role in education. Despite the bulk of research (Behrend, Rosengren, & Perlmutter, 1989; DiCamilla & Antón, 2004; Duncan & Cheyne, 2001; Vygotsky, 1986; Winsler, 2009)examining the relationship between self-regulation, private speech, and academic achievement, translation remains an unreached territory awaiting further research. So, the present study addressed this gap and investigated the effect of the self-regulatory role of private speech on students' translation quality. In other words, the present study attempted to find out the effect of students' self-regulation, and private speech on translation practice. Thus, the study comes up with the following research questions:

1. Does private speech enhance translation students' translation quality?
2. Do self-regulatory skills (monitoring & planning) enhance students' translation quality?
3. How might private speech enhance students' translation quality?

METHODS
Participants

The participants of the quantitative part of the study comprised of 151 B.A. English translation students from three universities in Mashhad, a city in the Northeast of Iran. The participants were selected according to convince sampling among undergraduate English translation students. Their age ranged from 20-22 years old.

Instruments
Self-regulation questionnaire

Self-regulation questionnaire designed by O'Neil Jr and Herl (1998)was employed for assessing the two regulatory components: planning and self-monitoring. The subscales of planning (9

items),self-monitoring (8 items), were scored on a4-point Likert rating scale varying from almost never/ to sometimes/ often, and almost always. The aim of using self-regulation questionnaire was to determine the relationship of self-regulatory role of private speech to translation quality. The reliability of planning and self-monitoring in this study was .65 and .71 respectively.

Self-verbalization questionnaire

The self-verbalization questionnaire was designed by Siegrist(1995). In this study, the researchers adapted the self-verbalization questionnaire's items based on translation to measure private speech. The self-verbalization scale includes 24 items arranged on a Likert scale ranging from strongly agree/ agree/ no idea/ disagree/ strongly disagree. All questionnaire items ask students difficulties or situations in which they encounter while translating a text that trigger them to use self-verbalization. In other words, the purpose was to find out what are the situations in which they generate private speech (self-verbalization).

NAATI Translation test

To meet another aim of the present study which was the relationship among variables such as self-regulation, private speech, and tarnation quality, a valid text was applied in this study. The applied text for students to translate was NAATI (see Appendix B)that stands for National Accreditation Authority for Translators and Interpreters; the text comprised of 250 words and students first translated the text and then filled in two questionnaires (self-regulation and self-verbalization).

Procedure

Data collection procedure started in October and December 2017. The study was conducted in three universities in Mashhad. The participants received a battery of two questionnaires including self-regulation, private speech and a text to translate. After providing participants with a brief explanation about the purpose of the study, participants translated the text and then complet-

ed the questionnaires. To collect accurate data, the aims of filling the questionnaires were explained and participants assured that their personal records would be confidential. Moreover, the questionnaires were coded numerically, and the participants provided demographic information such as gender, age, and educational level. To assess participants' translation ability, the researchers distributed a NAATI (National Accreditation Authority for Translators and Interpreters) sample text among students to translate. Two raters who got M.A. degree in English translation rated the texts translated by students based on the Waddington(2001)'s holistic Method C of translation quality assessment. The raters were completely familiar with the Waddington's model of translation assessment, and also both of them were English teachers. In other words, they had enough experience to rate texts.

As a result, raters provided the researchers with a total score of participants' translations. The reported scores later correlated with the participants' other scores in self-regulation and private speech. The inter-rater reliability between the two scores provided by the two raters was measured to be a =.84 which indicated high inter-rater reliability between the raters.

To analyze the quantitative data in this study, the responses that obtained from the questionnaires were tabulated and analyzed using statistical package for the social science (SPSS) 21 software. A structural equation modeling structural equation modeling(SEM) using LISREL 8.5 was applied to examine the cause-effect relationship among participants' self-regulation, private speech and their translation ability. The qualitative data was analyzed via MAXQDA software.

RESULTS

Quantitative phase

The first phase of the present study sought to substantiate the validity and reliability of the adapted version of private speech (self-verbalization). Private speech scale was designed by Siegrist (1995).In this study, the questionnaire

items were adapted according to the translation. Since it was used in this study and to make the result of the study valid and reliable, the reliability and validity of the questionnaire should be determined, as well. To do so, first, CFA using LISREL was used to determine the validity of the adapted questionnaire (self-verbalization). Then, the reliability of the adapted questionnaire was computed via SPSS.
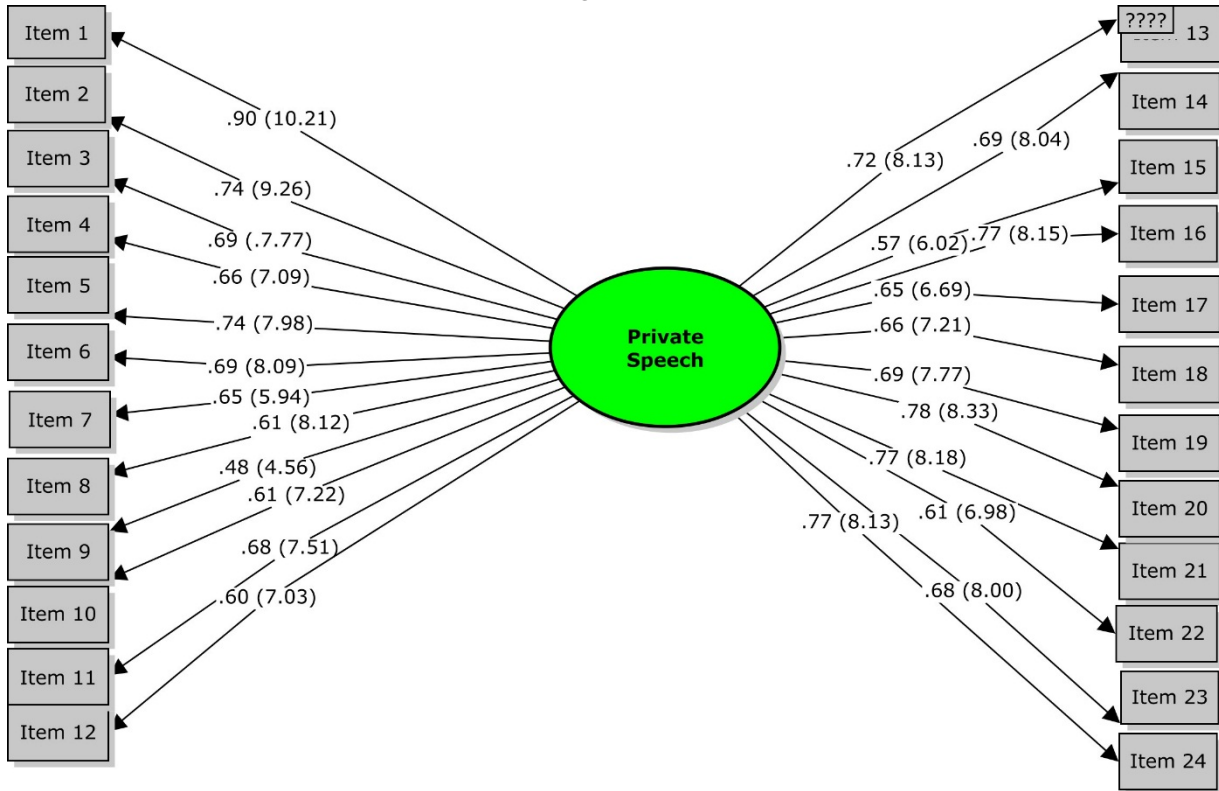
$\chi 2= 1120.31, df= 499, RMSEA= 0.063, CFI=0.90, GFI=0.90, NFI=0.90$

Figure 1. The schematic representation of the private speech scale

To ensure if each item had a good factor loading, t and β values were examined. The indices on the lines indicate the standardized estimates and t values, respectively. The first one is the standardized coefficient (β) demonstrating the factor loading of each item with respect to the corresponding factor which presents an easily grasped picture of the effect size. The closer the magnitude to 1.0, the greater the factor loading of the item and the higher the correlation is. Moreover, the magnitude of lower than 0.30 is an indication of weak factor loading in which the item must be revised or discarded. The second measure is the t-value (t) and if it is higher than 2, the results can be considered as statistically significant. As the Figure demonstrates, all items had accepted factor loadings. The Cronbach's alpha estimate for the private speech scale was found to be .89 which is very close to 1.00 and demonstrates the high reliability of the private speech questionnaire.

As Table 1 demonstrated we examined the relationship between private speech, self-regulation's subscales (self-monitoring and planning), and translation quality. Table 1 reveals, among the four variables of the study, private speech (M=81, SD= 15.92), and planning(M=23.25, SD=5.56) had the highest score respectively.

Table 1
Descriptive statistics of the variables of the study.

	N	Minimum	Maximum	Mean	Std. Deviation
Translation	151	.00	9.80	6.38	2.30
Private speech	151	10.00	120.00	81.29	15.92
Planning	151	11.00	70.00	23.25	5.56
Self-monitoring	151	10.00	32.00	22.94	4.42
Valid N (listwise)	151				

To examine the structural relations, the LISREL 8.50 statistical package was applied. As indicated by Figure 2, all indices reached the acceptable fit thresholds. Overall, it can be concluded that the proposed model had a good fit with the empirical data. A number of fit indices were examined to evaluate the model fit: the chi-square magnitude which should not be significant, the normed fit index (NFI), the comparative fit index (CFI) with the cut value greater than .90, the GFI (good fit index), and the root mean square error of approximation (RMSEA) of about. The structural model is presented in the following Figure 2.
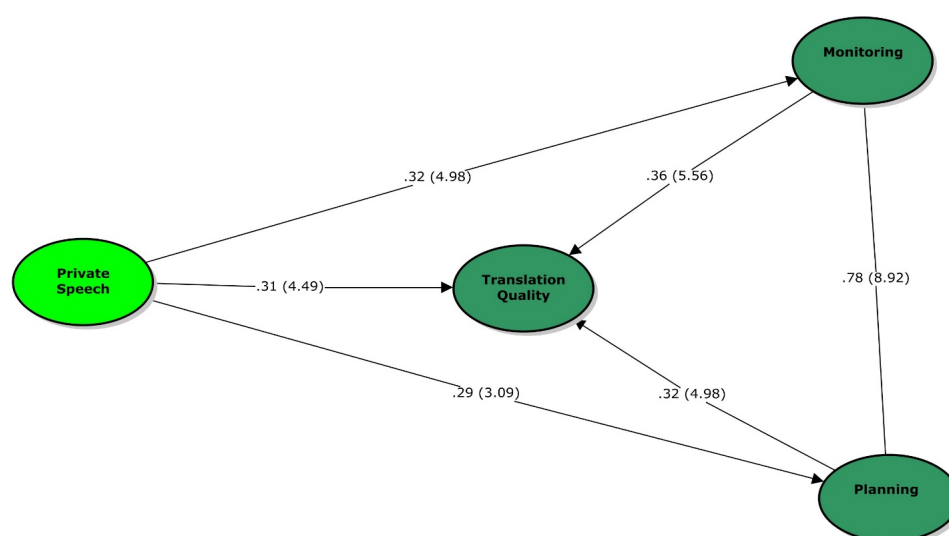
χ2= 21.97, df= 8, RMSEA=. 079, GFI=.90, CFI= 0.90
Figure 2. The schematic representation of the relationships among the variables in question

As indicated by Figure 2. all indices reached the acceptable fit thresholds. Overall, it can be concluded that the proposed model had a good fit with the empirical data.

As stated earlier, the indices on the lines indicate the standardized estimates and t values, respectively. As it is demonstrated, private speech had a positive influence on monitoring (β =.32, t=4.98), translation quality (β = .31, t=4.49), and planning (β =.29, t=3.09). Moreover, monitoring had an influence on translation quality (β= .36, t=5.56) and planning positively influenced translation quality (β=.32, t=4.98). The relationship between monitoring as well as planning is high (β=.78, t=8.92), as well.

The correlation coefficients among private speech, planning, self-monitoring, and translation are presented in Table 2. As can be seen, translation quality and self-monitoring display the highest correlation.

Since LISREL is not capable of estimating the relationship between variables, SPSS was applied to the data to compute the correlation among four constructs. As indicated in Table 2, the highest correlation was found between the computed results are as follows: (1) private speech and translation (r = 0.49, p < 0.05), (2) private speech and self-monitoring (r = 0.37, p < 0.05), and (3) private speech and planning (r = 0.26, p < 0.05) respectively.

Table 2

Correlation Coefficients among the Variables

	1	2	3	4
1.Private speech	1.00			
2.Planning	.26**	1.00		
3.Self-monitoring	.37**	.63**	1.00	
4.Translation	.49**	.35*	.56**	1.00

**. Correlation is significant at the 0.01 level (2-tailed)

QUALATATIVE

Participants

In the qualitative part of the study, 21 junior and senior English translation students attended an interview. The interviewees were both males and females in B.A. levels from Imam Reza International University. The focus of the interview was on the potential functions of private speech in translating a text at home or at the university. Data collected on December 2017, informed the most often applied strategies by the students.

Instruments

For the qualitative part of the study, 8 questions were designed (see Appendix A). The Questions were such as "Do you verbalize your thought when you look up the words in a dictionary or search it on the internet?". The purpose of the interview was to determine the effect of the self-regulatory role of private speech in students' translation quality. In other words, we wanted to find out the most often applied techniques by students while translating a text through self-verbalization (private speech). The interview conducted in an appropriate room without any disturbance for the interviewees.

Procedure

For the first step, we transcribed the interviewees' responses, imported them into MAXQDA, and then coded the data to draw a visual map. Before conducting the interview, we explained the definition of private speech to the interviewees to make sure that they are all familiar with the constructs and concepts. The semi-structured interview initiated with 8 questions and each interview continued for about 20 minutes. The interviewees' responses were transcribed and then imported into the MAXQDA. The purpose was to extract the sub codes for each main code from the participants' responses.

As Figure 3 demonstrates, PS that stands for private speech is in the center of the figure and the three sub codes such as self-efficacy, self-regulation, and rehearsal are linked to the private speech which is the main code. Rehearsal refers to repeating a word or phrase to remember it. Vygotsky(1986) states rehearsal is a situation in which a child repeats a story to himself to remember it. Self-efficacy refers to expressing aims, opinions, feelings, and self-thoughts through private speech(Vygotsky, 1986). As Figure 3 demonstrates each of the mentioned three sub codes is also connected to their smallest sub-codes as well.
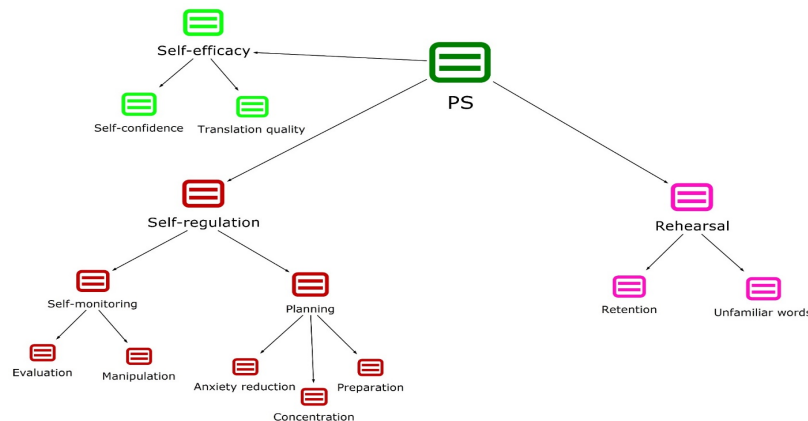
Figure 3. The conceptual map representing the private speech categorization (generated by MAXQDA)

Table 3 demonstrates the frequency of the mentioned sub-codes that exported from MAXQDA. After classifying them based on the main codes, and extracting them, we came up with the most common mentioned sub-codes by the interviewees. Table 3 demonstrates the frequency of the most commonly applied strategy mentioned by the participants while translating a text. The self-regulation's code segment is 0 because it has two sub-codes such as self-monitoring and planning. Since Interviewees in their responses did not directly talk about the self-regulation itself but they said: "self-verbalization helps me to get prepared before I want to read out loud my translation in the class". The mentioned response classified as the category of the sub code preparation which is one of the sub-categories of planning and self-regulation respectively. Table 3 demonstrates that the code segment for preparation is 13, which means it was mentioned 13 times by 21 English translation students in the interview. Nobody mentioned the main codes, researchers themselves extracted the sub codes from the transcribed responses and classified them based on the sub codes of the three main codes. As mentioned before in Table 3 PS stands for private speech.

Table 3
The Frequency of Codes and Sub-codes

Code-ID	Position	Parent code	Code	All code segments
1	1		PS	0
2	8	PS	Self-regulation	0
3	5	PS	Self-efficacy	0
4	2	PS	Rehearsal	0
5	4	PS/ Rehearsal	Retention	36
6	3	PS/Rehearsal	Unfamiliar words	14
7	7	PS/Self-efficacy	Self-confidence	7
9	6	PS/ Self-efficacy	Translation quality	32
10	13	PS/Self-regulation	Self-monitoring	0
11	9	PS/ Self-regulation	Planning	0
12	12	PS/Self-regulation	Preparation	13
13	11	PS/ Self-regulation	Concentration	19
14	10	PS/ Self-regulation	Anxiety reduction	8
15	15	PS/ Self-regulation	Evaluation	33
16	14	PS/ Self-regulation	Manipulation	20

Table 4 demonstrates the overall computed number of the sub-codes of each main code as well. As Table 4demonstrates, the total score of self-regulation's, self-efficacy, and rehearsal sub codes is 92, 39,and 50 respectively. So, from the mentioned results, it revealed that self-regulation's sub codes were the most effective and influential function of private speech. As (Vygotsky, 1986) indicates, private speech is the speech that people apply to cope with the difficulty of their tasks and plays a self-regulatory role.

Table 4
Overall Estimation of Sub-codes

	Overall number
SR sub-codes	92
Rehearsal sub-codes	50
SE sub-codes	39

DISCUSSION

The primary aim of the present study was to validate the adapted version of the self-verbalization scale among 151 Iranian English students. The adapted self-verbalization questionnaire in this study measured the utilization of private speech and its relation to students' translation quality

while facing difficulties in the process of translating a text. To do so, the scale items were changed based on the translation. The questionnaire asks about the problems students encounter during the translation process which stimulates students to generate private speech. The 24 questionnaire items of self-verbalization were changed based on translation and distributed among 151 Iranian English translation students. The results of CFA revealed that the scale had good model fit with the empirical data and the reliability was also found to be (0.89) that demonstrated the high reliability of the questionnaire. In other words, the adapted version of translation had acceptable reliability and validity indices.

The second purpose of the study was to utilize the validated version of the self-verbalization scale to find out the correlation between the scores of generating private speech and translation quality among 151 English translation students. Students first translated the text and then filled in the self-verbalization questionnaire to see in which situation they generated private speech while they were translating a text. As aforementioned results revealed, there is a positive and significant correlation ($r = 0.49$, $p < 0.05$) between generating private speech and translation quality. In other words, the results of the correlation between private speech questionnaire and translation quality revealed that students who generated private speech during translating a text had a better performance on their task. Private speech (self-verbalization) helps students to repeat the words to themselves to remember them later; it is similar to what Vygotsky (1986) mentions that children do while repeating a story to themselves to remember it. In a similar vein, (Feigenbaum, 2009)mentions individuals apply private speech when they encounter cognitive problems; it demonstrates that there is a relation between task difficulty and generating private speech.

In a study conducted by DiCamilla and Antón (2004), attempted to find out the effect of private speech on participants' cognitive operations such as focusing attention, and the creation of psycho-

logical distance. In their study 14 dyads, university students were audio recorded while they were cooperating with each other to write a composition without referring to dictionaries or other materials. They tried to determine the role of private speech in a cooperative setting. In their observation, they found out the students who asked themselves questions, responded to their own questions, gave comments on their own knowledge and repeated the sentences to themselves had a better performance. They came to the conclusion that private speech helped the participants to have a better concentration on their tasks and keep themselves away from the problems they encountered when they handled a task.

The second aim of the study was to find out whether self-regulatory skills (monitoring & planning) enhance students' translation quality or not. To provide an answer to this question the correlation analysis was run. The computed results revealed that there is a relationship among private speech, self-monitoring ($r = 0.37$, $p < 0.05$), and planning ($r = 0.26$, $p < 0.05$) respectively. It implies private speech helps students manipulate their task better and have a higher control over their difficulties in translation. In other words, English translation students who got a better score in translation enjoyed the higher self-regulatory role of private speech to handle a task. On the other hand, the self-regulatory role of private speech contributes to better translation quality. (Vygotsky, 1986)believes that there is a strong relationship between behavioral self-regulation and private speech; he mentions private speech is the speech that people use to overcome the difficulty of their tasks and plays a self-regulatory role. Children generate more private speech when the task is complicated, and they are doing it on their own without the aid of a teacher or parents(Vygotsky, 1986). As (Winsler, 2009)indicates private speech is used for intrapersonal communication and has a self-guidance role that results in a better performance. Besides, Schunk and Zimmerman (2007)mention self-monitoring can be like a situation in which students simultaneously evaluate their task to see

whether it includes the main points or not; it assists them to evaluate the task to see whether it handles at the particular time or not. According to the prior mentioned correlation in this study, it can be said private speech through its self-regulatory role helps students to defeat the difficulties of their tasks. As (Sokolov, 1972) indicates when the task is more complicated, private speech gets more structured, and ones try to evaluate and manipulate the task. The findings of the present study are corresponding with the findings of the study conducted by Fernyhough and Fradley (2005), in which they investigated the relationship between the self-regulatory role of private speech with the task difficulty. They asked 46 children to complete four trials of the tower of London task. After analyzing the data, they found that there is a relation between the occurrence of private speech and task difficulty.

The qualitative phase of the study attempted to provide the answer to the question of how might private speech enhance students' translation quality?. So, the researchers conducted an interview with 21 undergraduate English translation students. The results via interview revealed that most students generate private speech while handling a complicated task. On the other hand, most students indicated that they generate private speech to assist them to overcome the difficulty of their task. The frequency of code segments in Table 3 revealed, the most useful aspect of private speech for students was retention (36%) and evaluation (33%) respectively. Most students mentioned, they repeat the words to themselves while looking them up in a dictionary that shows retention has an influential role on their task. The analyzing of the data demonstrates retention assists them to keep the words in their mind meanwhile verbalizing them. As (Vygotsky, 1986) states private speech is applied as a repetitive strategy to boost working memory through retaining the information to be remembered later; he refers to the rehearsal role of private speech in a way that children use to repeat the story to themselves. Students also indicated that it assists them to manipulate the task better and have a

satisfactory concentration. In other words, private speech has a guidance role in their process of translating difficult parts of a text. Students also believed that private speech helps them to have a better manipulation over their task. They indicated that when they apply private speech, it helps them to hear their voice simultaneously which assists them to evaluate their task better. Most students mentioned they self-verbalize their translation to evaluate their task and make a judgment on their translation quality. They mentioned in translation courses they utilize private speech to get prepared before reading out loud their translation in the class for others. In a similar vein, Ohta (2001)mentions students who are silent in the class, in fact, they are not silent, but they are engaged in an intrapersonal interactive process. Moreover, the findings of the qualitative phase of the study are in line with the findings of the (Duncan & Cheyne, 2001); they conducted the study to find out the relationship between private speech and different kinds of tasks (easy and difficult) that 51 university students worked on them. After analyzing the data, they found that students generated private speech more frequent on the difficult computer tasks than the easy ones and applying private speech played a self-regulatory role for them.

CONCLUSION

The results of this study revealed that there is a relationship among private speech, self-regulation, and translation quality. Findings demonstrated that private speech and self-regulation components (self-monitoring - planning) were among the most commonly applied strategies by the translators. Students who enjoyed the self-regulatory role of private speech had a better performance. In other words, for students, private speech has a positive impact on translation quality and facilities difficult tasks. Likewise, the findings of the interview revealed that students who applied private speech to overcome the complicated parts of translation text were more successful than the others. Since private speech helped them to overcome their stress

and most of them mentioned that it helped them to boost the quality of their translations. It can be concluded that the self-regulatory role of private speech enhances students' tarnation quality that can broaden our understanding of some behavioral factors. Another yield conclusion of the present study is the result of the SEM analysis that demonstrated the validity of the adapted self-verbalization scale in this study.

The present study was limited in a number of ways. First, because of the limited access to other universities of Iran, the study only conducted in three universities of Mashhad. Moreover, the participants were selected according to the convenience sampling as far as feasibility. Beside, Other qualitative approaches such as case study, and the use of video recorder to record what students do while translating text in the real situation can be utilized. Furthermore, in this study, only English translation students participated while other studies can be conducted by participating professional translators and interpreters. Moreover, another study can investigate the relation of private speech by using other software such as translog and eye-trackers to have some more evidence by replicating the study. Another study can be conducted to evaluate the effect of applying private speech to the speed of coping with tasks.

The findings and results of the study have several implications. The findings can be constructive for all English translation students and translators who work in English translation institutes; it can be useful to find out what strategies can promote the quality of their translation, as well. Other researchers can apply the validated questionnaire in this study to evaluate students' translation quality with literary or technical texts.

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Appendix A

Interview Questions

1.	When you are in a translation workshop class and a professor asks a question from one of the students in the class while he did not ask you to read your translation out loud for the class; but do you verbalize your thought as well as translation with yourself? Why?
2.	Do you think it will help you to have a better concentration on your task?
3.	How does self-verbalization help you, do you evaluate yourself? and does it have any influence or impact on your translation quality?
4.	When do you usually use more self-verbalization? for a complicated task or unfamiliar words or easy tasks?
5.	Do you apply self-verbalization in your final exam or for translation assignments at home while you are translating a text?
6.	Does it help you to reduce your exam stress or overcome it?
7.	Do you verbalize your thought when you are looking up the words in a dictionary or on the internet?
8.	Does it help you to remember your learned materials?

Appendix B

Please translate the following text:

Future Health Options

The hospital systems in most States are facing another series of crises. We as a community should take notice of our predicament and urge our political leaders to re-examine the situation, to plan and to act.

Commonwealth and State governments do not have the resources to expand the health budget in line with community expectations, which are building up rapidly.

For example, the aging of our population alone is nearly doubling the cost of health care. When this is combined with increases in expensive diseases related to affluence, such as high blood pressure, heart disease and cancer, and diseases often related to the consumption of too much food, alcohol and tobacco, combined with mainly sedentary occupations, we have a problem of massive proportions.

It is a community problem, not one simply for politicians, economists, and doctors. It also involves important moral dimensions, and therefore it is a difficult problem.

Economic necessity is about to force us to make some very difficult moral decisions. We have recently demanded of our politicians that they reduce our tax burden at a time when we are also asking them to improve the health service. Therefore, particularly intractable choices must be made about whom we should treat, for what, and how.

The diseases of the aged are very expensive, requiring complex treatments over a long time is costly hospitals and nursing homes. AIDS is a disease expensive to treat and is predicted to cost roughly $10,000 per patient per year.