Retrospective and Introspective Think-Aloud Protocols in Translation Quality Assessment: A Qual-Quan Mixed Methods Research

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Abstract

A major concern in Translation Studies (TS) has been on what really goes on in the translators' head while they are translating (not what researchers claim is going on). Among the techniques utilized in studying such cognitive processes and systems, think-aloud protocols (TAPs) have been widely employed. As a content analysis study, this Qual-Quan mixed methods research aimed at exploring the comparative differences introspective and retrospective TAPs can cause in English-to-Persian translation quality. The selected participants were 15 MA students studying TS at Islamic Azad University, Karaj Branch. The participants were required to translate two English texts into Persian, one introspectively and the other retrospectively, while the participants' voices were audio-recorded and fully transcribed later. Relying on a recent translation quality assessment scale (Famil Khalili, 2011), the frequency distribution for the 14 encoded themes proved that the participants performed differently in introspection and retrospection TAP phases. In fact, while the themes coherence and grammaticality had the highest frequency counts in the retrospection phase, dialogical register, linguistic functions and speech acts had a considerable improvement in the introspection phase.

Keywords: Assessment; Introspection; Quality; Retrospection; Translation; Verbal protocol

INTRODUCTION

As a longstanding line of research, translation criticism and error analysis are by nature product- and not process-oriented. When comparing the target to the source content or looking at the committed translation errors, one may at best

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hypothesize what has happened in the mind of the translator during the translation process. In cases of interference, such assumptions may have had a high degree of possibility, but other kinds of recognition are difficult to reach. For instance, through examination of translation errors, one might speculate that a translator's foreign language competence is not adequate but when talking to him, one may discover that he

has problems expressing himself in his mother tongue, too. Consequently, some means are required to figure out what is going on in the translator's mind as a means to reach a glimpse into his black box.

As O'Brien (2013) pointed out, the research on translation process has intensely borrowed from a number of disciplines such as linguistics, psychology, cognitive science, neuroscience, reading and writing research and language technology. The impact of these disciplines and their specific research directions and strategies on translation researchers is something of a one-way affair, but given time, a reciprocal interdisciplinary relationship may emerge, so that translation studies would be not only a borrower but also a lender. A number of attempts have been made at probing into the translator's mind. One of them is to directly ask a translator himself to think aloud and open up his mental processes while or after a translation task. Theoretically, think aloud protocol (TAP) is a method in which the physical and cognitive processes in a translator's mind are examined (Ericsson, 1993). As it was suggested, TAP methodology takes four major considerations (Corlett, 1995):

> (1) The position of verbal protocols as evidence, their validity as data, and the kind of data to be obtained,
> (2) Techniques or practical aspects of gathering data and making task situation,
> (3) Analyzing or extracting the legitimate and helpful information from the verbal protocol data, and finally, and
> (4) Tools or different hardware and software to perform TAP analysis

TAP is not however an easy, fast-forward method of gathering and analyzing data. Viewing translation performance as a problem-solving process, translation studies scholars believe that it should be possible to study such a demanding cognitive process by means of TAP. On the other hand, due to some doubts, applicability and possible consequences of TAP in TS,

adopting a multimethod approach to provide data on translators' hidden mental states while carrying out the task has its own advocates, preferences and impediments. For instance, Williams (2004) set out one of such approaches to translation quality assessment as an amalgam of content analysis and argumentation theory. Williams characterized argumentation as a discourse which has two categories: (1) argument macrostructure and (2) rhetorical topology with five subcategories of organizational schemas, conjunctives, types of argument, figures and narrative strategy. In this approach, the original text is initially examined with reference to its argument schema. Next, the translation is examined in order to evaluate its overall arrangement. Thirdly, a comparative assessment is conducted with reference to the five rhetorical subcategories, and finally, an overall argumentation-centered translation assessment is done (Williams, 2004).

As it was reported, a comparatively large TAP study was done in which 48 German EFL learners translated English texts into German while thinking aloud introspectively. After analyzing the transcripts, as a side-effect of TAP, the EFL learners' capacity for problem-solving seemed to increase, suggesting that TAP might also have important pedagogical applications to improving the quality of translation (Lörscher, 1991). To bridge the gap in ST literature, the current researchers conducted a comparative qualitative study of introspective and retrospective TAP to explore the possible difference they make in Iranian translators' translation quality. To serve the objective of the research, the following descriptive/qualitative questions were raised:

- To what extent does the retrospective TAP make any difference in Iranian translators' English to Persian translation quality?
- To what extent does the introspective TAP make any difference in Iranian translators' English to Persian translation quality?

METHODS

Participants

In this research, the participants were a sample of 15 Iranian MA students majoring English translation (70%) and English literature (30%) at Islamic Azad University, Karaj Branch who were non-randomly selected to serve the objec-tives of the study. The researchers' expected qualifications for the participants were academic experience with Persian-to-English translation. Table 1 reports on their demographic informa-tion. For ethical preservations, the participants remained anonymous in this study.

Table 1.
The participants' Demographic Information

Participant	Gender	Degree	Educational Background	Age (Year)
AL	Female	MA student	English Literature	43
DP	Male	MA student	English Translation	27
EM	Female	MA student	English Literature	38
KE	Female	MA student	English Literature	29
MB	Female	MA student	English Translation	26
MJ	Male	MA student	English Literature	25
NE	Male	MA student	English Translation	36
NS	Female	MA student	English Translation	26
RH	Female	MA student	English Translation	26
SM	Female	MA student	English Translation	26
SB	Female	MA student	English Literature	36
SO	Male	MA student	English Translation	34
SA	Female	MA student	English Translation	49
ZA	Female	MA student	English Translation	28
MZ	Male	MA student	English Translation	35

As Table 1 displays, the age range of the par-ticipants was 25 to 49 years old. They were re-quired to translate two selected English texts of 120-125 words to Persian, while thinking aloud introspectively in one of the tasks and retrospec-tively in the other. The texts were selected from *Pride and Prejudice* (Austen, 1775) and *the Gift of the Magi* (Henry, 1862), with the Flesch Reading Ease Score of 87.8 which designated the passages as easy to read.

MATERIALS

In this Qual-Quan mixed methods research, Fa-mil Khalili's (2011) translation quality assess-ment (TQA) scale was used as the rating scale for both introspective and retrospective phases. The scale originally consists of eleven criteria: linguistic features, genre, speech acts, adequate lexical choices, proper choice of register, gram-matically well-formed sentences author`s personal view point, culturally appropriate language, cohe-rence, stance and proper choice of cohesive devic-es. In this study, however, the researchers initially encoded the occurrence of these TQA criteria in the participants' translation performance and later inserted them into NVivo 10 for further content analysis.

Retrospective and Introspective TAP

By definition, in the introspective TAP, a con-current verbalization of thought and task per-formance takes place, while in retrospective TAP, a post hoc verbalization is stimulated (Ericsson, 1993).The participants, therefore, were coached thoroughly and required once to think aloud whatever came to their mind while they were translating a text and, and once to think aloud after performing on the translation

task. The time lapse between two phases of introspection and retrospection was 8 weeks. Both their TAP performances were recorded. Later, the transcripts were encoded following the criteria in Famil Khalili's (2011) TQA scale. Finally, the content analysis of the translated texts was done by means of NVivo 10.

RESULTS AND DISCUSSION

The participants' recorded verbal protocols were segmented, encoded, and analyzed according to the 11 descriptors in Famil Khalili's TQA scale, by the researchers. After content analysis of the translated passages, 14 themes were explored. Later, the researchers made use of NVivo 10 to measure up the frequency distribution of these themes in the introspective and retrospective TAP phases, separately. Table 2 displays the relative occurrences of the 14 themes in Retrospection Phase

Retrospective Phase

Table 2 displays the relative occurrences of the 14 themes in the Retrospection Phase. In Table 2, the frequency distribution of the 14 criteria in Famil Khalili's (2011) TQA scale which have been encoded are illustrated in the participants' translations as following:

Lexical Choices. They refer to the choice of appropriate equivalences in the translated text were distributed in MJ's translation with the frequency of (f=8.64%) in retrospection. For example in translating the following text:

Elizabeth listened in silence. She was not convinced. `Jane is so kind!` she thought. `Always ready to see the good side of people`s characters! I considered Mr. Bingley`s sisters too proud, almost rude, in fact. I`m sure they feel superior to most other people, like Mr. Darcy`. But she did not say any more.

الیزابت در سکوت گوش فراداد . قانع نشده بود . باخودش فکرکرد جین خیلی مهربان است . همیشه روی خوب شخصیت مردم را میبیند . من خواهران آقای بینگلی را خیلی مغرور و تقریبا بی ادب فرض میکردم . مطمعن هستم که آنها خود شان را بالاتر از بیشتر مردم مثل آقای دارسی میدانند، بیش از این دیگری چیزی نگفت.

On the other hand, in NS's translation the frequency of appropriate words was (f=3.93%).

الیزابت در سکوت گوش کرد. او متقاعد نشده بود. با خود فکرکرد که جین خیلی‌مهربانه] [Side اینجا میتونه وجه ی آدما باشه ولی ترجیح دادم نگم   ]همیشه برای دیدن روی خوب شخصیت های افراد آماده است‌متوجه شدم که خواهر آقای بینگلی در واقع بسیار مغرور و در واقع بی ادب است. مطمعنم که آنها مثل آقای دارسی نسبت به اکثر مردم حس برتری دارند   .

Table 2.
The Frequency Distribution of the 14 Encoded Themes in Retrospective Phase (in percent)

Participants	Lexical Choices	Coherence	Cultural Appropriacy	Dialogical Register	Genre	Grammaticality	Linguistic Functions	Method of Translation	Full Translation	Personal View Point	Speech Act	Stance	Textual Register	Cohesion Organization
AL	4.03	61.37	1.18	3.55	0	14.22	6.87	1.66	0	0	3.55	1.42	0.24	1.90
DP	5.44	66.32	0.84	1.46	0	11.72	4.81	1.88	0.84	0	1.46	2.72	0.21	1.46
EM	6.27	48.43	1.74	2.09	0	21.60	5.92	3.48	1.05	0	2.09	3.83	0.35	2.79
KE	5.28	48.28	1.06	3.96	1.58	15.83	5.28	1.58	1.32	0	3.96	3.17	0.26	3.17
MB	4.41	56.15	1.16	3.94	0	16.47	4.64	2.78	0.46	0	3.94	2.55	0.23	1.62
MJ	8.64	41.2	1	4.98	1	28.90	2.99	0	0.33	0	3.99	3.65	0.33	2.99
MZ	7.39	57.64	0.99	3.2	0	17.73	2.96	0	0	0	3.2	2.22	0.25	3.20
NE	6.79	57.44	1.31	2.35	0	20.37	2.09	0.78	0	0.26	2.35	3.13	0.26	2.87
NS	3.93	70.53	0.79	2.75	0	10.81	1.96	0.79	0.39	0	2.75	2.36	0.20	1.96
RH	4.25	65.18	0.61	2.83	0.81	14.98	1.62	0.81	0.4	0.81	2.83	1.62	0.20	2.23
SA	5.48	47.67	14.25	3.56	0	14.52	3.01	1.1	0.27	0	3.56	2.47	0.27	2.74
SB	4.88	63.67	0.78	3.32	0	18.16	1.56	0	0	0	3.32	2.34	0.20	1.56
SM	4.17	69.13	0.95	2.84	0	11.36	1.14	2.46	0.19	0	2.84	1.89	0.19	2.46
SO	6.79	51.09	1.36	2.17	0	27.17	1.90	0	0.82	0	2.17	2.45	0.54	3.53
ZA	4.58	68.13	0.88	1.76	2.11	11.80	1.58	0.88	0	2.11	1.76	2.11	0.18	1.58

Coherence. NS with the frequency of (f=70.53%) paid enough attention to the rhetorical aspects of the translation in the following text:

Elizabeth listened in silence. She was not convinced. `Jane is so kind!` she thought. `Always ready to see the good side of people`s characters! I considered Mr. Bingley`s sisters too proud, almost rude, in fact. I`m sure they feel superior to most other people, like Mr. Darcy.` But she did not say any more.

الیزابت در سکوت گوش کرد   او متقاعد نشده بود. [این متقاعد رو من واسه این انتخاب کردم چون قرار نبود کسیو قانع کنه،برای همین از قانع کردن استفاده نکردم، خودش تو دل خودش متقاعد نشده بود]. او فکر کرد جین بسیار مهربانه، همیشه روی مثبت شخصیت مردم رو میبینه   .ready] رو حذف کردم احساس کردم چون زیاد جالب نیس، احساس کردم قشنگ نیس که بگم همیشه آمادس ، فکر کردم میگه همیشه مدل شخصیتش اینجوریه که تا به کسیو میبینه بعد مثبتشو میبینه منفی هاشو نمیبینه، بخاطر همین ready رو حذف کردم]. من متوجه شدم خواهر آقای بینگلی بسیار   مغرور و اکثر اوغات گستاخه .[چون جلوتر هم که میخونیم می فهمیم داره از منفی هاش صحبت میکنه برای همین برای proud مغرور میگم،معادل های مثبت دیگش درست نیس].

On the other hand, in MJ's translation, Coherence with the frequency of (f= 41.2%) was the **Cultural Appropriacy.** SA with the frequency of (f=14.25%) puts the highest emphasis among other participants on the cultural aspects of the text, to translate the following text:

Charlotte was a sensible, intelligent young woman of twenty-seven, the eldest daughter of Sir William and Lady Lucas, who were neighbors of the Bennet family.

شارلوت زن جوان 27ساله ی عاقل و باهوشی بود . او دختر سر ویلیام و بانو لوکاس از همسایگان خانواده بنت بود.

On the other hand, RH with the frequency count of (f=0.61%) used the least number of culture-bound words and translated the same passage as:

دختر بزرگ آقای ویلیام و خانوم لوکاس که قبلا همسایه ی آقای بنت بودند .

On the other hand, DP with the frequency count of (f=1.46) employed dialogical register less than all other participants and translated the text like this:

بنظرمن خواهر آقای بینگلی خیلی مغر ور یا حتی بی ادب است .مطمعنم آنها مثل آقای دارسی با دیگران مغرورانه برخورد میکنند . الیزابت چیزی نگفت.

least frequent in this category in translating the same sentence as following:

الیزابت در سکوت محض گوش می داد   [یعنی سکوت کرده بود و فقط داشت گوش می داد].او متقاعد نشده بود . به عقیده ی او جین بیش از حد مهربان است و همیشه در مورد شخصیت همه ی پر لقوان را دنین اینجا domesticate شده .[به گمان من خواهر آقای بینگلی بسیار مغرور و البته بی ادب است.]

Dialogical Register (Tenor). MJ with the frequency count of (f=4.98%) was the most frequent user of the dialogical register in his translation, and translated the following passage:

I considered Mr. Bingley`s sisters too proud, almost rude, in fact. I`m sure they feel superior to most other people, like Mr. Darcy. But she did not say any more.

من خواهران آقای بینگلی را خیلی مغرور و تقریبا بی ادب فرض میکردم مطمعن هستم که آنها خودشان را بالاتر از بیشتر مردم مثل آقای دارسی میدانند، بیش از این چیز دیگری نگفت .

Genre. Genre is commonly known as the use of figurative language in the translated text. ZA with the frequency of (f=2.11%) paid enough attention to the genre-based language and translated the following text:

`Jane is so kind!` she thought. `Always ready to see the good side of people`s characters!

[این داستان غرور و تعصب توی زمان انگلستان عصر ویکتوریا میگذره، بخاطرهمین داستانش یکم ادبیات سنگینی داره نسبت به داستان دیگه چون ژانرمتن ادبیه باید همونجوری هم ادبی ترجمه بشه]. الیزابت در سکوت گوش فراداد . قانع نشده بود .باخودش فکرکرد جین خیلی مهربان است . همیشه روی خوب شخصیت مردم را میبیند.

On the other hand, MB with the frequency count of (f=0%) hardly used any genre-specific words in translating the text.

الیزابت در سکوت گوش میکرد، قانع نشده بود [she که به معنی او بود رو حذف کردم   ].ف کر کرد که جین خیلی مهربونه،همیشه آمادست تا روی خوب شخصیت آدم هارو ببینه [کلمه به کلمه معنی کردم].

Grammaticality. MJ with the frequency count of (f=28.90%) had the most grammatical language in his translation of the following text:

Elizabeth listened in silence. She was not convinced. `Jane is so kind!` she thought. `Always ready to see the good side of people`s characters! I considered Mr. Bingley`s sisters too proud, almost rude, in fact. I`m sure they feel superior to most other people, like Mr. Darcy.` But she did not say any more.

الیزابت درسکوت کامل گوش فراداد . قانع نشده بود . با خودش فکرکرد جین خیلی مهربان است و همیشه روی خو ب شخصیت مردم را میبیند من خواهران آقای بینگلی را خیلی مغرور و تقریبا بی ادب فرض میکردم . مطمئن هستم که آنها خودشان را بالاتر از بیشتر مردم مثل آقای دارسی میدانند، بیش از این چیز دیگری نگفت.

On the other hand, NS with the frequency count of (f=10.81%) had the most ungrammatical translation of the passage:

الیزابت در سکوت گوش کرد او خودش تو دل خودش متقاعد نشده بود [این متقاعد رو من واسه این انتخاب کردم چون قرار نبود کسی را قانع کنه، برای همین از قانع کردن استفاده نکردم]. او فکر کرد جین بسیار مهربانه، همیشه روی مثبت شخصیت مردم رو میبینه . [ready رو حذف کردم احساس کردم زیاد جالب نیس،احساس کردم قشنگ نیس که بگم همیشه آمادس ، فکر کردم میگه همیشه مدل شخصیتش اینجوریه که تا یه کسی رو میبینه بعد مثبتشو میبینه منفی هاشو نمیبینه، بخاطر همین ready رو حذف کردم]. من متوجه شدم خواهر آقای بینگلی بسیار مغرور و اکثر اوغات گستاخه . [چون جلوتر هم که میخونیم می فهمیم داره از منفی هاش صحبت میکنه برای همین برای proud مغرور میگم، معادل های مثبت دیگش درست نیس]. مطمئنم که آنها حس برتری نسبت به بیشتر مردم دارند مثل آقای دارسی . [مثل آقای دارسی رو میخواستم بیارم اول جمله ولی فکرکنم شاید نویسنده منظوری داشته که آخر جمله اورده سعی کردم طیق ساختار جمله ترجمه کنم]، اما اون چیز بیشتری نداشت.

Linguistic Functions. They refer to the actions caused by language use. AL with the frequency count of (f=6.87%) used the most appropriate linguistic functions while translating the following passage as:

I`m sure they feel superior to most other people, like Mr. Darcy.` But she did not say any more. Elizabeth knew that her sister was close to falling in love with him.

مطمئنم خودشان رو از همه بالاتر میدانند درست مثل آقای دارسی (یا) درست مثل آقای دارسی آنها هم خودشان را ازهمه بالاتر میدانند. almost] رو باید حذفش کرد یا بگیم تقریبا یا

خیلی آقای دارسی هم میتونست بیاد اول یا آخر جمله]،اما چیز بیشتری نگفت . الیزابت می دانست که خواهرش به زودی عاشق آقای بینگلی میشود . close to] یعنی داره این اتفاق میافته،نزدیکه که این اتفاق بیافته]

On the other hand, SB with the frequency count of (f=1.56%) used the least number of linguistic functions in the translation of the similar text:

متوجه شدم که خواهرآقای بینگلی در واقع بسیار مغرور و در واقع بی ادب است . الیزابت میدانست که خواهرش در شرف عشق است.

Methods of Translation are the occasion that the translator mentions his strategy of translation. EM with the most frequent frequency of translation strategy awareness (f=3.48%), translated the following text:

Elizabeth listened in silence. She was not convinced. `Jane is so kind!` she thought. Always ready to see the good side of people`s characters!

[یه دورکل متن روخوندم بعد جمله جمله ترجمه کردم] ،[جمله ی اول ودوم رو با هم گفتم]. الیزابت درسکوت گوش میکرد ولی قانع نشده بود . فکرمیکرد که جین خیلی مهربونه . [good side رو گفتم نکات مثبت] همیشه نکات مثبت شخصیت آدمها رو میید.

On the other hand, MZ with zero frequency (f=0%) did not mention her method of translation at all while translation the same passage.

الیزابت در سکوت محض گوش میداد [یعنی سکوت کرده بود و فقط داشت گوش میداد]. او متقاعد نشده بود . به عقیده ی او جین بیش از حد مهربان است و همیشه در مورد شخصیت افراد نیمه ی پرلیوان را میبیند.

Full Translation is the translator's commitment to translate the whole passage with no missing parts. KE with the frequency count of (f=1.32%) had the largest amount of full translation in the following passage:

I considered Mr. Bingley`s sisters too proud, almost rude, in fact. After the dance the Bennet and Bingley families began to visit each other every few days.

با اینکه خواهرهای آقای بینگلی خیلی مغرور و کمی هم پررو بودند، بعد از رقص بینگلی و بنت، خانواده هایشان شروع به دیدار همدیگر کردند.

On the other hand, AL with the frequency count of (f=0%) had several sections in the text untranslated, such as:

بعدازمجلس رقص خانواده بنت و خانواده ی بینگلی شروع کردن به دیدوبازدیدهای بیشتر *[every few days* حتی میتونست دیدارهای هفتگی باشه]

Personal View Point. Point of views expresses the translator's personal attitude. ZA with the frequency count of (f=2.11%) used his viewpoint most frequently in translating the following passage:

Elizabeth listened in silence. She was not convinced. `Jane is so kind!` she thought.

الیزابت در سکوت گوش میکرد *silence[.* رو گفتم سکوت، بنظرم اینجوری بیشتر به جمله میخورد [. قانع نشده بود *[*اورو حذف کردم چون جمله ی قبلی الیزابت داشت، بعد میگه که *Jane is so kind*، این احتمالا داشته با خودش فکر میکرده بخاطر همین گفتم]، باخودش فکرمیکرد جین مهربان است *[.*البته *she thought*رو آورده].

On the other hand, MB with zero frequency (f=0%) of personal view point, hardly used his point of view in the translation of the same text.

الیزابت در سکوت گوش میکرد او قانع نشده بود و پیش خودش فکرکرد جین خیلی مهربان است.

Speech Act. Speech act refers to the use of an expression on a specific occasion when the speaker/writer pursues a certain function. MJ with the frequency count of (f=3.99%) used the most speech acts in translating the following text:

I considered Mr. Bingley`s sisters too proud, almost rude, in fact. I`m sure they feel superior to most other people, like Mr. Darcy. But she did not say any more

من خواهران آقای بینگلی را خیلی مغرور و بی ادب فرض میکردم و با آنکه مطمئن بودم آنها مثل آقای دارسی خودشان را همیشه یک سر و گردن بالاتر از همه مردم میدانند لام تا کام حرفی نزدم.

On the other hand, DP with the frequency count of (f=1.46%) used the least number of speech acts in translating the same text:

بنظر من خواهر آقای بینگلی خیلی مغرور است   [دقیقا مثل خود متن اصلی تحت اللفظی ترجمه کردم)، (این جمله رو

چسبوندم به جمله ی قبلی گفتم که[بنظرمن خواهر آقای بینگلی خیلی مغرور یا حتی بی ادب است   . من مطمئن هستم که آنها خود را برتر از بسیاری از مردم احساس میکنند، مانند آقای دارسی. اما چیزی نگفت.

Stance. Stance refers to the writer/speaker/translator' feelings or emotions about something. EM with the frequency count of (f=3.83%) used the stance most frequently in translating the following text:

I considered Mr. Bingley`s sisters too proud, almost rude, in fact. I`m sure they feel superior to most other people.

من احساسم اینه که خواهرآقای بینگلی خیلی مغرور و بی ادبه. دوست دارم اینطور فکر کنم که خودش رو بالاتر از بیشترمردم میبینه مثل آقای دارسی.

On the other hand, AL with the frequency count of (1.42%) had the fewest use of stance in translating the similar passage

بنظرم خواهران آقای بینگلی یا   مغرور و یا خیلی پررو بودند.[اینجا   *or*   نداره ولی من برای اینکه یه جمله بشه اینجوری ترجمه کردم]،مطمئنم خودشون رو از همه بالاتر میدانند درست مثل آقای دارسی.

Textual Register (Mode). It refers to the written or spoken modality of the translated text. DP with the frequency count of (f=0.54%) highly observed the textual register in the following passage:

Jane is so kind!` she thought. She was discussing this with her good friend, Charlotte Lucas, one day.

او با فکرکرد جین بسیار مهربان است.آنروز در مورد این موضوع با دوست صمیمی اش، شارلوت لوکاس، حرف میزد.

On the other hand, ZA with the frequency count of (f=0.18%) used the fewest instances of textual register in translating the same passage.

به را موضوع او این.اون فکر می کرد جین خیلی مهربونه بود. گفته بود خوبش ازدوستان یکی که لوکاس شارلوت

Cohesion. It refers to the connectedness of the ideas at the sentence level. SO with the frequency count of (f=3.53%) made the most cohesive translation of the following passage:

It became evident that Mr. Bingley admired Jane very much, and Elizabeth knew that her sister was close to falling in love with him.

آشکار بود که آقای بینگلی جین را خیلی پسندیده بود و الیزابت این واقعیت را بخوبی میدانست که خواهرش بزودی در دام عشق بینگی خواهد افتاد.

On the other hand, DP with the frequency count of (f=1.46%) translated the same passage with the least cohesive devices:

واضح بود آقای بینگلی رو جین را پسندیده است و الیزابت میدانست خواهرش درشرف عاشق شدن است [این شرف رو بخاطرclose to ترجمه کردم، کم کم داره عاشق میشه].

Introspective Phase

In Table 3, the frequency distribution of the 14 encoded themes in introspection phase has been summarized.

Table 3.
The Frequency Distribution of the 14 Encoded Themes in Introspective Phase (in percent)

Participants	Lexical Choices	Coherence	Cultural Appropriacy	Dialogical Register	Genre	Grammaticality	Linguistic Functions	Translation Method Of Translation	Point Full	Personal View	Speech Act	Stance	Textual Register	Cohesion Organization
AL	3.72	58.64	1.62	5.98	0	10.82	6.95	3.88	0.16	0	5.98	1.13	0.16	0.97
DP	4.21	57.11	1	5.01	0	13.03	7.82	1	0.4	2	5.01	0.8	0.2	1.6
EM	3.05	43	1.78	5.34	0	24.68	8.91	4.07	0	0	5.34	1.27	0.51	2.04
KE	5.25	51.38	1.93	6.35	0	13.54	8.01	0	0.55	0	6.35	1.38	0.55	2.21
MB	4.31	45.17	3.08	8.62	0	17.04	8.62	0	0.41	0	8.83	1.23	0.21	2.26
MJ	4.09	42.55	2.64	8.65	0	17.31	8.65	0	0.24	0	8.65	1.68	0.24	3.61
NE	4.23	49.24	3.02	8.16	0	12.39	7.55	0	0.6	0	8.16	1.51	0.3	3.93
NS	3.26	53.7	2.61	10.43	0	10.43	2.83	0	0.22	0	10.43	1.52	0.22	3.48
RH	4.02	51.34	2.9	8.93	0	14.96	3.35	0	0	0	8.93	1.12	0.22	3.35
SM	3.02	56.16	2.38	7.13	0.43	13.17	3.46	2.38	0.22	0	7.13	0.86	0.22	3.46
SB	4.08	56.12	3.06	8.42	0	7.91	5.1	0	0	0.77	8.42	1.79	0.26	3.32
SO	5.59	53.07	1.4	7.82	0	11.73	3.91	3.07	0	0	7.82	1.4	0.56	3.35
SA	5.31	51.92	1.47	6.19	0	13.86	3.83	3.24	0.29	0	6.19	1.77	0.29	3.83
ZA	2.6	69.08	0.72	4.48	0.29	12.14	2.46	1.16	0	0	4.48	0.72	0.14	1.73
MZ	5.87	60.22	1.52	5.87	0	12.17	3.7	0	0	0	5.87	1.3	0.22	3.04

Lexical Choices. In introspective phase, SO with the frequency of (f=5.87%) had the best choice of words in translating the following text:

Then she heard his steps on the stair away down on the first flight, and she turned white for just a moment. She had a habit of saying a little silent prayer about the simplest everyday things, and now she whispered: "Please God, make him think I am still pretty."

بعد از چند لحظه او صدای پای جیم را که از پله ها پایین می آمد در پاگرد اول شنید *[first flight]*. رو در پاگرد اول میگم]. او برای لحظه ای رنگش پرید. عادت داشت برای چیز های خیلی ساده یا پیش پا افتاده زیر لب دعا بخواند . پس زیر لب زمزمه میکرد که خدای کاری کن که من هنوز به چشمش خوشگل بیام.

On the other hand, ZA with the frequency of (f=2.6%) showed the poorest choice of words in translating the same text:

بعد صدای قدم هایش را چند پله پایین تر شنید[فعل آخرجمله آوردم] و یک لحظه رنگش پرید[این یه اصطلاح تو فارسی].او همیشه دوست داشت که درباره ی ساده ترین کارهای روزانه اش دعا های کوچکی میکرد [جابجایی ساختارداریم مثل آخرآوردن فعل و دوتا جملرو بهم ربط دادم].و اون جا لا با خودش زمزمه میکرد که ای خدا،یا خدا جون، [یه کاری کن که اون فکرکنه لفظیشه ولی من ترجمه میکنم]خواهش میکنم کاری بکن که فکربکنه که من هنوز خوشگلم.

Coherence. ZA with the frequency of (f=69.08%) paid enough attention to the rhetorical aspects and translated the following passage:

"Jim, darling," she cried, "don't look at me that way. I had my hair cut off and sold because I couldn't have lived through Christmas without giving you a present. It'll grow out again.

او با گریه گفت : جیم، عزیزم، اونجوری به من نگاه نکن *[that way]* رو میگم اونجوری *[.]*.*had my hair cut off* میگم من دادم موهامو کوتاه کردن [دادم موهامو کوتاه کردن واونها رو فروختم چون نمیتونستم [اینجا زندگی کنم درطول کریسمس منظورشه ولی قشنگ نیس] بدون دادن هدیه ای به توکریسمس روسپری کنم (یا) نمیتونستم بزارم کریسمس بگذره بدون اینکه هدیه ای به تو داده باشم. این دوباره بلند میشه [منظورش موهاشه] موهام دوباره بلند میشن [بجای *it* مو رو میگم].

On the other hand, MJ with the frequency of (f= 42.55%) was the least frequent user in this

category, and translated the same text as following:

با گریه گفت : جیم عزیزم اونجوری به من نگا نکن . من موهامو کوتاه کردم . اونا رو فروختم چون نمیتونستم طاقت بیارم. که کریسمس رو بدون کادو دادن به تو بگذرونم . دوباره موهام بلند میشه.

Cultural Appropriacy. MB with the frequency (f=3.08%) put the highest emphasis on the culture-bound expressions and translated the following text:

Please God, make him think I am still pretty". Say `Merry Christmas' Jim.

پدر مقدس، بگذار به چشمش زیبا بیاییم . بهم بگو کریسمس مبارک!

On the other hand, ZA with the frequency count of (f=0.72%) used the least number of culture-bound words and translated the similar passage as:

خدایا لطفا کاری کن او فکر کنه من هنوز زیبا هستم . جیم بگو کریسمس شما مبارک.

Dialogical Register (Tenor). NS with the frequency count of (f=10.43%) was the most frequent user of the dialogical register. He translated the following passage as:

"Jim, darling," she cried, "don't look at me that way. I had my hair cut off and sold because I couldn't have lived through Christmas without giving you a present. It'll grow out again—you won't mind, will you? I just had to do it. My hair grows awfully fast. Say `Merry Christmas!' Jim, and let's be happy. You don't know what a nice—what a beautiful, nice gift I've got for you."

گریه کنان گفت [چون خط بالا دلا داره دیگه نمیگم دلا گریه کنان گفت   [جیم عزیزم اینجوری به من نگاه نکن].*couldn`t have lived through Christmas* یه حالتی میشه که [نمیشه کریسمس بشه و من واست هدیه ای نداشته باشم (یا)نمیتونستم ببینم کریسمس شده و هدیه ای برات ندارم یا نخریده ام [اینا دوباره بلندمیشن تو اهمیت نمیدی، مگه نه؟ (یا) تو اهمیت نمیدی، میدی؟ [این انگارمال زبان فارسیه]. [اینجا *had to* به معنی مجبور بودنه ولی مجبور   بودن یه بار منفی داره، اینجا باید بگم [من فقط باید این کارو میکردم ، من حتما باید این کارو میکردم [یجوری که یه رضایتی تو *had to* مشخص باشه، نه اینکه از روی اجبار این کارو کرده

باشه]موهام خیلی زود بلند میشن، حالا بگو کریسمس مبارک [میشه حالا رو هم حذف کرد ولی بنظرم حالا نشون میده که داره تشویقش میکنه از اون حال و هوا دربیاد] جیم، حالابگو کریسمس مبارک وبگذار شاد باشیم. نمیدونی چه چیز قشنگی برات خریدم.

On the other hand, ZA with the frequency count of (f=4.48%) used the dialogical register less than all other participants and translated the text like this:

جیم عزیزم اینجوری بهم نگاه نکن، من نمیتونستم بدون اینکه برای تو کادوی کریسمس بگیرم زندگی کنم . موهای من دوباره بلند میشه . تو اهمیت نده بهش، میتونی؟ من این کارو کردم . موهای من رشدش خیلی سریعه ، بهم بگو ک ریسمس مبارک جیم و بیا خوشحال باشیم . تو نمیدونی چه هدیه زیبا و قشنگی برای تو گرفتم .

Genre. SM with the frequency of (f=0.43%) paid enough attention to the genre-based language and translated the following text:

Jim was never late. Della doubled the fob chain in her hand and sat on the corner of the table near the door that he always entered.

[جمله به جمله ترجمه می کنم].جیم هیچ وقت دیر نمی کرد . دلا [چون chain معنی زنجیر میده fob رو ساعت ترجمه می کنم، تاکردن بهترین معنیه براش]، دلا زنجیر ساعت رو در دستش تا کرد و گوشه ی میز نشست نزدیک به دری که او همیشه از آنجا وارد می شد.

On the other hand, KE with the frequency count of (f=0%) hardly used any genre-specific words in translating the text.

[Late] رو دیر کردن ترجمه میکنم   . جیم هرگز دیرنمیکرد.[fob chain رو زنجیر میگم میتونم زنجیرساعت رو بگم، double، که به معنی دولاکردن،دوتایی کردنه،من تاکردن ترجمه میکنم،چون احساس میکنم زنجیرو تا میکنن]دلا زنجیر ساعت رو تو دستش بود تا کردو یک گوشه ی میز نشست درست نزدیک دری که همیشه جیم از اون واردمیشد.[مجبور شدم یه فعل اضافه بگم که بیشتر از یک جمله شد]

Grammaticality. EM with the frequency count of (f=24.68%) had the most grammatical structures in his translation of the following text:

"Jim, darling," she cried, "don't look at me that way. I had my hair cut off and sold because I couldn't have lived through Christmas without giving you a present. It'll grow out again—you

won't mind, will you? I just had to do it. My hair grows awfully fast. Say `Merry Christmas!'

Jim, and let's be happy. You don't know what a nice—what a beautiful, nice gift I've got for you."

دلا گریه کنان گفت :جیم عزیزم اونجوری به من نگاه نکن من موهایم را کوتاه کردم و فروختم چون تا بحال نشده که کریسمس بدون هدیه دادن به تو بگذره، [یه بار دیگه، آخه اینجا اگه بخوام تحت اللفظی ترجمه کنم نمیخوره به جمله، مثلا بگم تاحالا نتونستم زندگی کنم اینجوری که به تو کریسمس کادو ندم،نمیخوره این، اینجوری بگم]، تا حالا نشده که کریسمس به تو کادو ندم . [احتمالا داره راجع به موهاش حرف میزنه   ]، دوباره موهام بلند میشن، اهمیت نده ، برات مهمه؟ مجبور بودم این کارو انجام بدم   . رشد خیلی زیاده . [awfully] اینجا بسیار میخوره،بسیار شدیده] حالا بگو کریسمس مبارک [اینجا همون بحث foreignization هست ، نمیخوام کریسمسو بگم عیدت مبارک ، میخوام حتما بگم که این کریسمس بوده،تو کریسمس که اونا بهم کادو میدن .]جیم بیا خوشحال باشیم ، نمیدونی چه هدیه ی قشنگ و زیبایی برات گرفتم.

On the other hand, SB with the frequency count of (f=7.91%) had the most ungrammatical translated passage:

او با گریه گفت :جیم،عزیزم. اونجوری به من نگاه نکن [that way] رو میگم اونجوری]. [had my hair cut off میگم من دادم موهامو کوتاه کردن] دادم موهامو کوتاه کردن و فروختم چون نمیتونستم [اینجا زندگی کنم درطول کریسمس منظورشه ولی قشنگ نیس] کریسمسو سپری کنم بدون هدیه به تو. (یا)نمیتونستم بزارم کریسمس بگذره بدون اینکه هدیه ای به تو داده باشم .این دوباره رشد میکنه [منظورش موهاشه]. فکرشو نکن ،باشه؟ [چون داستان باید روان باشه] من فقط باید انجامش میدادم .جیم بگو کریسمس مبارک و بیا خوشحال باشیم .نمیدوونی چه هدیه ی خوبی ، چه هدیه زیبا و خوبی برات گرفتم [توی قسمت اولش gift رو نیاورده ولی باید بگیم]

Linguistic Functions. EM with the frequency count of (f=8.91%) used the most appropriate linguistic function while translated the following passage as:

Please God, make him think I am still pretty
It'll grow out again—you won't mind, will you.

خدایا یه کاری کن اون فکر کنه من هنوز زیبا یام موهای من رشدش سریعه. تو که برات مهم نیست. مگه نه؟

On the other hand, ZA with the frequency count of (f=2.46%) used the least number of linguistic function in the translation of the similar text:

خدایا لطفا کاری کن که اون فکر کنه هنوز خوشگلم .
موهای من خیلی سریع رشد میکنه یا رشد خواهند کرد،مگه نه؟

Methods of Translation, EM with the frequency of (f=4.07%) was talking about his method of translation more often than others in translating the following text:

Jim was never late. Della doubled the fob chain in her hand and sat on the corner of the table near the door that he always entered

(اول یه بار قسمت های مشخص شده رو خوندم بعد یه نگاهی کردم به واژه نامه). جیم هیچ وقت دیر نمیکرد .دلا اون زنجیرساعتش رو تو دستش تا کرد و درکنارمیزی که نزدیک دری بود که اون همیشه وارد میشد،نشست.

On the other hand, MB with zero frequency (f=0%) did not mention her method of translation at all while translation the same passage.

جیم هرگز دیرنکرده بود . دلا زنجیر ساعت رو تاکرد کرد و در گوشه ی میزی که کنار در بود وجیم همیشه هنگام ورود از آن میگذشت، نشست .

Full Translation. KE with the frequency count of (f=0.55%) had the most instances of full translation in the following passage:

And now she whispered: "Please God, make him think I am still pretty." Say `Merry Christmas! Jim, and let's be happy.

و حالا داشت با خودش زمزمه میکرد: خدایا لطفا کاری کن که منو هنوز زیبا ببینه . جیم، به من بگو کریسمس مبارک و بیا شاد باشیم.

On the other hand, AL with the frequency count of (EM=0%) left several untranslated parts, as in the following passage:

و الانم زیرلب زمزمه کرد :خدایا خواهش میکنم کاری که اون فکرکنه من هنوزم خوشگلم. جیم حالابگو کریسمس مبارک وبگذار شاد باشیم.

Personal View Point. ZA with the frequency count of (f=2%) used his viewpoint most frequently in translating the following passage:

I couldn't have lived through Christmas without giving you a present. It'll grow out again—you won't mind, will you?

[اینجا اگه بخوام تحت اللفظی بخوام ترجمه کنم نمیخوره به جمله، مثلا بگم تاحالا نتونستم زندگی کنم اینجوری که به تو کریسمس کادو ندم،نمیخوره این،اینجوری بگم] ، تا حالا نشده که کریسمس به تو کادو ندم . [احتمالا داره راجع به موهاش

حرف میزنه]، دوباره موهام بلند میشن، اهمیت نده ،واقعا برات مهمه؟

On the other hand, MJ with zero frequency (f=0%) hardly used his point of view in the translation of the same text.

نمی توانم تصور کنم که به تو کادوی کریسمس ندهم . ادامه داد که برای تو اهمیتی ندارد، دارد؟

Speech Act. NS with the frequency count of (f=10.43%) used the most number of speech acts in translating the following text:

It'll grow out again—you won't mind, will you?

Jim, and let's be happy. You don't know what a nice—what a beautiful, nice gift I've got for you."

موهام دوباره بلند میشن. مگه قراره نشن؟
جیم اگه بدونی چه کادوی قشنگی واست خریدم خیلی خوشحال میشی.

On the other hand, ZA with the frequency count of (f=4.48%) had the least number of speech acts in transiting the same text:

موهای من دوباره رشد میکنن، تو که اعتراضی نداری؟
جیم بیا خوشحال باشیم . تو نمیدونی چه هدیه زیبا و قشنگی برای تو گرفتم.

Stance. SB with the frequency count of (f=1.79%) used her own feelings most frequently in translating the following text:

Please God, make him think I am still pretty.
My hair grows awfully fast.

رشد خدایا یه کاری کن که من به چشمش خوشگل بیام .
موهام خیلی هم خوبه.

On the other hand, DP with the frequency count of (0.8%) had the fewest use of stance in translating similar passage:

خدایا لطفا کاری کن که اون فکر کنه هنوز خوشگلم .
موهای من به شدت زود رشد میکنه.

Textual Register (Mode). SO with the frequency count of (f=0.56%) observed the textual register of the following passage most often:

She had a habit of saying a little silent prayer about the simplest everyday thing.

او عادت داشت که برای هر چیز پیش پا افتاده ای دعا کند.

On the other hand, ZA with the frequency count

of (f=0.2%) used the fewest instances of textual register in translating the same passage.

اون یه عادتی داشت که درباره ی کوچکترین و ساده ترین چیزهای روزمرگی دعا بخواند.

Cohesion. NE with the frequency count of (f=3.93%) made the most cohesive translation of the following passage:

"Jim, darling," she cried, "don't look at me that way. I had my hair cut off and sold because I couldn't have lived through Christmas without giving you a present.

با گریه گفت: جیم عزیزم اونجوری به من نگا نکن. اگه من موهامو کوتاه کردم وفروختم به این خاطر بود که نمیتونستم طاقت بیارم کریسمس رو بدون کادو دادن به تو بگذرونم.

On the other hand, AL with the frequency count of (f=0.97%) translated the same passage with the least cohesive devices:

دلا گریه میکرد . جیم عزیزم اینجوری بهم نگا ه نکن، من نمیتونستم بدون اینکه برای تو کادوی کریسمس بگیرم زندگی کنم.

The researchers summarized the findings as following:

- The theme *Lexical choices* had a range of frequency between 3.93% to 8.64% in Retrospection Phase, while, in Introspection Phase a much lower range of 2.6% to 5.87% could be tracked.

- The theme *Coherence* had a range of frequency between 4.2% to 70.53% in Retrospection Phase, and 42.55% to 69.08% in Introspection Phase, to represent the role of concurrent TAP in maintaining coherence.

- The theme *Cultural Appropriacy* had a range of frequency between 0.61% to 14.25% in Retrospection Phase, and 0.72% to 3.08% in Introspection Phase which shows that the latent TAP helped the participants to be more considerate in their cultural observation.

- The theme *Dialogical Register (Tenor)* had a range of frequency between 1.46% to 4.98% in Retrospection Phase, and 4.48% to 10.43% in Introspection Phase which shows the superiority of introspec-tion to generate the right tenors in trans-lation.

- The theme *Genre* had a range of frequen-cy between 0.0% to 2.11% in Retrospec-tion Phase, and 0% to 0.43% in Intros-pection Phase which to illustrate once again the positive role of latent TAP in preserving genre in translation.

- The theme *Grammaticality* had a range of frequency between 10.81% to 28.90% in Retrospection Phase, and 7.91% to 24.68% in Introspection to indicate the Retrospection was more helpful in ob-serving *Grammaticality* in translation.

- The theme *Linguistic function* had a range of frequency between 1.56% to 6.87% in Retrospection Phase, and 2.46% to 8.91% in Introspection Phase which shows the more influence of con-current TAP in finding suitable linguistic functions in the passage.

- The theme *Method of translation* had a range of frequency between 0.0% to 3.48% in Retrospection Phase, and 0% to 4.07% in Introspection Phase to show the slight superiority of introspection in ver-balizing the method of translation.

- The theme *Full Translation* had a range of frequency between 0.0% to 1.32% in Retrospection Phase, and 0.0% to 0.55% in Introspection Phase to represent latent TAP positive role in completing the translation task.

- The theme *Personal view point* had a range of frequency between 0.0% to 2.11% in Retrospection Phase, and 0% to 2% in Introspection Phase which indi-cated similarity between introspection and retrospection to let the translators' attitudes out in the translated passage.

- The theme *Speech act* had a range of fre-quency between 1.46% to 3.99% in Re-trospection Phase, and 4.48% to 10.43% in Introspection Phase which displayed concurrent TAP had a better influence in using *Speech act*.

- The theme *Stance* had a range of frequency between 1.42% to 3.83% in Retrospection Phase, and 0.8% to 1.79% in Introspection Phase that demonstrated Retrospection had a better effect on using *Stance* than Introspection verbal protocol.

- The theme *Textual Register (Mode)* had a range of frequency between 0.18% to 0.54% in Retrospection Phase, and 0.2% to 0.56% in Introspection Phase which represented both of them had the similar impact on using proper more of translation.

- Finally, the theme *Cohesion* had a range of frequency 1.46% to 3.53% in Retrospection Phase, and 0.97% to 3.93% in Introspection Phase which demonstrated that Retrospection TAP had a slightly better impact on using cohesive devices.

Figure 1 illustrated the frequency distributions for the 14 encoded TQA criteria in this study. As it can be seen, the participants performed differently in Introspection and Retrospection TAP phases of translation, so that while the themes *Coherence* and *Grammaticality* show the higher frequency in Retrospection TAP, *Dialogical Register*, *Linguistic Functions* and *Speech Acts* show considerable growth in Introspection TAP.
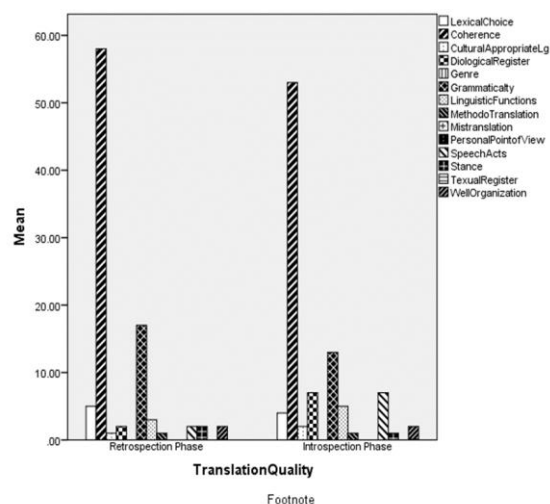

Figure 1. The Comparative Improvement of Translation Quality Criteria in Retrospective and Introspective TAPs

CONCLUSION

Recently, think aloud protocols (TAPs) have extensively been used in process-oriented Translation Studies (TS), however, the critical question of their experimental validity when applied to translation have often remained unspoken. The researchers in this study supported the fact that the translators would undoubtedly benefit from both Retrospection and Introspection TAPs. Trusting on the findings in this study, the translators' metacognitive awareness – raised by thinking aloud - enhances the quality of their translation, no matter it takes place simultaneously or ad hoc. However, their translation performance was affected differently by Introspection and Retrospection as far as the criteria enlisted in Famil Khalili's (2011) TQA scale are concerned. For instance, while the translators' coherence is highly improved in retrospective TAP, their ability to use speech acts is enhanced while they are introspectively thinking aloud.

In the same vein, in a study on the effect of TAP on translating English literary texts and found that 14 strategies were detected to be the most frequently used by the subjects in the study (Eftekhary & Aminzadeh, S, 2012). *Using imagery* and *paraphrasing* were the first and second most frequent while such strategies as *resourcing* and *referencing*, *assessing* and *monitoring, problem tackling* and *co-text recourse* stood in between. In another study over the effect of think aloud protocols on the amount of translation revision, the researcher aimed to check whether it had any considerable effect on the quality of the translation irrespective to the direction of language. (Shahrokhi, 2016) The texts were translated in two conditions of with and without TAP. The outcomes supported a considerable decrease in the amount of revision when the translators were distracted with verbalization during translation.

This study was pioneering in terms of exploring the comparative influences of both retrospective and introspective TAPs in improving the translation quality. As a response to some concerns about the possible benefits from verbaliza-

tion of the translators only if they are professionals (Bernardini, 2002), the findings of this study would contribute to the mainstream importance of think-aloud verbal protocols, in general as well as in Translation Studies, in particular. This study can aid the development of a theory of the application of TAP in translation performance, and its impact on translation quality assessment with a much more cognitive orientation.

This study, however, suffered from a number of limitations, which are worthy to consider in future research. The benefits of TAPs were ex

plored while the participants were required to translate the texts from English to Persian, and had the freedom to verbalize their thoughts in Persian. The researchers believe that the findings in this study might be different if the direction of language changes or the TAP would be conducted in the target language. Next, the genre of the passages was limited to narrative and the size of the texts were as short as 150 words. Finally, the participants' translation errors, of all sorts, were counted but not involved in the final report due to the qualitative nature of the collected data.

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Biodata

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