

Evaluation of the Validity and Reliability of a Communicative Scale for Translation Quality Assessment

Sepeedeh Hanifehzadeh*, Ph.D. Candidate, Department of Languages and Literature, Science and Research Branch, Islamic Azad University, Tehran, Iran

sepeed1999@yahoo.com

Farzaneh Farahzad, Associate Professor, Allameh Tabatabai University, Tehran, Iran

farahzadedu@yahoo.com

Abstract

The present study assessed the construct validity and reliability of a researcher-constructed psycho-motor mechanism scale based on the communicative theory of translation proposed by PACTE (2003). In doing so, the necessary criteria for designing the scale were obtained by a thorough review of related literature on previously constructed scales in error analysis or holistic ones. Moreover, in the first part of the research, a qualitative data analysis according to the translation tasks done by eleven participants and their feedback through a semi-structured translation problems interview was done for finding the descriptors in designing the psycho-motor mechanism scale. Next, by designing the scale, two translation tasks were given to 90 M.A. students majoring in Translation Studies at four different branches of Islamic Azad University. Based on the rating done by two experienced raters, construct validity and reliability of the scale was revealed by the use of factor analysis and correlation statistics. The findings approved by the construct validity and reliability of the researcher-constructed scale could contribute to the field of Translation Studies since having a more objective scale for translation tasks in line with anchored theories of translation quality assessment like those of PACTE (2003) is a felt need.

Keywords: PACTE, TQA, construct validity, reliability, Psycho-motor Mechanism Scale

Introduction

Translation has long been considered as an important testing instrument to evaluate the knowledge of the learners (Waddington, 2001). It is an area where theory and practice are joined, which ideally means that translation scholars apply theoretical ideas in their own practice, whilst continuously improving their own reflective ideas regarding theory of translation based on their experience in pedagogy.

However, word for word translation or literal translation is a direct manifestation that learners are only capable in memorizing prefabricated units and grammatical points without any sign or tint of recreating a similar but a new type of argument conveying the previous information in a creative voice. Therefore, screening the information for translating any type of text is a requisite for which critical thinking can facilitate the skill (Chareonwongsak, 2008).

In translation, most of the learners are convinced that there is only one correct interpretation of the text (Kim, 2000). In other words, they are not flexible enough to digest and target the text from different angles; the main assumption is that their rigid approach to problems in the text just suffices. In fact many people involved in language teaching such as teachers, learners and other stakeholders share a common misconception that language learning equals only memorizing vocabulary and grammatical structures (Kim, 2000).

However, with the great upheaval through the introduction of new skills and components in translation competence, particularly through the advent of models of Campbell (1991) and PACTE (2003), the new assumptions were expressed on the fact that if properly designed,

translation activities can be employed to enhance the four skills and develop accuracy, clarity and flexibility (Duff, 1989).

However, after this great revolution in translation studies and repercussion of new ideas in the field, in spite of wide agreement on the utility of translation as a beneficial tool for drawing the learners' attention to the differences and promoting the flexibility of them, the manifestation of the assumptions could not be traced in any works of translation produced by the learners. The incongruence, even in modern decade of translation studies, can be justified by the fact that the scholars or stakeholders of the field believe these subtleties can sometimes be disregarded since evaluating and scoring the translated texts based on currently introduced components places a double pressure on the shoulders of authorities and organizations and is a futile practice. Subsequently, the stakeholders' reluctance mandates the learners to behave according to accepted standards and criteria and never move beyond the borders.

To overcome the problem, some measures like developing appropriate scales for measuring the new components of translation competence can be taken and thereby they can be offered to the teachers, raters and practitioners for better and more accurate evaluation of translated texts.

This shift in attention mandates curriculum developers and program designers and most importantly trainers and raters in translation field to embed new criteria for evaluation of translated texts. One of these new criteria is the psycho-physiological component introduced by PACTE (2003) which instantiates critical thinking abilities like analysis, synthesis and evaluation as important and effective benchmarks in evaluating the quality of translation. Therefore, learners who can use abundant data in generating new ideas are favored above those who lack the ability to absorb information to create new ideas to solve problems. The present study was an attempt to assess the construct validity and reliability of a researcher-constructed psycho-motor mechanism scale based on the theory of translation competence proposed by PACTE (2003).

Literature Review

Translation is delivering the meaning of a text into another language in the way "that the author intended the text" (Newmark, 1988, p. 5), or from the reader's point of view, "in such a way that the receptors in the receptor language may be able to understand adequately how the original receptors in the source language understood the original message" (Nida, 1984, p. 119). The translation process can be evaluated in three stages: (1) translation-related reception of the source language text; (2) transfer of text from the source language into the target language; (3) translation-related production of the target language text (Tarp, 2004, p. 31).

After explaining the concept of translation, it seems necessary to pinpoint how the scholars grasp the act of translation; whether it is the final product and the output of the translator or it is comprised of a set of procedures that the translator surpasses to render the final product. Recent translation theory is concerned with two phenomena: (1) the product-oriented theory of translation which denotes that a written text in a target-language as the result of a translation process has traditionally been described and analyzed by a comparison with the respective source-language text. (2) the competence-oriented theory of translation which focuses on translators' internalized knowledge (Lörscher, 1995, p. 884). In defining translation competence, theorists focus not only on its product, but also on the processes involved, which signifies that translation is a skill that can be trained and investigated in terms of relevant strategies and/or competencies (Latkowska, 2006, p. 210). Also, Hatim and Munday (2004, p.3) mention that translation can be analyzed from two different perspectives, namely that of a

‘process’, which refers to the activity of converting a source text into a target text in another language, and that of a ‘product’, i.e. a translated text.

Whether the translation is conceived as a process or product, the next important issue in Translation Studies is the assessment of translation as a competence or performance. However, there is no universal set of criteria to evaluate what we consider strong or weak translation. As House (1997, p. 1) states, “evaluating the quality of a translation presupposes a theory of translation. Thus different views of translation lead to different concepts of translational quality, and hence different ways of assessing it.”

Among different models proposed on translation, PACTE group submitted the first draft of their translation model in 1998. However, two years later, they modified and fleshed out the proposed draft and submitted the final version in year 2000. After several years of attempt, the thoroughly revised model appeared in 2003 and it was applied in researchers done by PACTE group or other researchers around the world (PACTE, 2003).

The model of PACTE as a communicative process originates from the definition provided by Newmark (1988) who introduces two approaches as semantic and communicative translation. Semantic translation “is personal and individual, follows the thought processes of the author, tends to overtranslate, pursues nuances of meaning, yet aims at concision in order to reproduce pragmatic impact” (p.46). Communicative translation, on the other hand, “attempts to render the exact contextual meaning of the original in such a way that both content and language are readily acceptable and comprehensible to the readership” (Newmark, 1988, p.46). PACTE’s model is composed of a set of interrelated sub-competencies, which are interdependent, hierarchical and can compensate for one another. The main aim of this group is to validate their theories by the use of empirical tools.

Under the impact of results emerging from evaluating translation competence and its acquisition, the model changed in time (PACTE, 2005). Moreover, the description of respective sub-competences developed simultaneously with the model (PACTE, 2003, p. 58-59):

***Bilingual sub-competence:** It is mainly the procedural knowledge needed to communicate in two languages. It includes the specific feature of interference control when code-switching between the two languages. It is composed of pragmatic, socio linguistic, textual, grammatical and lexical knowledge in the two languages.

***Extra-linguistic sub-competence:** It is predominantly declarative knowledge, both implicit and explicit, about the world in general and in specific areas. It contains bicultural knowledge (about the source and target cultures), encyclopaedic knowledge (about the world in general) and subject knowledge (in specific areas).

***Knowledge about translation sub-competence:** It is chiefly declarative knowledge, both implicit and explicit, about what translation is and aspects of the profession. It includes knowledge about how translation functions and knowledge related to professional translation practice.

***Instrumental sub-competence:** It is predominantly procedural knowledge connected to the application of documentation sources and information and communication technologies applied to translation such as dictionaries, encyclopaedias, grammars, style books, parallel texts, electronic sources, corpora, searchers, etc.

***Strategic sub-competence:** It is the procedural knowledge to be applied as an ancillary tool in translation process and solve the problems encountered. This is an essential sub-competence which affects all the others and causes interrelations among them because it controls the translation process. It intervenes by planning the process in relation to the translation project, evaluating the process and partial results obtained, activating the different sub-competencies and

compensating for deficiencies, identifying translation problems and applying procedures to solve them.

***Psycho-physiological components:** It includes different types of cognitive and attitudinal components and psycho-motor mechanisms. They include: cognitive components (memory, perception, attention and emotion), attitudinal aspects (intellectual curiosity, perseverance, rigour, critical spirit...), and abilities like creativity, logical reasoning, analysis and synthesis, etc.

Method

Participants

In the qualitative phase of the study, to gather the data, eleven subjects participated. Regarding the sampling procedure, purposive sample was the choice as based on Creswell (2013), it was sufficient to provide maximum insight and understanding of what was being studied. Among various methods of purposeful sampling, *typical case sampling* was chosen since the data based on their interview and translation was supposed to be handy in designing the translation quality assessment scale for similar participants in the quantitative phase. To this end, eleven translators who were first year students of MA in Translation Studies from Allameh Tabataba'i University participated in the qualitative phase of the study.

In the quantitative phase of the study, the participants were 100 male and female MA students majoring in English Translation who studied at four different branches of Islamic Azad University and only the freshmen were selected, as the rationale was having a screened up group as they fulfilled the main courses of translation in their undergraduate level by proof of their BA degree, and secondly they had passed the Iran's Sanjesh Organization test of MA, therefore they could meet several criteria in order to be eligible for advanced translation courses. Next, standard version of TOEFL PBT was administered to all these five classes of M.A. candidates comprising a group of 100 students. The students whose scores fell one standard deviation below and above the mean ($\pm 1SD$) were selected as the main participants of the study. Therefore, the final group of EFL learners, taking part in the quantitative phase of the research, were 90 participants based on the results of their performance in the TOEFL test.

Instruments

Translation tasks

The main information used for evaluating and validating the developed scale was elicited from two translation tasks, each involving translation of a news story from an English learning website that garners the learning material from the Guardian (www.theguardian.com). In preparing the texts for translation, several criteria were adopted from PACTE (2005) to include suitable materials for translation. PACTE (2005) elaborates the selection criteria as follows:

- The texts need to be of the same genre and in the same field for the language to be translated. In other words, the texts need to be the pieces that occur in a specific social setting with distinctive characteristic parameters of organization, structure and communicative function.
- The texts should manifest multiple translation problems. Briefly, they should engage the abilities of inferencing, interpreting, evaluating the arguments, and making deductions in translators.
- The preferred texts are the short ones with approximately 175 to 300 words.
- The texts should contain the genres translated by professional translators in the target language.

Semi-Structured Translation Problems Interview

The researcher developed a semi-structured interview to record the participants' retrospective comments about the problems they encountered while translating the two texts in the qualitative phase of the study.

In fact, the designed interview was an observational tool that provided adequate understanding of the meaningfulness and relevance of the translation tasks. Among the seven designed questions, three of them just needed open-ended answers and four of them required limited responses and the response for them even lacked extensive deviations.

In designing the interview, a major point was taken into consideration. Based on the advice of Farahzad (1992), each questionnaire, interview, or rating scale should be anchored by a solid theory of translation quality assessment. In doing so, the blueprint for designing materials for translation assessment resemble the vertices of a triangle.

As a clear cut example, in her article entitled "*Testing achievement in translation classes*", Farahzad (1992) maintains that for scoring each type of translation text, it can be scored holistically and the examiner may find it convenient to approach the text as the unit of translation and adopt this system, especially with a large number of students. However, in every analysis of the clauses, sentences, or the whole text, three features determine the score of the translator. The first is *accuracy*, which denotes the precision in the translation of the source text and the degree of closeness of the translation to the source text. The next feature is *appropriateness*, conveying the fluency and the correctness of the structures in the sentences. The last element as *cohesion* (e.g. transitional, appropriate use of pronouns, linkages, etc.) and style of discourse (choice of words, grammatical structures, etc.) also apply to the whole text.

Although the model provided by Farahzad (1992) was a comprehensive one, a great portion of it was based on error analysis in translation. However, PACTE (2003) evolved the act of translation into recreation of a new text in the target language. Therefore, the features in this interview included accuracy, appropriateness and translation strategies. The first and second questions in the interview were about the accuracy and appropriacy of translation skills of the participants and the third, fourth, and fifth questions were allocated to the strategies that the participants selected to fulfill the translation. The sixth and the seventh questions were the general appraisal of the translators about their abilities in translation.

Researcher-constructed Psycho-motor Mechanism Scale

The constructed five-point Likert scale had three sections. The first section was *accuracy in comprehension of source language* content and five descriptors were used to assess the level of accuracy in participants with allocated points ranging from one to five. The next section was *appropriacy in production of target language* with subsequent five descriptors. Likewise, the allocated score of the participants could range from one to five. The last section named *translation strategies* consisted of six sub-components. They were *translation of words with multiple meanings*, *translation of words with no appropriate equivalence in target language*, *translation of idioms*, *the author's point of view*, *making conclusions*, and *interpretation of the text and title*.

Procedures

In the first step, for creating the researcher-constructed psycho-motor mechanism scale, the initial drafts of the translation tasks (including two texts of two hundred and twelve words and two hundred and eleven) were given to a class of eleven MA students at Allameh Tabataba'i University. Almost, all students required one hour to translate the total ten paragraphs.

After one hour of translation task completion, the researcher constructed semi-structured interviews were done with all the eleven subjects and their oral responses were recorded for later transcription in order to get a preliminary insight of the difficulties in the translation tasks. Based on the thorough review of the related literature and the results of qualitative analysis of data in the qualitative phase of the study, the main categories and emerged themes for the researcher constructed scale were obtained.

In the second step for the quantitative phase of the study, translation tasks were given to all 90 participants. Based on the rating done by two experienced raters on the translation works of 90 participants, construct validity of the scale was revealed. Finally, for calculating the construct validity of the scale, factor analysis was run to probe the underlying constructs of the eight components of the researcher-constructed psycho-motor mechanism scale.

Results

Obtained Categories from the Interviews

The following categories were obtained based on the seven questions of the semi-structured interview:

Interpretation of the Title

Generally speaking, title translation can be a vexing process and since titles are necessarily contextual, in that their meaning is specified by the text, they become governed by non-detachability (Briffa & Caruana, 2009).

It was revealed that in the texts chosen as the translation tasks, the interpretation of the title was mostly dependent on the thorough reading of the passages and without appropriate comprehension of the passage, it was quite difficult to have a meaningful translation.

Faithfulness

The second significant category belonged to faithfulness in the translations. A faithfulness error was considered when the target text did not respect the meaning of the source text as much as possible.

However, it can be said that, whatever the difficulty in the translation process, procedures must aim at the essence of the message and faithfulness to the meaning of the source language text being transferred to the target language text. In the words of Nida and Taber (1982), translation can be viewed as reproducing the nearest equivalence in the source language to the target language both in terms of semantic and stylistic aspects. Therefore, besides the syntactic elements, keeping with other aspects of the language is significant and the newly produced text should not distract the mind of the reader from the original meaning, which is in contrast to the creative rendition of an original text.

Literalness

A literalness error occurs when a translation that follows the source text word for word results in awkward, unidiomatic, or incorrect renditions.

Literal translation is word-for-word translation and it is very common among languages of the same family (Munday, 2001, p.57). It is a direct transfer of a source language text into a grammatically and idiomatically appropriate target language text. In this translation, the role of the translator is restricted only to conform to the linguistic restrictions of the target language.

In this study, two different languages with various origins were contrasted, so the literal translation of the subjects seemed totally awkward in several cases and that was why the researcher asked the participants from the beginning to translate the texts communicatively.

Translation of Words with Multiple Meanings

There were some words in both texts which had two or multiple meanings. Some translators used the technique of addition to translate them. In other words, besides choosing one meaning for the putative word, they added extra information as a justification for their choice.

Generally, in this study, different strategies were applied by the translators in facing the words with multiple meanings such as coinage, addition and elaboration, omission, and borrowing.

Translation of Words with no Appropriate Equivalents in the Target Language

This was another point raised in the translation and subsequent interviews. Baker (1992) claims that errors in translation mostly result from the non-equivalence between the source and target languages. However, good translators with encyclopedic knowledge and linguistic knowledge of both the source and target languages know how to deal with them. In case of not finding the appropriate equivalence in the target language, it is suggested that a competent translator should have an inquisitive mind constantly searching for encyclopedic knowledge (Hatim & Mason, 1990, pp. 106-107) so that he/she can acquire appropriate background knowledge to interpret the source language text without making embarrassing errors. In other words, the use of translation strategies is highly suggested and in this study the subjects actually resorted to translation strategies as well.

Translation of Idioms

Like the previous parts, some translators used the correct meaning for the idiom and some resorted to other techniques.

Generally speaking, the strategies were *literal translation in which the meaning was deviated from the original concept, using the appropriate idiomatic meaning in the target language, and using literal translation still with preserving the original meaning.*

One aspect of lexical meaning in languages is expressive meaning. Baker (1992) defines expressive meaning as a word that cannot be evaluated as true or false because the word in question has to do with the speaker's feeling and experience (p.13). Expressive meaning can pose many problems for translators, especially unseasoned ones. Errors in this respect are classified into wrong translation of idiomatic expressions. This type of problems in translation is the result of inappropriate reading and writing in the source language (Suksaeresup & Thep-Ackrapong, 2009). Therefore, a competent translator has to constantly keep up with new idioms.

However, in our study it seemed that they resorted to literary translation of the idiomatic expression since they wanted to follow honesty as the literal translation even did not change the direction of the meaning in the paragraph. Still, it made the paragraph awkward somehow. Thus, maybe the participants were not very skillful in using their translation strategies comparing to their command of knowledge in idiomatic expressions.

Subject/Verb Agreement

Another significant problem of the translators was that they mentioned they could comprehend the meaning of the source language, but in translation to Persian, sometimes the

sentences became so lengthy that the agreement between subject and verb in terms of plurality was not observed.

However, in this study, during the interviews done, it became apparent that more of the errors were related to the length of the sentences in the source language that distracted the subjects' attention from the appropriate focus on the Persian translation. Few subjects were not thoroughly fluent in Persian but the rest had good command of their first language. Therefore, unlike the abovementioned study the main reason for the problems in subject-verb agreement was distraction.

Misunderstanding (Miscue)

This was not a common mistake among the translators, but it was seen in several cases. The problem was that the translator did not recognize the word correctly and thereby mistranslated it.

Therefore, misreading a word or phrase was a harmful mistake that marred the rendition of the text, since it could change the total meaning of the text, even a more deleterious element than the previous ones since the translators translated the sentences based on a fake understanding of the words or phrases.

When reading a passage, second or foreign language subjects often encounter problems dealing with vocabulary. These problems are often lack of word knowledge, misleading guidance from the text, or mistaken knowledge (Laufer, 1997). As is it duly mentioned by Laufer, vocabulary recognition is a pivotal means in a fluent reading of the paragraphs. The problem is exacerbated when mistaken knowledge is accompanied. In other words, the false recognition of a word or a phrase is rather detrimental to understanding of the whole text. Since comprehension is the key to understanding a text (Diaz-Rico, 2004), such lexical problems interfere in the process of reading comprehension (Laufer, 1997).

The Author's Point of View

This last point was general in translation works of the subjects since it was randomly observed in some paragraphs and not the others. The problem was that the translators were sometimes uncertain why the author of the texts included some paragraphs in the texts. In other word, they could not recognize the argument of some of the paragraphs or point of view of the author in them; whether the author was in favor of the argument or not. Subsequently, the inconsistency in lack of comprehending the sense and the argument of the author resulted in incoherence in the reading of the whole translation.

As Fish (2003) mentions the practice of translation encourages the reflection on language usage and the exchange of different points of view, raising language awareness. Fish is one of the advocates of using translation tasks in the EFL context to promote the learners' abilities to recognize the point of view of the author and the main arguments in the text.

Likewise, in this study, the translators that recognized the author's perspective in each part delivered better understandable translations which approached the trend in communicative translation.

Summary of Findings

Generally, based on all the derived categories according to the interview and the translation works, the researchers conflated the above mentioned categories to come up with three main components in designing the scale for translation quality assessment.

Based on the categories and the idea of a triangle, for vertices of a triangle, three main themes and subsequently three components were designed. The categories; namely, subject/verb agreement, literalness, misunderstanding (miscue) were summarized under the main theme of “accuracy in comprehension of source language content”. The categories, namely, faithfulness, subject/verb agreement and literalness were summarized under the main theme of “appropriacy in production of target language”. And as the last step, the categories including interpretation of the title, translation of words with multiple meanings, translation of words with no appropriate equivalence in the target language, translation of idioms and the author’s point of view were summarized under the theme of “translation strategies”.

Evaluating the Construct Validity of the Scale

After subject selection in the quantitative phase of the study, the first step was assessing the normality of the data garnered from various means. As displayed in Table 1, the ratios of skewness and kurtosis over their respective standard errors were lower than the absolute value of 1.96, hence normality of the data was confirmed.

Table 1. Descriptive Statistics

	N	Skewness			Kurtosis		
		Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
TOEFL	90	-.085	.254	-0.33	.278	.503	0.55
Honey	90	-.319	.254	-1.26	.257	.503	0.51
Watson-G	90	.071	.254	0.28	-.024	.503	-0.05
Holistic	90	.391	.254	1.54	-.337	.503	-0.67
Waddington	90	-.184	.254	-0.72	.520	.503	1.03
Accuracy	90	.263	.254	1.04	.148	.503	0.29
Appropriacy	90	-.350	.254	-1.38	-.275	.503	-0.55
WWMM	90	-.350	.254	-1.38	.155	.503	0.31
WWNE	90	-.318	.254	-1.25	-.461	.503	-0.92
Idiom	90	.160	.254	0.63	-.409	.503	-0.81
Point of view	90	-.206	.254	-0.81	-.149	.503	-0.30
Conclusion	90	-.079	.254	-0.31	.057	.503	0.11
Interpretation	90	-.313	.254	-1.23	-.257	.503	-0.51

Next, for evaluating the construct validity of the scale, factor analysis was run to probe the underlying constructs of the eight components of the researcher-constructed psycho-motor mechanism scale. In doing so, assumptions of sampling adequacy and lack of multicollinearity were met. As displayed in Table 2 the KMO index of .915 was higher than the minimum acceptable criterion of .50.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.915
Bartlett's Test of Sphericity	Approx. Chi-Square 477.964

Df	28
Sig.	.000

The Bartlett's test of multicollinearity was significant ($\chi^2(28) = 477.96, p = .000$) indicating that the correlation matrix was significantly different from an identity matrix – a matrix with zero correlations among all variables.

The determinant value of .004 ($> .00001$) indicated that the correlation matrix did not suffer from multicollinearity, too high correlation among all variables. As displayed in Table 3, none of the correlation coefficients were higher than .80 (Field 2013).

Table 3. Correlation Matrix^a

	Accuracy	Appropriacy	WWM	WWN	Idiom	Point	Conclusion	Interpretation
Accuracy	1.000	.730	.423	.696	.766	.714	.486	.536
Appropriacy	.730	1.000	.450	.724	.746	.742	.578	.588
WWM	.423	.450	1.000	.450	.386	.358	.306	.484
WWNE	.696	.724	.450	1.000	.717	.717	.687	.683
Idiom	.766	.746	.386	.717	1.000	.724	.479	.574
Point	.714	.742	.358	.717	.724	1.000	.582	.523
Conclusion	.486	.578	.306	.687	.479	.582	1.000	.457
Interpretation	.536	.588	.484	.683	.574	.523	.457	1.000

a. Determinant = .004

The SPSS extracted one factor which accounted for 64.37 percent of the total variance (Table 4).

Table 4. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.150	64.375	64.375	5.150	64.375	64.375
2	.799	9.986	74.361			
3	.627	7.840	82.200			
4	.477	5.957	88.158			
5	.277	3.461	91.619			
6	.251	3.137	94.755			
7	.227	2.840	97.596			
8	.192	2.404	100.000			

As displayed in Table 5, all of the eight components of the researcher-constructed psycho-motor mechanism scale loaded on the only extracted factor. Based on these results, it can be claimed that the researcher-constructed psycho-motor mechanism scale had construct validity.

Table 5. Component Matrix

	Component
	1
WWNE	.894
Appropriacy	.879
Idiom	.857
Point of View	.851
Accuracy	.848
Interpretation	.752
Conclusion	.713
WWMM	.572

For finding the reliability, each of the eight components of the researcher-constructed psycho-motor mechanism scale was rated twice. The inter-rater reliability indices (Table 6) indicated that there were significant agreements between the two raters ($p < .05$).

Table 6. Pearson Correlations; Inter-Rater Reliability Indices

	HolisticR	AccyR	AppR	WWMMR	WWNER	idiomR	PointR	ConcR	Inter
	2	2	2	2	2	2	2	2	R2
	R.719**								
HolisticR1	P.000								
	N90								
	R	.598**							
AccuR1	P	.000							
	N	90							
	R		.524**						
AppR1	P		.000						
	N		90						
	R			.576**					
WWMMR1	P			.000					
	N			90					
	R				.669**				
WWNER1	P				.000				
	N				90				
	R					.725**			
idiomR1	P					.000			
	N					90			
	R						.686**		
PointR1	P						.000		

	N	90	
ConcR1	R		.463**
	P		.000
	N	90	
InterR1	R		.394 **
	P		.000
	N	90	

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

* . Correlation is significant at the 0.05 level (2-tailed).

Discussion and Conclusion

In the first place, the qualitative data helped to construct the psycho-motor mechanism scale. In the second place, the findings of the present study revealed the construct validity and reliability of the scale with respect to the data provided by factor analysis. In other words, the operationalization of the construct which was the researcher-constructed psycho-motor mechanism scale was the good reflection of the theory underlying it.

In line with this study, in a comprehensive research work, Famil Khalili (2011) tried to develop a translation quality assessment scale based on the theories of PACTE (2003). However, he operationalized and developed 7 descriptors based on the first two subcomponents, namely, bilingual and extra-linguistic subcomponents. The descriptors derived from the bilingual and extra-linguistic subcomponents of PACTE' model were evaluated in terms of five independent variables. These investigated variables were: (1) the ability to use the language to manifest linguistic functions and speech acts; (2) the ability to use the language according to the socio-linguistic conventions of the target language; (3) the ability to apply the textual conventions of the target language including knowledge of texture (coherence and cohesion mechanism) and knowledge of different genres with their respective conventions (structure, language feature, etc.); (4) the ability to use well-formed sentences involving conformity with the native speakers' knowledge of vocabulary, morphology, syntax, and phonology/graphology; and (5) the ability to use culturally appropriate language. The developed scale based on the above criteria had a considerable reliability and was successful in assessing translation quality and that established the construct validity of the scale.

In another similar study, Orozco and Albir (2002) designed a tool for measuring the concept of translation competence proposed by PACTE. Their multidimensional translation competence questionnaire consisted of three instruments namely, translation notions instrument, translation problems instrument, and translation errors instrument. Their developed questionnaire, likewise favored high reliability and validity which could put the ideas of PACTE (2003) into practice.

Moreover another study was done by Alavi and Ghaemi (2013) based on the questionnaire developed by Orozco and Albir (2002) which in turn was another practical approach to put the ideas of PACTE into practice. Their study redeveloped and modified the translation competence questionnaire developed by Orozco and Albir (2002) and assessed the validity and usefulness of their multi-dimensional translation competence questionnaire in the Iranian sample. Alavi and Ghaemi (2013), based on their findings, concluded that the translation competence questionnaire by Orozco and Albir, modified and redeveloped by them, has surely strong psychometric characteristics and good construct s validity in the context of Iran.

Generally, this was the first study that tried to operationalize the psycho-motor mechanism concept in PACTE theory of translation competence. In this study, as the design was *ex post facto*, no intervention or even observation during the translation classes were made or done and only the final product of translation was evaluated based on the researcher constructed criteria.

However, when the outcome is tested, it is important to evaluate the input that the learners received. Therefore, it is the responsibility of the course and curriculum developers to include psycho-motor or critical thinking abilities in the program of graduate and undergraduate learners. As Paul (1992) stressed students learn best “when their thinking involves dialogue or extended exchange between different points of view or frames of reference” (p. 291) and advocated engaging students in dialogical (involving dialogue or exchange of different view points) and dialectical (testing strengths and weaknesses of opposing viewpoints) thinking, listening, and speaking situations in the classroom. These are all the processes that in the act of translating on the day of the exam or in any other situations take place for the translators if they plan to translate a text communicatively. So, teaching them the skills in advance is a facilitative tool for them in occasions in which they need to translate any type of text.

Moreover, a possible future trend in the field of translation studies might be investigating the subjective nature of the variables involved in translation quality assessment. In this vein, a scale based on the subjective and objective nature of the variables can be constructed in which according to the nature of each variable, subjective or objective measurement of the construct can be done. Therefore, finding the procedures for reducing the observed subjectivity or even objectivity of constructed scales can be an important concern for interested scholars in the field.

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