Investigating Iran's Success in Standardization of Terminologies of Computer and Information Technology

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Abstract: Iran's Academy of Persian Language and Literature is a scientific governmental institute, responsible for standardization of Persian language in Iran. To standardize the Persian Language terminology, the Academy began to introduce Persian equivalents for English terminologies in 1997. Thenceforth the Academy has introduced thousands of Persian equivalents in various fields, but the Iranian translators still seem to be reluctant about using these newly introduced terminologies. However, no scientific study has investigated the usability and acceptability of these Persian equivalences to the date. To investigate success of Iran's Academy of Persian Language and Literature in standardization of terminologies of computer and information technology, the present study first generated a list of 140 terminologies of computer and information technology introduced by the Academy of Persian Language and Literature. Then the Persian translations of 16 English books on the related filed were investigated to check the equivalents the Iranian translators had used in their translations for the terminologies under the study. Besides, the translation procedures adopted by translators for translating the terminologies under the study were investigated too. The study revealed that most Iranian translators still do not welcome the Persian equivalents introduced by the Academy of Persian Language and Literature and prefer to borrow the original English terminologies through different translation procedures. In addition, the study showed that in most cases, -97 cases out of the total of 140 cases- the Iranian translators had used equivalents other than the ones the Academy of Persian Language and Literature had introduced which in turn indicates that Iran's Academy of Persian Language and Literature has failed to reach its goal of providing standard Persian terminologies of computer and information terminology.

Key words: Terminology Standardization % Academy of Persian Language and Literature % Translation Procedure % Computer and Information Technology Terminology

INTRODUCTION

Thousands of new concepts originate every year in connection with new inventions and discoveries as a result of research and development. It is therefore becoming more and more important to observe certain basic rules in the formation of terms. An increase in polysemy in terminology would lead to a determinologization and thus to the creation of communication barriers in expert communication. This would have a negative impact on the further development of science and technology [1]. To avoid such negative impacts, attempts has been made on standardization of terminology which can be defined as "a choice among competing terms on the basis of economic reasons, precision and appropriateness" [2].

The history of terminology standardization - if one excludes earlier attempts in the field of metrology - started in the International Electrotechnical Commission (IEC), which was founded in London in 1906 following a recommendation passed at the International Electrical Congress, held in St. Louis, USA, on 15 September 1904, to the extent that: *"...steps should be taken to secure the co-operation of the technical societies of the world, by the appointment of a representative Commission to consider the question of the standardization of the nomenclature and ratings of electrical apparatus and machinery".* From the very beginning, IEC considered it its foremost task to standardize the terminology of electrotechnology for the sake of the quality of its subject standards and soon embarked upon the International Electrotechnical

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Vocabulary (IEV), whose first edition, based on many individual terminology standards, was published in 1938.

Likewise, the beginnings of terminology standardization are also believed to be closely linked to the standardization efforts of International Organization for Standardization (ISO), founded in 1946. Nominally, the committee of Terminology and other language and content resources (TC 37) was established from the very beginning of ISO in 1946, but it was decided to be re-activated only in 1951 and the committee officially started operation in 1952. The ISO/TC 37 was put into operation in order to find out and formulate general principles of terminology and terminological lexicography as well as to prepare standards and other documents concerning methodology and principles for terminology and language resources.

According to the *International Standardization Organization* [3] the scope of ISO/TC 37 includes standardization of principles, methods and applications relating to terminology and other language and content resources in the contexts of multilingual communication and cultural diversity. In fact the committee provides guidelines on how to manage the terminological problems.

As put by Strehlow [4], standardization of terminology is a matter of defining concepts to which terms are assigned. He also believes that just like standardization in general, the standardization of terminology serves the same goals as for it can reduce confusion or prevent misunderstandings. As is the case with subject standardization, particularly every one today profits by the standardization of terminology, without necessarily being aware of it.

Terminology standardization supports language-planning efforts and facilitates the implementation of the new terminology. In addition, Ischreyt [5] states that terminology standardization enables authors and translators to prepare high-quality language resources and tools for a wide variety of applications in professional and scholarly information and communication, education, industry, trade, etc. It can help improve communication through avoiding misunderstandings and thereby bringing about greater certainty in ones dealings with the partner. He further states *"It brings about unambiguous communication between subject specialists whether orally, on paper, or through any other information carrier."* The necessity and usefulness of terminology standardization is therefore widely recognized and is carried out on both international and national standardization organizations [6].

However, there is no doubt that every country with developing terminologies needs terminology standardization especially in developing countries, the standardization of terminology, when it is based on successful linguistic planning, can provide the preconditions for an accelerated transfer of knowledge, information and technology. This will directly affect secondary and higher education, vocational and professional training and will advance education, research and development, commerce, etc. [7]. Needless to say that terminologies need to be treated in a systematic way, in order to ensure clear and reliable communication and to establish consistent conventions for terminology use in an organization.

Since the beginning of efforts on terminology standardization, a distinction has been made between the standardization of terminological principles and the standardization of individual terminologies [8]. In other words, terminology standardization can be subdivided into two distinct activities:

C   Standardization of terminologies
C   Standardization of terminological principles and methods.

Of course the two are mutually interdependent, since the standardization of terminologies would not result in high-quality terminological data, if certain common principles, rules and methods are not observed. On the other hand, these standardized terminological principles, rules and methods must reflect the state-of-the-art of theory and methodology development in those domains, in which terminological data have to be standardized in connection with the formulation of subject standards [9].

However according to the *International Information Centre for Terminology* at international level alone possibly more than 200 technical committees are standardizing their terminologies. At national levels, there might be more than hundreds of committees standardizing terminology world-wide. As for December 2011, Wikipedia lists 113 language academies that regulate standard languages at the national level among which is the Academy of Persian Language and Literature (APLL).

Statement of the Problem: Established in the early 1990, Iran's Academy of Persian Language and Literature is a scientific governmental institute, responsible for standardization of Persian language in Iran. The academy members are academics of Persian literature and linguistics from Iran, Tajikistan, Afghanistan and Uzbekistan. According to the statute of the APLL, the main objectives of this academy include the following:

C To establish terminology management unites and organizing similar units in other universities as well as scientific and cultural organizations and coordinate their activities through exchange of experiences.

C To Monitor terminologies from other languages translated into Persian in order to determine criteria for the preservation and strengthening Persian vigor in dealing with new concepts and terminology

C To Plan and manage new principles of choosing Persian equivalents for non-Persian terminologies

C To organize the imported foreign words in Persian and their equivalents

C To help standardize concepts and terminologies of different fields of science and technology in Persian language

As stressed above, a main objective of the APLL is standardizing Persian terminologies through creating and approving official Persian equivalents for the non-Persian general and technical terminologies. It should be mentioned that the Iranian law requires those equivalents passed by the APLL, to be used in all official communications of government bodies and government-owned companies and in product names of all private companies.

However as stated before, the APLL was established in early1990 and before establishment of this academy, Persian language used to suffer from a serious shortage of vocabulary specially in the field of technology and science where technological development had caused a drastic linguistic problem of addressing the expanding wave of newly founded concepts and techniques for which no Persian equivalents used to exist. That had pushed the Iranian technical translators to adopt various ways in order to resolve this problem before anything else. One solution adopted by most translators to cope with this problem was to borrow the English technical terms. That was the case for Persian translation of most English computer and information technology terminology.

Anyhow, the process of borrowing a target language word could happen through different translation procedures namely, Transcription Transference, Naturalization and Calque. Transcription is defined by Harvey [10] as reproducing the source language word in the target language while keeping the source language letters. In contrast as defined by Newmark [11], transference is the process of transferring a source language word to a target language text, which includes conversion of source language letters into the letters of the target language. Newmark [12] also defines naturalization as adapting the source language word first to the normal pronunciation, then to the normal morphology of the target language. The translation procedure of Calque is defined by Vinay and Darbelnet [13] as borrowing an expression from source language and then translating literally each of its elements using target language words.

However, the APLL introduced its first collection of Persian equivalents in 1997. Thenceforward, the APLL has introduced thousands of Persian equivalents for the borrowed foreign terms in more than 40 different fields, but the Persian translators still seem to be reluctant to use the introduced Persian equivalents in their translations. Since the introduction of the Academy of Persian Language and Literature Equivalents (APLLE), there have been on-going critics and concerns as well as discussions on various issues related to the success of APLL in standardizing Persian terminologies, but to the date, no published study has investigated the use of these Persian equivalents among Iranian translators. This fact further justifies the accomplishment of the present study. Therefore, the present research, which tries to study the use of the APLLE as well as procedures adopted by translators translating English computer terminology into Persian, should be considered as the first step in this regard.

Procedure: The current study is a descriptive study, which aims to investigate Iran's success in standardization of terminologies of computer and information technology through answering the unanswered question of "Are the APLLE of English terminologies of computer and information technology really in use or not?" To start the study, a list of 140 Persian equivalents introduced by the APLL in the field of computer and information technology was compiled from the published APLL official source of Persian equivalents. Then, the Persian translations of 16 English books in the field of computer and information technology were explored in order to find Persian equivalents the Iranian translators had chosen for the English terminologies of computer and information technology in the list. The title and other specifications of the books under investigation are presented in Table 1. Furthermore, appendix 1 shows the list of English terminologies of computer and information technology used as the corpus of the study.

Table 1: specifications of the books used for the present study

| Title	Author(s)	Translator(s)	ISBN	Year of Publication
An introduction to database system	C. J. Date	E. Jafarnejad	9646864066	2000
Internet: getting connected	B. Cooper	S.M Roknaddini	9644175727	2002
Home networking with Microsoft Windows XP step by step	M. Dana	P. Samarghandi	9648033005	2003
Introducing Microsoft Windows 2000 server	A. Ardoan	A. Naeeni	9646294639	2000
Teach yourself internet in 24 hours	N.Estabrook	A.Jafarnejad	9649159088	2000
Teach yourself visually Excel 2010	P. McFedries	M. Zanjani	9643649678	2011
Teach yourself visually Word 2010	E. Marmel	A. Foruzande	9643649661	2010
Computer network security & Hacking	H. Homaun	A. Ahmadi	9646290213	2003
CENT Do-it-yourself home networking project	J. Aspinwall	M. Naseh	9649568126	2009
XML in Libraries	T. Roy	M. Alipour Y. Noruoozi	9647790392	2005
Sam's Teach yourself Microsoft FrontPage 2003 in 24 hours	R. Codenhead	M. J.Hashemi	9647617925	2006
Why does my floppy disc flop	P. Cook S.Manning	M. Jafarian	9647414488	2002
Creative micro computing	B. Feddern	R. Firoozi	9643535746	2001
How to pass ICDL for Microsoft Word 2003	P. Holden B.Mumelly	A. Motavaze	9643544826	2007
Beginning Visual Basic 2005 Database	W. Thearon	K. Siroosian	978964410112	2009
Web Wisdom: How to evaluate and create information quality on the web	J. E. Alexander M. A. Tate	S. M. Ismaeili	9647712162	2004
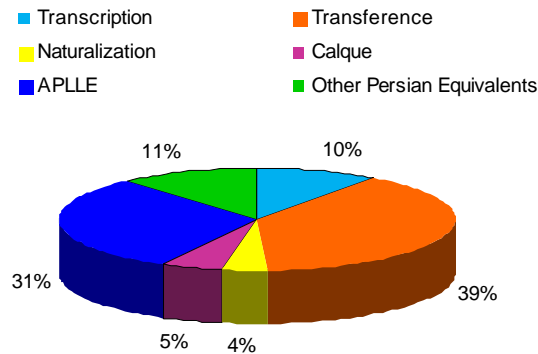
Fig. 1: Percentage of each translation procedure

Having finished extracting the Persian equivalents of the 140 English terminologies of computer and information technology, they were analyzed through comparing with the original English terms in the list in order to see if the APLLE are used by the translators or not. In the case the APLLE were not used as Persian equivalent of the terminologies under study, the terminologies used by translators were further investigated in order to specify the translation procedures adopted by the translators.

DISCUSSION

The data analysis revealed that only in 43 cases the APLLE were used by Iranian translators for translating

the 140 terminologies in the list. It also showed that from the 97 remaining terminologies, 14 were translated through transcription procedure, 55 terms were translated through transference, 5 terms through naturalization procedure and 7 terminologies by the calque procedure. Besides, it was amazing to see that in 16 cases the Iranian translators have used their own Persian equivalents – which were created by themselves-to translate the terminologies in the list.

Regardless of the translation procedure adopted, the study clearly showed that in most cases -97 cases out of total of 140 cases- the Iranian translators have not used the APLLE, which in turn means that the Iranian translators are reluctant about using APLLE in their translations.

■ Transcription ■ Transference ■ Naturalization ■ Calque ■ APLLE ■ Other Persian Equivalents
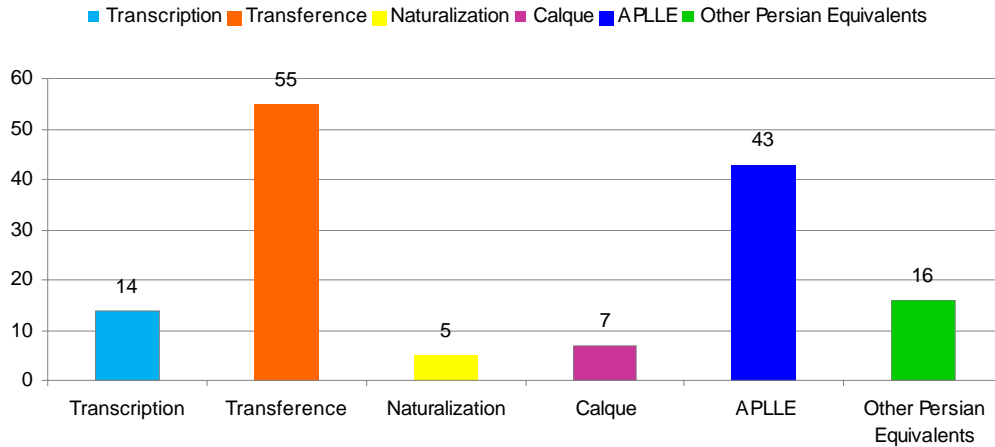

Fig. 2: Frequency of each translation procedure

However, to illustrate the frequency and percentage of each translation procedures, Figure 1 and 2 were drawn. While Figure 1 illustrates the percentage of each translation procedure, Figure 2 displays the frequency for each translation procedure studied in the present paper.

CONCLUSION

The present research has been concerned principally with the success of Iran in standardization of Persian terminologies of computer and information technology. It is concluded from information presented so far that the Iranian translators do not use the APLLE while translating English terminologies of computer and information technology which in turn indicates that Iran's APLL has not been successful in standardizing Persian terminologies of computer and information technology because many terminologies rather than the ones introduced by the APLL are still widely used by the Iranian translators. Although the present study was conducted only on terminologies of one field i.e. computer and information technology, but its results significantly contribute to the field of terminology standardization because it can be considered as a starting point for future studies on the use and acceptability of Persian equivalences of English terminologies introduced by the APLL since it has paved the way for future studies by setting up the research methodology.

However, one single research is not enough and more research should be carried out in order to decisively say that the APLLE are used by Iranian translators or not and whether the APLL has been successful in standardizing terminologies of computer and information technology or not. In addition, researchers may replicate the same study on a larger scale by increasing the number of translated books under the study in order to support or reject the idea that the APLLE of English computer and information technology terminologies are not welcomed by Iranian translators and that the APLL has not been successful in standardization of terminologies of computer and information technology. Likewise, terminologies of other fields of science and technology can be investigated in future studies to support or reject the findings of the present research.

Whatever the reason is, it would be a good topic for a new study to discuss the reason behind the failure of the APLL in standardizing Persian terminologies. Besides, future works should provide suggestions on how to improve the acceptability and use of APLLE among Iranian translators as an attempt towards Persian standard terminologies.

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Appendix 1

Bite	Icon	Save	Hardware	Search engine	Update
Byte	Home page	Setup	Hard drive	Input	Hypertext
Log out	Joystick	Screen	Graphic	Log on	Webpage
Character	Keyboard	Scanner	Folder	Taskbar	Footer
Click	Modem	String	Password	Template	Instant message
Computer	Monitor	Soundcard	RAM	Motherboard	CPU
BCC	Browser	Search	Webmaster	Proxy	Software
Chip	Mouse	Toolbar	Record	Port	Control Panel
Data	Multimedia	Video	Caps lock	Log in	Microprocessor
Drive	Online	Visual basic	Field	Navigation	Tab key
Disk	Customize	Web	Pointer	ROM	Operating system
Download	PC	Website	Memory	Crack	Configuration
Email	Pentium	Wizard	File	Load	Domain
Explorer	Pixel	Virus	Printer	key	Hack
Mouse pad	Username	IP	Enter key	Laptop	Mailbox
Paste	Assembly	Ctrl key	Emoticon	HTML	Host
Font	Copy	Chat	End key	Layout	MP3
Menu	CD	USB	Cookie	Hacker	Cracked
Windows	Type	Volume	Desktop	Draft	Attachment
Attach	Cable	Client	VPN	Forward	Encrypt
Cut	URL	Hyperlink	Output	Document	Web-based
Reload	Router	Right-aligned	Server	Top-aligned	Center-aligned
Default	Firewall	Header	Share	Left-aligned	Offline
World Wide Web			Internet Service Provider		