Theoretical Overview

TRANSLATION QUALITY STUDIES:
A TOTAL QUALITY MODEL FOR
EVALUATING TRANSLATION AND
LOCALIZATION IN THAILAND

Maneerat Sawasdiwat Na Ayutthaya,

Rajamangala University of Technology Thanyaburi
Email: maneerat@cpe.rmutt.ac.th,

Abstract

This research proposes an empirical quality model by exploring the history of translation studies chronologically. Factors affecting translation and localization quality are analyzed from various theories and practices divided into 3 periods or waves: the first wave focusing on sign theory, the second on equivalence and text theory, its contexts and functions, and the third on translation innovations. The analyzed factors are grouped into the endogenous dependent variable constructs as quality indicators incorporating language, context, equivalence, genre, function, format and management, and the exogenous independent variable constructs encompassing source text quality, translation quality and localization quality. As individual literary translation moves towards a translation industry for products and services in the creative economic scenario, localization as a translation innovation is becoming a key market for Thai translators. Thai translation in globalization is influenced by western theories and their innovations in a highly competitive environment. Moreover traditional quality assessment could not scientifically nor sufficiently explain the translation quality phenomena. As a local practical guideline for Thai translation and localization it is proposed that the quality issues are addressed with an empirical total translation quality model which integrates
การวิจัยนี้ได้เสนอโมเดลคุณภาพการแปลข้งประจักษ์โดยการสำรวจบัณฑิตศาสตร์ของ
สาขาวิชาการแปลตามลักษณะเวลา และได้วิเคราะห์ปัจจัยที่มีผลต่อกุณาการแปลและการ
แปลเพื่อปลายทางจากทฤษฎีและหลักปฏิบัติต่าง ๆ โดยแบ่งเป็น 3 ช่วงเวลา คือช่วงที่ 1
เน้นในเรื่องทฤษฎีสัญญาณ ช่วงที่ 2 เป็นเรื่อง ความเห็นเกี่ยวกับทฤษฎีตัวบท บริบทและ
หน้าที่ของตัวบท และช่วงที่ 3 เป็นเรื่องแนวความการแปล
ปัจจัยที่เครื่องแต่งให้นามาจัดประเภทเป็นกลุ่มตัวแปรหลักที่เป็นตัวชี้วัดคุณภาพ
ประกอบด้วย ภาษา บริบท ความเห็นเท่าชาชนิดตัวบท หน้าที่ การเข้ารูปแบบ และการ
จัดการ สำนวนกลุ่มตัวแปรรวมได้แก่คุณภาพต้นฉบับ คุณภาพงานแปล และคุณภาพงาน
แปลเพื่อปลายทาง
เนื่องจากการแปลวรรณกรรมในยุคบุคคลได้เปลี่ยนแปลงไปสู่การแปลเชิงอุตสาหกรรม
สำหรับผลิตภัณฑ์และการบริการในภาคนิเทศกิจสังสังเคราะห์ การแปลเพื่อปลายทางที่เป็น
นวัตกรรมการแปลนี้จึงที่เป็นที่สนใจไปสู่ตลาดสำหรับนักแปลไทย การแปลของประเทศ
ไทยในยุคโลกาภิวัตน์ยังได้รับอิทธิพลจากทฤษฎีและแนวความรั่วระลึกในสมการการ
แข่งขันสูง
นอกจากนี้แล้วการประเมินคุณภาพแปลแบบตัวต้นเน้นไม่สามารถที่จะอธิบาย
ปรากฏการณ์การแปลได้เพียงพอและเป็นที่สามัคคีของรัฐ วิจัยใหม่ที่มีการเสนอในผลการ
แปลเชิงประจักษ์ที่สรุปคุณภาพโดยรวม ที่มีประโยชน์ในการพยากรณ์การตัดแปลงแบบตัวต้น
และแนวคิดการแปลในทัศนคติการเรียนที่นิยมให้เป็นแนวทางการปฏิบัติสำหรับ
การแปล และการแปลเพื่อปลายทางในประเทศไทย
โมเดลคุณภาพการแปลโดยรวมนี้จะส่งเสริมการพัฒนาการตัดสินใจวัดคุณภาพตลอดจนเป็น
พื้นฐานที่มีอิทธิพลในการดำเนินการคุณภาพและความมั่นคงในระดับนานาชาติ
Keywords: translation quality studies, translation and localization total quality model, translation and localization quality measures, Thai translation and localization practices, translation quality innovations

Translation Quality Studies

We are entering a new era of quality where global competitiveness is high and new technology has changed the way we live, the concepts we believe in, and the methods by which we perform activities. Translation’s various qualitative roles, i.e., multilingual communication, transfer of knowledge, source of esthetics, and enhancement of business-localization, play an increasingly important role in the search for a genuine key to globalization. Translation studies, therefore, need to clearly embrace quality studies in their discipline in order to serve a changing world.

Quality can be a confusing concept, partly because people view quality relative to differing criteria based on their beliefs and professional roles. In addition, the meaning of ‘quality’ has evolved as the quality profession has grown and matured. A universal definition tends to be idealistic and its practicality to serve particular needs has become more challenging. The multifaceted nature of quality has yielded inconsistent results, such a global definition does not exist; rather, different definitions of quality are appropriate under different circumstances, i.e. judgmental criteria, product-based criteria, user-based criteria, value-based criteria, specification-based criteria, process-based criteria, etc. (Reeves and Bednar (1994: 419-445), Evans & Lindsey (1996: 12-30), and Arter et al. (2003: 17). With the aim of establishing which approach may best be applied to the modern global needs of translation and localization, it is the macro quality picture with its different aspects serving different purposes that will provide a background for this research and act as a framework for the exploration of the empirical translation quality studies.

by the Department of Curriculum and Instruction Development, Ministry of Education (1989: 62-71), a translation quality monitoring (Pinitpouvdal, 1984: 1041-1092), and a survey on characteristics of a good translation (Pinitpouvdal, 1986: 65). From these studies we can discern whether we want to effectively serve globalized translation and localization. What is needed is an empirical totalization approach to translation and localization quality.

The evolution of translation quality may be observed via the history of translation studies. The dichotomy of ancient translation: word for word and sense for sense discussed by Horace (20 BCE) Cicero (46 BE) forms the basis for later translation criticism. The early attempts at translation theories proposed by John Dryden (1631-1700), Étienne Dolet (1509-1546), and Alexander Fraser Tytler (1747-1813) expand the view of how to translate with the development of descriptive quality criteria. Friedrich Schleiermacher (1768 -1834) has had a great influence not only on key contemporary translation theorists but also on factors leading to quality assurances by his concepts of text types and the alienating vs. naturalizing translation focus (Bassnett-McGurie, 1991: 39-75, Munday, 2001: 18-27). From a prescriptive-language focus in earlier periods, translation integrates other disciplines and theories to further clarify its nature. We may divide the chronological impacts on translation quality approximately into 3 periods as follows:

I. The First Wave

This period marks the study of language as a collection of signs in context. Semiotics may be the most important theory for shedding light on translation quality from which various fruitful explanations have emerged. The study of language as a sign or the science of sign begins with Charles Sanders Peirce and his pragmatic maxim (1839-1914). Henry Stubbe (1632–1676) was the first to use the term 'semiotics' in English in a very precise sense to denote the branch of medical science relating to the interpretation of signs or symptoms. This was followed by John Locke (1632-1704) who used the terms 'semeiotike' and 'semeiotics' to denote the third part of science as 'the doctrine of signs" in his Essay Concerning Human Understanding, 1690 (Uexküll, 1982: 205-215). Peirce as founder of semiotics and pragmatism defined semiosis as an irreducibly triadic
process wherein something, as an object, logically determines or influences something as a sign to determine or influence something as an interpretation or interpretant, itself a sign. (Peirce, 1902: 286-302, 1931-1958: 4-10, 2003:

Semiotics, also called semiotic studies or semiology, is the study of cultural sign processes (semiosis), analogy, metaphor, signification and communication, signs and symbols. Semiotics is closely related to the field of linguistics, which in its part, studies the structure and meaning of language more specifically. Charles W. Morris (1901-1979) later contributed to the three branches of semiotics: semantics, syntactics and pragmatics.

We can observe that the notion of sign is comprised of source text, translation and localization and that these endogenous constructs are governed by exogenous constructs. This analysis will exhibit a clear picture of how the realization and quality determination of the endogenous constructs depend on the exogenous constructs. In other words, the quality of source text, translation and localization is governed by its quality indicators - internal and external environments.

Bronisław K. Malinowski (1884-1942) with his contexts of situation and culture completes more pieces of the whole translation jigsaw. In interpreting Melanesian cultures (people living on an islands of the Western Pacific) through emergence in texts (oral tradition, narration of fishing expedition), Malinowski had to use translation with commentary to provide a free translation which conveyed cultural insights. If he rendered a literal translation to preserve the original source then it would be unintelligible to the English reader. (Halliday and Hasan 1985: 36-37).

To confirm the power of the exogenous constructs – language’s internal and external environments, John R. Firth (1890-1960) with his famous quotation, “You shall know a word by the company it keeps.” clearly supports the environment-dependent nature of language (Firth 1957:11).

Kenneth L. Pike (1912-2000), member of the Summer Institute of Linguistics, contributed further to this approach with his tagmemics, an important branch of American structuralism that attempts to describe linguistic regularities in connection with socio-cultural behavior. Pike believed that the structure of language should be studied in context, not just
single sentences, as seen in the title of his magnum opus "Language in
relation to a unified theory of the structure of human behavior" (Pike, 1966:
365-394).

2. The Second Wave

Equivalence as a translation core and quality is observed in this period.
We may begin with Eugene Nida (1914-) and J. C. Catford (1907-2009)
for their notions of 'correspondence and equivalence'. We can observe that
further exploration has been conducted to define quality indicators, i.e., text
and its context, text functions and textuality.

Nida in The Theory and Practice of Translation (Nida and Taber
1969: 23-24, 202-201) defined dynamic equivalence as ‘quality of
translation’ in which the message of the original text has been so transported
into the receptor language that the response of the receptor is essentially like
that of the original receptors. The opposite principal is ‘formal
correspondence’ in which the features of the form of the source text have
been mechanically reproduced in the receptor language. Catford (1965: 27-
28) proposed a different perspective on equivalence. For him, a textual
equivalence is any target language text which is observed to be the equivalent
of a given source language form on a particular occasion, by particular
methods, e.g., which is changed when a given portion of the source language
text is changed.

Anton Popović (1933-1984) was among the first to apply semiotic
theory to the study of translation in his book "Teória umeleckého prekladu"
(Theory of literary translation), 1975. He coined the terms "prototext", and
"metatext", which are currently used to signify what was once known as
"source text" and "target text" (Makaryk, 1993: 131). His interest is in line
with Nida's and Catford's equivalence as a translation quality by proposing a
staged equivalence as 1. Linguistic: word for word translation or lexical
equivalence; 2. Paradigmatic: elements of grammar (syntactic/word class), 3.
Stylistic: functional equivalence, 4. Textual (syntagmatic): relationship of a
text parataxis (implicit) and hypotaxis (explicit-connectives) or arrangement

Nevertheless it is not always possible to translate sentences with
equivalent structures, the translator should use several strategies to ensure the
translation of a given text. These strategies are called translation procedures.
Vinay and Dalbeneret's *Stylistique comparée du français et de l'anglais* is widely cited for their translation strategies and procedures, i.e., Borrowing, Calque, Literal translation, Transposition, modulation, Equivalence and Adaptation (Munday, 2001: 55-56).

To better explain translation phenomena, more factors are explored in addition to equivalence. Translation features derived from Halliday's Systemic Functional Grammar are applied for potential devices of quality indicators, i.e., text analysis, register, genre, coherence and text functions. Halliday and Hasan (1985: 5-11) defined 'a text' from different angles, i.e., 'Text may be either spoken, written, or indeed in any other medium of expression that we like to think of.' 'A text is essentially a semantic unit... as a social exchange of meaning in a particular context of situation.' 'The context of situation, the context in which the text unfolds... is encapsulated in a text through... a relationship of social environment and functional organization of language.' In addition de Beaugrande and Dressler (1981: 63) defined 'a text' as: 'A naturally occurring manifestation of language, i.e., as a communicative language event in a context.' While Fowler (1991: 59) defined 'a text' as: 'A different kind of unit from a sentence.' 'A text is made up of sentences, but there exist separate principles of text-construction, beyond the rules for making sentences.'

This notion of what is 'with the text', however, 'goes beyond what is said and written: it includes other non-verbal signs-on-the total environment in which a text unfolds'. This supports the idea of a text as a translation unit within a context.

**The Three Features of the Context of Situation**

In order to characterize a text in its relation to its context of situation, Halliday and Hasan (1985:12-13) further referred to this relation as the three features of the context of situation signifying 'register' which is the set of meanings, the configuration of semantic patterns, that are typically drawn upon under the specified conditions, along with the words and structures that are used in the realization of these meanings.

The term "register" first came into general currency in the 1960s (Leckie-Tarry 1993: 28). It is interpreted by Halliday and Hasan (1985: 14) as the three values - field, mode and tenor which are the determining factors for the linguistic features of the text. Field (the what) is the total
event, in which the text is functioning, together with the purposive activity of the speaker or writer; includes subject-matter as one of the elements. Mode (the how) is the way the text is expressed in the event, including both the channel taken by language - spoken or written, and its genre, rhetorical mode, as narrative, didactic, persuasive, phatic communion, etc. Tenor (the who) refers to the type of role interaction, the set of relevant social relations, permanent and temporary, among the participants involved and can be described by formality scale under the term 'style'. In one prominent model, Martin Joos (1961: 177-197) described the five styles in spoken English as follows: Frozen, Formal, Consultative, Casual, and Intimate.

The Functions of Text

Language has functions through its use by its addressee and addressee. Roman O. Jakobson (1896-1982), founder of Prague School, defined six functions of language/text (or communication functions) influenced by Karl L. Bühler's Organon Model as 1. The Referential Function as 'contextual information', 2. Expressive or 'emotive' which relates to the Addressee, 3. The Conative Function engages the Addressee, 4. The Poetic Function focuses on the message for its own sake, 5. The Phatic Function is language for the sake of interaction, 6. The Metalingual or 'reflexive' Function is the use of language (Waugh, 1980: 57-82, Caton, 1987: 223-260).

John L. Austin (1911-1960) in his most influential lecture 'How to do Things with Words' (Austin, 1975: 5-40) interpreted the notion 'language is action' as a frame of speech act comprising illocutionary, locutionary and perlocutionary aspects of meaning. Illocutionary is an act performed in saying something, in contrast with a locution, the act of saying something and perlocutionary act, an act performed by saying something.

Halliday and Hasan (1985: 18-28, 45) specified text functions into 3 types: the Ideational/Referential concerned with mapping the reality of the world around us reflects differences in the Field which are realized through both Transitivity selection and lexical choices. In the same way, differences in the Tenor are realized through Mood which in turn constructs the Interpersonal as social relationships played by participants. The Textual/Logical reflected in Mode manifests the textual which is realized by coherence through nominalization, theme choices (information structure).
To thread a text into discourse, cohesion plays a key role. It is the grammatical and lexical relationship within a text or sentence. Cohesion can be defined as the links that hold a text together and give it meaning. It is related to the broader concept of coherence.

There are two main types of cohesion: grammatical, referring to the structural content, and lexical, referring to the language content of the piece. A cohesive text is created in many different ways. In *Cohesion in English*, Halliday and Hasan (1976) identify five general categories of cohesive devices as reference, ellipsis, substitution, lexical cohesion, and conjunction. de Beaugrande and Dressler (1981:1-3,183,193) added that in order to be communicative a text is threaded by seven standards of textuality: Cohesion, Coherence, Intentionality, Acceptability, Informativity, Situationality, and Intertextuality.

Julian House is a leading researcher on translation quality. Her quality assessment model enhances both translation and quality studies. In her attempt to analyze and compare the original and translation texts, based on Hallidayan Functional Systemic Linguistics, House applies lexical, syntactic and textual means to analyze ‘register’ across the Field, Tenor and Mode, subsuming genre, language and text. House applies the Overt translation notion as one in which the genre, register, and language/text of the original are preserved, but the function of the translation may be different from that of the original. The Covert translation notion is one in which genre and the function of the original are preserved in the translation, but language/text and register are modified to fit the parameters of the target language through cultural filter (House, 1977, 1997, Kudo, 2007: 165).

Hence a picture of factors affecting translation quality can be drawn from the above notions: features and functions of texts including their intertextuality.

3. The Third Wave

Translation Innovations

Until recently, it has been observed that individual literary translation is gradually moving towards a translation industry of products and services
to serve global economy. Translation innovations in business-industry setting known as localization, multilingualization, internationalization, business process outsourcing, crowd sourcing, cloud computing and virtualology, are becoming not only keys to market for translators but also keys to the country’s new economy. It is discussed that without the intervention of language mediators, multilingual strategic economy, such as multidata governance and global content management could not be accomplished.

Translation, Localization and Quality

Localization is often treated as a mere "high-tech translation", but this view does not capture its importance, its complexity or what it encompasses. Though it is sometimes difficult to draw the limits between translation and localization, in general localization addresses significant, non-textual components of products or services. In addition to strict translation, the localization process within various contexts and issues summarized from Highbarger (2003:1), Lommel (2007: 1-17) and MultilingualQA (2010: 1) encompassing Linguistic context, Cultural – Market - Business context, Physical context, Technical context, and Legality-Regulation-Politics context.

All these changes aim to recognize local sensitivities and to enter the local market by merging into its needs and desires. For example, localization aims to offer country-specific websites of the same company or different editions of a book depending on the place it is published.

Various organizations have proposed quality and standards schemes to serve this agenda, e.g., the SAE (Society of Automotive Engineers) J2450 Translation Quality Metric and the LISA (Localization Industry Standards Association) QA Model, ISO 12616, Italian UNI 10574, German DIN 2345, EN 15038. The ISO/TC37/SC2/ WG 6 incorporates the European EN 15038 Standard with the American ASTM (the American Society for Testing and Materials) and the Chinese Standard, i.e., GB/T 19363.1—2003 (Doval, 2005: 1).

As observed, these standards make reference to the translation process in general, in the belief that quality product is the result obtained from qualified process as in the case of LISA QA Model or SAE J2450 (LISA, 2007: 5-7, Translation, 2010: 1). None of which presently reflects an empirically total-comprehensive quality.
From the above information, we see that quality is a core issue. It is observed that translation innovations combine translation with technology in a business-industry setting where technical and procedural quality is more tangible and objective than linguistics. Collaboration between technical and linguistic is indispensable. Without the joint effort, the best rules for translation rules and the best practices for translation practices could not be accomplished. As judgment of who should get the job is a proof of organizations' profit and success. The search for an appropriate practical guideline for teaching – training of translation and a framework for screening qualified translators and their translations, as well as an outline for quality localization are an agenda in the Thai national language policy.

In Thailand, research and studies have been undertaken to seek for a practical guideline to assess 'how to translate', i.e., "The Factors Affecting the Translation of the Charge from Thai to English" (Udomsilpa, 2001), Translation Skill Development of Students Studying Translation Foundation at Thaksin University, Songkhla (Kiriratnikom, 2005), "Katrina Reiss Criteria for Literary Translation Quality Assessment: A Case Study of the Pilgrim Kamanita" (Suvannanonda, 2003), A Comparative Study of the Two Thai Versions of John Steinbeck's Of Mice and Men by Kantha Srivimol and Pracha Uttathon (Somchai, 2006), "Translations of the Nightingale and the Rose by Oscar Wilde, The Storm by Kate Chopin and A Rose for Emily by William Faulkner with Analysis." (Thongthua, 2006). The results fell in many methods and techniques, none of which reflected empirical outcomes.

The Department of Curriculum and Instruction Development, a unit in the Ministry of Education (1989: 62-71) formerly responsible for translation quality identified Thai translation quality by the description: appropriateness, and content completeness and language accuracy, faithful to the source text, rhetorical and well-organized translation, etc.

In addition criteria proposed by Sidha Pinitpouvadol (1984: 1041-1092), a key translation theorist on monitoring translation quality including her survey on good translation characteristics (1986: 65), focus on descriptive measures, for example clarity, conciseness, source-orientededness, accuracy, appropriateness and readership-responsiveness to the target text, etc.
We can see that each attempt relies on different individual approaches to seek standardized quality or best practices in a descriptive scheme. Moreover in the area of dub localization (Dub localization 2010: 1) where translation is lucrative, some issues are worth noting. The controversy surrounding how much (dub) localization is 'too much' is often much-discussed. These examples reflect a need and a call for an agenda to propose a new empirical scheme for quality assessment as well as to determine the extent to which standard and quality will allow the harmonious rendering of the original to the translation.

A Relational Quality

It is further observed that while traditional translation moves toward innovations, i.e., localization, multilingual content governance, etc., the subjectively descriptive, conventional quality measures move toward empirical objectivity as well. Explicable and measurable quality is a must in business and industry setting. Moreover a lack of only one agreed standard but multi-directional quality-orientedness enhances a relational quality range, - a continuum - from a simple to the ideal absolute quality, - from different perspectives for various purposes and stakeholders. ASTM translation and interpretation standards focus on communicating requirements between the provider and the supplier. EN15038 focuses on qualifications and provider processes and mandates that service providers must apply a QA in their translation/localization process. A local quality guideline/framework or model to exhibit different values from one's competitors will fulfill the cycle of one's quality assurance. In brief EN15038 is for certification of providers, our own QA metric for evaluation of translations, and the ASTM standard to cover translation requests. No matter what approach we will rely on, explicable, measurability, objectivity and continuous improvement are our main key for quality control.

At a basic quality assurance level, a comprehensive compilation research of translation strategies, i.e., Translation Terminology edited by Jean Delisle, Hannelore Lee-Jahnk, Monique C. Cormier (1999) under the auspices of FIT and CIUTI may be used as an explicable descriptive quality assurance. The Thai Translation Terminology (Sawasdiwat Na Ayutthaya 2010a) based on the above widely used Translation Terminology may be used as a quality guideline for translation and localization in Thailand. It is noted that the criteria from the book is currently applied by the National
Accreditation Authority for Translators and Interpreters and the American Translators Association to grant a certification to translators. Some Terms in the Translation Terminology are used in the ATA Certification Exam, “How the Exam is Graded”, e.g., Incomplete passage, Illegible, Misunderstanding of original text, Mistranslation into target language, Addition or omission, Terminology, Word choice, Register (ATA Certification Program, 2010: 1).

For the Thai version, the 208 terms are presented in alphabetical order. Each term, was translated into Thai with validated explanation and examples from 162 qualified resources ranging from non-academic or entertainment to academic, e.g., newspaper, advertisement, magazines, documentary, textbooks, comic, movies, bible, novels, tales, short stories, literature, poems, etc. The following is an excerpt from the Thai Translation Terminology (Sawasdiwat Na Ayutthaya 2010a: I-14).

Example:

I.

ad hoc formulation กาการกําหนดโดยเฉพาะ

The result of a translation-related operation that establishes a lexical, syntagmatic, or even phrase <equivalence> that is only appropriate within the current <text>

ผลของการดําเนินการที่เกี่ยวข้องกับการแปลโดยกําหนดในระดับคำ ภาษาตั้งแต่พื้นห้องแม้แต่สิ่งที่ใด <ความเทียบเท่า>ที่เหมาะสมภายใน <บีบท>นี้เท่านั้น (เป็นการแปลตามบีบท) ตัวอย่างเช่น - I. Si l’on observe les oiseaux on constate que’ basse vitesse leurs ailes se crescent par le braquage vers le bas dubord de la fuite; un profil creux porte plus qu’un profil plat. ----- Watch a bird in flight: at low speeds, the trailing edges of its wings are pointed downwards, forming a hollow curve. This shape has more lift than a flat section ---- ดักลำเดินทุ่นและบินนี่ ๆ ปลายปีกจะรุ้งเข้าชื้นต่ําลง ปีกที่รุ้งเข้านี้จะ มีแรงยกมากกว่าปีกที่
3. Seating himself at the writing-table, Stuart began mechanically to arrange his papers. Then from the tobacco jar he loaded his pipe, but his manner remained abstracted. (Rohmer, 1988: 10 as cited in Sawasdiwat Na Ayutthaya, 2010a: 13-14) 

4. Three interns, ages 19 to 21, showed up at his firm with tank tops, exposed bra straps and flip-flops. 

4. Total Translation and Localization Quality Model

Total Quality Concepts

As quality has continually evolved, the broad spectrum of quality becomes recognizable, hence the concept of ‘Total Quality’ was added. A.V. Feigenbaum (1988: 84-90) devised the concept of ‘Total Quality Control’ in the 1950s, later known as Total Quality Management. His four comprehensive quality characteristics are the origin of the notion “Total Quality.” They are adapted with insights from Russel and Miles (1998: 13-16) to make a total translation quality framework. By being Total, Quality should represent: 1. Practicability and responsibility to society, 2. Deeply thought-through input, process and output, integrating people-technology relationships, and being communicable throughout its environment, 3. Harmony of broader scope from source to end, and 4. A systematic objective and transparent approach with continuous improvement.

Since the late 1980s the notion 'total quality' has become an integrative philosophy for continuous improvement of the quality of products and processes. It functions on the premise that this quality is the responsibility of everyone who is involved (Ahire, 1997: 91-114, Cua, McKone and Schroeder, 2003: 675-694). This supports why relational quality is a timeless trend. While Total Quality Management (TQM) tries to improve quality by ensuring conformance to internal requirements, the Six
Sigma, a newer totality concept focuses on improving quality by reducing the number of defects and impurities (Jacowski, 2007:1). The Six Sigma interestingly reflects the Deconstructionism – Postmodernism philosophy.

A Quality Model

Being a relational quality assurance, a total quality model tries to incorporate both endogenous and exogenous constructs that influence translation and localization phenomena responsive to producers and receivers at the explicable-descriptive and quantifiable/measurable levels. The proposed model will delineate its relational and totality values as follows:

1) Proposition and Aim:

When confronting quality issues, a total translation quality model is proposed as a local practical guideline for Thai translation and localization, as an enhancing quality measure and a solid background for international quality and standards implementation.

2) Assumption:

The proposed total quality model is based on the above studies including insights on language typology from Kies (1995), Barker and Galasiński (2001), Caffarel et al. (2004), and paper presentations on translation and localization quality (Sawasdiwat Na Ayutthaya, 2008, 2009a, 2010b, 2011). The following parameters determine the application and limitation of the models.

The definition of sign is key to the proposed model as it has to embrace both text and non-text notions in order to accommodate localization. Sign is beyond a common text’s notion as by its totality and has to serve not only conventional translation but also its innovations, i.e., localization or multilingualization.

If Equivalence is the core of translation and localization, Language is its carrier, Context is its environment, we need to determine what variables/indicators will be exhibited in the tables and the models, how they are related and virtually processed by means of ‘translating’ to the final
product. In the aforementioned quality review: quality can be briefly indicated by its input/source, process and output including its environment, i.e., context, specifications, value, user, participation, continuous improvement which lead to a proposal of a quality model. The following analysis tables and models will further shed light on our quest.

Variables/indicators were chosen from literature review, including insights from the Overt and Covert notions of translation type, as well as criteria from international quality and standards. To support reliability and validity values of the chosen indicators, a Delphi technique – comments by translation and localization experts was applied to screen the set of indicators which were then analyzed by means of Cronbach’s Alpha test reliability (Cronbach 1951: 297-334). The proposed indicators are based on Alpha value exceeding 0.70 as a threshold for acceptable reliability (Hair et al., 1998: 118, George and Mallery, 2003: 231, Hinton and Brownlow, 2004: 363). However, further research is suggested to statistically support correlations between independent and dependent variables: quality indicators and their quality.

Table I. Variables/Indicators Relations in Translation and Localization by Levels of Source Text Attachment

<table>
<thead>
<tr>
<th>Variables/Indicators</th>
<th>SOURCE TEXT</th>
<th>TRANSLATION</th>
<th>LOCALIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAMMAR</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CONTEXT</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>EQUIVALENCE</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>GENRE</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>+</td>
<td>+ (-)</td>
<td>+ (-)</td>
</tr>
<tr>
<td>FORMAT</td>
<td>+</td>
<td>+ (-)</td>
<td>+ (-)</td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

In Table I. the three dependent variables (the endogenous constructs) namely source text, translation, localization covering quality indicators i.e., comprehension, informativeness, meaningfulness, naturalness, esthetics, compliance to a genre and a function, stakeholders’ satisfaction and
responsiveness, cost-benefit, etc. The dependent quality relates to the six independent variables (the exogenous constructs) namely grammar, context, equivalence, genre, function and format by levels of source text attachment. For example, grammar is attached to source text but varies in translation and localization as each language has its own grammatical rule. Equivalence is attached to translation and localization. Genre is consistent across all levels. Function is attached to translation and localization, but can be modified or detached from its source text function. Source text format as in IT object is a focus of localization but it may be modified to serve locality. These variables incorporate into translation determination which is the total knowledge/competence/performance of the author/translator to render a source text/object, translation or localization. The componential analysis marked and unmarked signs imply relational attributes.

**Table 2. Endogenous Constructs (indicators) Governed by Exogenous Constructs (quality)**

<table>
<thead>
<tr>
<th>Exogenous Constructs</th>
<th>Endogenous Constructs</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANGUAGE</td>
<td>SOURCE TEXT</td>
</tr>
<tr>
<td>CONTEXT</td>
<td>TRANSLATION</td>
</tr>
<tr>
<td>EQUIVALENCE</td>
<td>LOCALIZATION</td>
</tr>
<tr>
<td>GENRE</td>
<td></td>
</tr>
<tr>
<td>FUNCTION</td>
<td></td>
</tr>
<tr>
<td>FORMAT</td>
<td></td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td></td>
</tr>
</tbody>
</table>

In Table 2, as earlier identified, the two variable composites are destined as endogenous and exogenous constructs. The first composites incorporating source text, translation and localization are outcomes of their controllers – exogenous constructs: the internal and external environments. We may basically say that the three qualities: of the source text, translation and localization are affected by their exogenosity (quality indicators). In addition the two qualities of translation and localization are affected by their exogenosity against their source text. The exogenous constructs feature grammar, context, equivalence, genre, function, format and management (Sawasdiwat Na Ayutthaya, 2010a: 91-92) as shown in Table 2.
The exogenous constructs featuring translation contexts of linguistics, situation and culture are shown in Table 3.

**Table 3. The Exogenous Constructs: Translation in Contexts**

<table>
<thead>
<tr>
<th>Translation features (Source and Target)</th>
<th>Tasks realized in contexts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Linguistics</strong></td>
<td></td>
</tr>
<tr>
<td>Context of linguistics overlaps with grammar as sign which is utterance/discourse and responsive and dynamic (not static). For example, collocations/co-texts (a sequence of words or terms that co-occur more often than would be expected by chance.) Matched words ex. make a difference, do business Matched clauses ex. cause-effect Matched texts ex. genre --- instruction (series of imperative clauses — train of thought as instructive)</td>
<td></td>
</tr>
<tr>
<td><strong>Situation</strong></td>
<td></td>
</tr>
<tr>
<td>Context of situation refers to the local environment for example, Slow Children at Play (road sign/physical impairment depends on situation)</td>
<td></td>
</tr>
<tr>
<td><strong>Culture</strong></td>
<td></td>
</tr>
<tr>
<td>Context of culture refers to the local/global environment for example, Local: idiom - A piece of cake = easy as eating a banana (banana can be found everywhere in Thailand not cake.) (Thai equivalence) Global: notion internet (network communication online) more or less a universal culture</td>
<td></td>
</tr>
</tbody>
</table>

We know that important indicators to determine the meaning and quality of translation and localization are their contexts. We can say that contexts can influence the content-metacontent of a text/object. As localization embraces a new dimension of translation hence its contexts may
be extended to other fields. Both contexts of translation and localization can be overlapped. Details of various contexts affected translation and localization are presented in Tables 3. and 4.

**Table 4. The Exogenous Constructs: Localization in Contexts**

<table>
<thead>
<tr>
<th>Localization specifications (Source and Target)</th>
<th>Tasks realized in contexts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Linguistics</strong></td>
<td>For example, software localization covers translation of the textual components of the user interface, online help, user documentation, installers, etc. For media or informatics products, localization includes dubbing and adaptation of speech-based audio components. The linguistic issue focuses on typographical, grammatical, and contextual errors. Language-specific settings and resources must be adapted, such as regional defaults, spell check and speech engine e.g., Are measurements shown in centimeters or inches, kilometers or miles? Support for East Asian languages that require thousands of characters requires special design and attention.</td>
</tr>
<tr>
<td><strong>Culture-Market-Business</strong></td>
<td>Local market/business, situation and cultural issues can affect all aspects of product design and localization. Local currencies and accounting conventions must be supported including local address and telephone number formats. Other issues include colors and graphics must be modified to meet local cultural norms. Text and non text have to be adapted to serve locality in terms of cultural appropriateness.</td>
</tr>
<tr>
<td><strong>Physicality</strong></td>
<td>Will it work in the target market? For example, graphical representations of products or items such as electrical outlets may need to be adapted to reflect the particular hardware used in specific markets, e.g., voltage and their icons of electrical appliances.</td>
</tr>
<tr>
<td><strong>Technicality</strong></td>
<td>Can it work with the needed data in the country? How are the localized languages and objects structured and formatted? For example, support for East Asian</td>
</tr>
</tbody>
</table>
languages or fonts requires special design and attention, (e.g., Text embedded in graphic may be longer for localized languages than for English. Sort order is not the same for all languages that do not use the western languages, i.e., Chinese are sorted by brush stroke order.) Hyperlinks for web localization may be adapted to serve locality.

<table>
<thead>
<tr>
<th>Regulation-Legality-Politics</th>
</tr>
</thead>
<tbody>
<tr>
<td>These norm-compliance contexts cover various rules and regulations, e.g., government assigned numbers such as, the Social Security number in the US, National Insurance number in the UK, Identity card in Thailand. Political issues may significantly affect localization, i.e. Use of male and female/minorities adjectives, sensitive images, icons, and terminology.</td>
</tr>
</tbody>
</table>

In addition to the translation contexts, the exogenous constructs may expand to integrate localization contexts of linguistics, culture-market-business, physicality, technicality and legality-regulation-politics summarized from Highbarger (2003:1), Lommel (2007: I-17) and MultilingualQA (2010: I) as exemplified in Table 4.

The analysis from the above tables is summarized in Model I. The Model demonstrates a descriptive relation of the endogenous and exogenous constructs in a conceptualized framework including the process and how they become realized in the final product.

**Model I. A Summary Conceptual Framework for Total Quality Model for Translation and Localization**

<table>
<thead>
<tr>
<th>Each text/semantic unit is realized in (Source Text) Translation and Localization Process</th>
<th>by (authors) translators</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>I. Text systems</em> <em>(register)</em></td>
<td>Transitivity</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In Model I, each text/semantic unit is realized by

I. The exogenous constructs: The independent variables incorporate the Text systems of Transitivity, Mood, and Theme-Taxis-Coherence that express the three functions: Experiential/Ideational, Interpersonal, Textual-Logical by the three features: Field, Mode, and Tenor creating/transferring (verbal and nonverbal) signs in contexts and by formats.
2. The endogenous constructs: The dependent variables incorporate the quality of Source Text, Translation and Localization which are governed by the exogenous independent variables.

The authors/translators through the endogenous and exogenous constructs analysis and configuration will apply writing/translation strategies/technology/determination for their production.

A total analysis is the sum analysis of the exogenous and the endogenous constructs. The analysis results of the source text will be compared with the target text’s. A descriptive explicable, relational quality assessment can be carried out at this stage. This model may serve best for teaching and training as it requires both theoretical and practical details.

To assure a total quality, a comprehensive model with an example of an object (web page) translation/localization is proposed below in Model 2. The independent variables which govern text realization determine the quality of Source Text/Object, Translation and Localization. The quality indicators (Grammar, Context, Equivalence, Genre, Function, Format and Management) will indicate quality of source text, translation and localization. Among indicators, terminology covers terms for fields/areas, dominant language specifies type/level of language used. Format is a localization process to make text/object fit localization. Management covers the total process including technological application, i.e. machine translation, computer assisted translation, translation memory, etc. Content is a conveyed message and metacontent includes cognitive abstraction, i.e., sensation as feeling, reaction, aesthetics, etc.

**Model 2. A Total Quality Model for Translation and Localization in Thailand**

<table>
<thead>
<tr>
<th>Variables/Indicators</th>
<th>SOURCE TEXT QUALITY</th>
<th>TRANSLATION QUALITY</th>
<th>LOCALIZATION QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAMMAR</td>
<td>N 1 3 5</td>
<td>N 1 3 5</td>
<td>N 1 3 5</td>
</tr>
<tr>
<td>Lexicon</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Syntax</td>
<td></td>
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<td></td>
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<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Textual</td>
<td></td>
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</tr>
<tr>
<td><strong>CONTEXT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content-Metacontent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linguistics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture-Market-Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technicality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulation-Legality-Politics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EQUIVALENCE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lexicon / Terminology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syntax</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Textual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GENRE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Register</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Writing Conventions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dominant language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUNCTION</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---------------</td>
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<td>---</td>
</tr>
<tr>
<td>Appropriateness</td>
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<tr>
<td>Completeness</td>
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<td></td>
</tr>
<tr>
<td>Consistency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FORMAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Non-text</td>
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<td></td>
<td></td>
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<tr>
<td>Content</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Link</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Testing</td>
<td></td>
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<td></td>
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<tr>
<td>Final revision/</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>improvement</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>and Feedback</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>GRAND TOTAL</td>
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<td></td>
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<tr>
<td>ASSESSNENT</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Satisfactory</td>
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</tbody>
</table>
### 3) Application and Explanation

On descriptive quality assessment, simple statistics, i.e., percentage, frequency and checklist can be applied to determine quality characteristics of the source text, translation and localization against their relevant indicators. The values assigned are I for improved, 3 for fair and 5 for good. As a comparison between the source text and its translation or localization is needed to assure further total quality, therefore its analysis is required. In addition, the source text analysis enhances a trend to control a source text for machine translation and internationalization. Its result is used to develop qualified translation corpora, and to build post editing database. Feedback from collected post editing will minimize repetitive or frequent errors that may occur in the future process.

For further quality assessment, score weight analysis may be applied to rank priority of the quality indicators or a comparison between the observed source and their expected translation or localization can be undertaken by applying chi square, i.e. goodness of fit to see differences from the observed source text. More research is needed to confirm statistical relation between indicators and their translation and localization quality.

### Conclusion

Translation and localization are key components in the development of global communication, knowledge and technology, culture and cultural awareness, aesthetics and most importantly they serve as the essential building blocks in the construction of a new economic code. The success of this code is determined by commitment to quality. If quality is our ultimate
goal then we need to conduct more research and studies. The relational notion of quality as linear continuum or hierarchical order from simple to complex or advanced assessment is a promising trend. As quality tends to be relational rather than absolute in order to enhance various satisfaction levels for all stakeholders, the extent to which a relational value is accepted depends on how much absolute quality one is obliged or wishes to determine.

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