## 摘要

本论文通过文献研究,首先从广义和狭义上提出了翻译职业能力的定义,进而以狭义上的翻译职业能力为研究对象,总结归纳出其组成成分。接着采用实证研究的方法,探讨了在翻译项目中培养非英语专业学生译者的翻译职业能力的可行性,以及学生翻译职业能力和译文质量之间的相关性。本研究的受试者是在某综合大学电气院四年级随机挑取的 16 名学生。在参加翻译项目的学习的同时,学生按要求分别在项目开始时和项目结束时填写了同一份"关于翻译职业能力的调查问卷";同时,为了测试学生译文质量的提升情况,该项目的客户代表也跟踪学生翻译进程,分别在学生刚参与项目以及完成项目时按要求填写了同一份"关于学生译文质量的调查问卷"。本文采用社会统计学软件 SPSS(版本 13.0)对问卷调查所得数据进行了对比性分析和相关性分析。通过对数据进行定量分析,本研究得出以下结果:

- 1. 本研究中的学生在经过翻译项目之后,翻译职业能力在总体上得到了一定的提高。
- 2. 学生翻译职业能力中各组成成分的提升幅度遵循一定的次序,即学生译者在职业道德,人际交往能力以及使用翻译资源这三方面得到了最为明显的提高;心理生理能力得到了较为明显的提高;提升幅度不明显的有:培训意识,工作态度与行为(其中,工作态度得到了较为明显的提高,而工作行为,尤其是对于自身权利的认识能力提升幅度不明显)以及质量控制能力。
  - 3. 经过翻译项目,学生的译文质量得到了较为明显的提高。
- 4. 经过翻译项目,学生翻译职业能力各成分总体上与译文质量呈正相关。其中,职业道德,人际交往能力以及使用翻译资源这三方面与译文质量呈显著性正相关。

基于以上研究发现,本文进一步对非英语专业本科生翻译教学提出以下建议:在翻译教学过程中引入翻译项目具有可行性,翻译项目能有效培养学生的翻译职业能力,提高学生的译文质量;在翻译教学中,教师要注重培养和译文质量呈显著正相关的翻译职业能力各组成成分,即职业道德,人际交往能力以及使用翻译资源的能力;同时,对于在翻译项目中学生不能有效习得的翻译职业能力各组成成分,教师要有意识地创造客观条件进行引导式培养,如培训意识,工作态度与行为以及质量控制能力这三个方面,从而更有效地培养出适应社会需求、翻译素质全面的职业译者。

关键词:翻译项目;职业能力;译文质量

## **Abstract**

Based on literature studies, the paper proposes the definition of professional competence (PC) in translation, and then focuses on the components of PC in its narrow sense. The present empirical study intends to explore the feasibility of developing EFL students' PC in a translation project, and the relationship between students' professional competence in translation and the quality of their translated texts. A group of 16 fourth-year students in the college of electric and information engineering are randomly chosen as the subjects of the study. They are required to complete the Professional Competence Questionnaire at the beginning of the project (the first stage) and at the end of the project (the second stage). At the same time, in order to assess the quality of students' translated texts, the client of the translation project is required to complete the Quality Assessment Questionnaire at the first stage and at the second stage of the project. The Statistical Package for Social Sciences (SPSS, version 13.0) is employed to analyze the data. Through comparative analyses and correlation analyses of the raw data, the author observes the following tentative findings:

- (1) The students in the present study have made a remarkable progress in their overall professional competence in translation.
- (2) The improvement range of the components of PC in translation is in a hierarchic rank. The top three components of PC in translation that are best developed are: Ethics, Interpersonal Communication Skills and Translation Resources, followed by Physical and Psychological Conditions, Training, Working Attitudes and Behaviors (the students' working attitudes have been improved greatly, such as being modest and cooperative in their work, but their working behaviors are still undesirable in that they are not sensitive to their own rights) and finally Quality Management Skills.
- (3) The students in the present study have made a remarkable progress in the quality of their translated texts, which helps testify the positive role of the authentic translation experience in cultivating EFL students' PC in translation.
- (4) After the translation project, a positive correlation has also been demonstrated between the PC in translation and the quality of the translated texts, though some correlations are low and not significant due to the small size of subjects in the study. Ethics, Interpersonal Communication Skills and Translation Resources are the top

three components that have significant positive correlations with the quality of the translated texts.

Findings drawn from the present study account for its pedagogical implications as stated below.

Firstly, it is crucial to bring translation projects into the academic environment. By increasing students' sense of responsibility and raising their interests, real-life situations increase the likelihood that students would be more engaged in their learning and thus invest more efforts and time on learning.

Secondly, teachers should focus on developing the components of PC in translation that are significantly correlated with the translation quality, namely, Ethics, Interpersonal Communication Skills and Translation Resources; and try to act as the active project managers and the facilitators to create a more favorable environment for the students' acquisition of other components of PC in translation, which the students fail to acquire by themselves in the translation project.

Thirdly, those components of PC in translation that can be best developed in the translation project and also are positively correlated with the translation quality should be attached great importance to translation teaching, namely, Ethics, Interpersonal Communication Skills and Translation Resources.

Key Words: translation project; professional competence; quality of translated texts

## **Abbreviations**

PC Professional Competence

EFL English as a Foreign Language

TQA Translation Quality Assessment

TQ Translation Quality

SPSS Statistical Package for Social Sciences

TC Translation Competence

PACTE Process in the Acquisition of Translation Competence

ZPD Zone of Proximal Development

ST Source Text
TT Target Text

SL Source Language
TL Target Language

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## **Chapter 1 Introduction**

## 1.1 Orientation and Research Questions

The present study is designed to explore the relationship between EFL (English as a Foreign Language) students' professional competence (PC) in translation and the translation quality (TQ) in technical translation through an empirical study.

The paper covers mainly two aspects: one is the study on the definition and components of PC in translation in the theoretical level; the other is the study on PC and TQ in technical translation in an empirical study, in which the Statistical Package for Social Sciences (SPSS, version 13.0) is employed to help analyze the raw data collected from two questionnaires. Based on the results generated from the empirical study, the author expects to put forward some pedagogical implications to the improvement of our current situations in translation teaching.

The paper is to analyze and answer the following research questions:

- (1) Will the students' overall professional competence be improved after going through the translation project?
- (2) Is the improvement of each component of PC in translation in a hierarchic rank in its significance? If any, what kind of hierarchic rank is it?
- (3) Will the quality of the students' translated texts be improved after going through the translation project?
- (4) Is there any correlation between the PC in translation and the quality of the translated texts? If any, what kind of correlation is it?

## 1.2 Significance

Developing students' professional competence in translation deserves its importance for it shoulders the needs both from the society and from the pedagogical development.

## 1.2.1 Demand from the Society

Nowadays translation is not only an activity of transferring source texts into target texts, but more like an activity catering for specific needs of human beings in the society.

On the one hand, in this age of mass communications, the expanding translation market calls for more professional translators in various fields, especially in the fields such as science and technology, laws, economics, etc.

On the other hand, the actual situation in translation profession in China lags far behind what is desired, which puts the professional training into the highlight. There are limited numbers of both professional translators and training organizations in China, so most of translation works are handled by semi-professional ones represented by college teachers and factory workers, or even some bilinguals who haven't received any formal translation training. These translators take translation as a part-time job and undermine the status of professional ones by vicious competition (un)consciously to some extent.

Such a widening gap between the demand for and supply of professional translators can be narrowed by enlarging the number of qualified professional translators.

### 1.2.2 Demand from the Pedagogical Development

Professional-oriented translation training/education is the main-trend abroad, and is also the trend that the translation education in China follows. From the university standpoint, the aim of the translation education in institutions of higher education is to produce professional translators catering for needs from the labor market.

As Don Kiraly concludes in her book, "translators today cannot afford to be linguistic hermits, sitting alone behind a typewriter and surrounded only by dusty tomes (Kiraly, 2000:12)." The field of translation education has now gradually broadened to the extent that it encompasses not only factors within the traditional class (such as analysis of literary text, teacher-dominated teaching process, etc.) but also factors concerning the extra-academic fields (such as the job market, the client, and the target readers, etc.). Therefore, in order to make the necessary preparation for being on the work force, students should be led to foster their adaptability to the market with real clients and companies. It is not a kind of future thing that is too early for students to touch upon. "Neurological research seems to indicate that the sooner a skill is developed, the more receptive and tuned the brain will be towards it." (Davies, 2004:78)

In addition, as our pilot survey on the local market (see 3.4) and shows, it is a fact that employers have definite expectations of new graduates majoring in translation, while they find out that the universities fall short of meeting their expectations regarding required competences or knowledge, especially students' preparation for dealing with specialized translation, terminology management and information technology. This may also account for why many translation companies/agencies favor EFL students rather than English majors when they want translators, for the former ones have a good mastery of specialized/subject knowledge upon graduation compared

with the latter one. In this sense, the author holds that it is more efficient to set translation courses for EFL students with certain bilingual competence in universities and thus takes EFL students as its subject of empirical study.

### 1.3 Research Methodology

Data in this paper are collected from two questionnaires, one for 16 fourth-year students in the college of electric and information engineering of one university in Hunan province, and the other for the client of the translation project. Without any experiences in any translation project before, the students are engaged in the present translation task and are assigned with instruction books of machinery.

The two questionnaires are separately deigned for the students and the client, namely, the Professional Competence Questionnaire for EFL Students (see Appendix B) and the Quality Assessment Questionnaire (see Appendix C). The former is designed based on "professional elements" normalized by eleven authorized international organizations of translators and interpreters, which will be mentioned in detail in 2.1.2 (see Table 2.1). The latter is based on Darwish (2001) and Gile (1995) and its practical foundation is the translation quality requirements adopted by eight translation companies/agencies in Changsha, Hunan province (for more detailed information, see 3.3). The Professional Competence Questionnaire and the Quality Assessment Questionnaire were distributed separately to the subjects after the students finish their translation of the first book and when they had finished the second book. The translation project lasts for two months.

The Statistical Package for Social Sciences (SPSS, version 13.0) is adopted to analyze the raw data of the questionnaires.

What's more, literature studies and follow-up interviews are used as the complementary methods.

## 1.4 Organization

The thesis consists of four chapters and a conclusion part and is organized as follows.

In Chapter 1, the research orientation is set and four research questions are put forward, followed by the significance of the present study and the research methods adopted.

Chapter 2 elaborates the relevant literature reviews which fall into three aspects: literature about PC in translation, literature about TQA in professional translator

education and finally literature about Constructivism. To be more specific, first and foremost, a review on the background information, definitions and components of PC in translation is presented. Then, the literature concerning the concept, criteria of TQA and its application in professional translator education is explored. Finally, a brief introduction to the background information of Constructivism, including Jean Piaget (1969)'s Cognitive Constructivism and Kiraly (2000)'s Social Constructivism is given, and then the application of Constructivism to professional translation training is discussed. In the end of this part, a summary of the literature review is provided with the author's comments, and four specific research questions of the present study will be raised.

Chapter 3 explains for the empirical research in the present study, which includes the subjects, instrumentation, and detailed procedures of the data collection and data processing. The author also introduces the measures she took during the experiment for validity control of the present study.

In Chapter 4, raw data collected from the two questionnaires in the two-staged translation project are analyzed by means of SPSS (version 13.0), and answers are provided to the four research questions: (1) Will the students' overall professional competence be improved after going through the translation project? (2) Is the improvement of each component of PC in translation in a hierarchic rank in its significance? (3) Will the quality of the students' translated texts be improved after going through the translation project? (4) Is there any correlation between the professional competence and the quality of the translated text? If any, what kind of correlation is it?

In Chapter 5 discussions about the results of the empirical study are carried out and then conclusions are made based on the research findings. Then some pedagogical implications are proposed, and then the limitations of the current study are presented as well as some suggestions for further research.

## **Chapter 2 Literature Review**

As has been mentioned in the chapter 1, the present study mainly refers to EFL students' professional competence education in a translation project, and thus concerns the following three areas of literature: (a) professional competence as a sub-competence of TC; (b) translation quality assessment and (c) Constructivism and its theoretical support to the present empirical study.

Firstly, a review on background information, definitions, functions and components of professional competence in translation is presented, followed by the empirical studies concerned. Secondly, the concept and criteria of TQA are discussed in light of their implications to the present empirical study. Thirdly, a brief account of studies on the Constructivism and translation education is given (especially the Real-Life-Like Assignments). Finally, a summary is drawn and some comments on the related literature are made. After the literature review, four specific research questions of the present study are to be proposed.

## 2.1 Professional Competence in Translation

In the 1990's, research on translation competence became one of the key issues in the field of translation studies. Translation competence can be defined as "the underlying system of knowledge and skills needed to be able to translate" (PACTE, 2000:100). In other words, it refers to a kind of systemic knowledge and skills underlying the actual performances of translators, in the same way a grammar underlies the use of speech.

Translation competence can be subdivided into several interrelated sub-components for detailed research. Several researchers (Hatim & Mason, 1997; Pym, 2003; PACTE, 2000; PACTE, 2002; PACTE, 2003; PACTE, 2005) have proposed various TC models based on their theoretical research and empirical studies. The most widely accepted and cited TC model is that of PACTE (2000), in which translation competence is divided into six sub-competences, as presented in figure 2.1.

Therefore, the present study tries to approach professional competence as a sub-competence of translation competence in the light of PACTE (2000)'s model of translation competence, which will find its elaboration in the following parts.

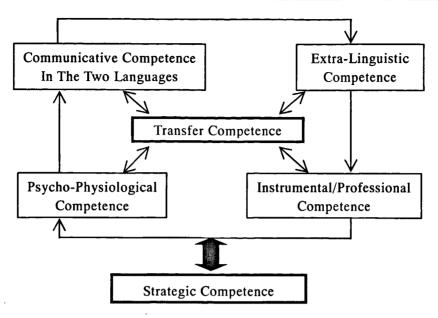


Figure 2.1 The Sub-components of Translation Competence (PACTE, 2000:101)

#### 2.1.1 Definitions and Functions

At first, what is a profession? Friedson (1986) exclaimed that "professions have been characterized by two broad features: (a) acquisition and especially schooled application of an unusually esoteric and complex body of knowledge and skill, and (b) an orientation toward serving the needs of the public, with particular emphasis on an ethical or altruistic approach toward clients" (cited in William C. Mc Gaghie, 1991:3). While according to Wikipedia, the free encyclopedia on the (http://en.wikipedia.org/wiki/Profession), a profession "is usually occupations that involve prolonged academic training and a formal qualification" and professional activity involves "systematic knowledge and proficiency". That is to say, "professions are usually regulated by professional bodies that may set examinations of competence, act as a licensing authority for practitioners, and enforce adherence to an ethical of practice".

Then concerning professional competence in translation, although few systematic studies are available, there're several researchers who have explored certain aspects of it.

Justa Holz-Mänttäri (1984) is "among the first to talk about translators as experts and to analyze translation as a professional activity taking place in a world where specialization and differentiation of role is the trend." She divides the roles of professional translators into four types corresponding to the four stages in translation

process —product specification, research, text production and text evaluation (cited in Rosemary Mackenzie, 2004:31).

Daniel Gile (1995) holds that professional translation is "essentially a service activity with a communication function, performed in a professional setting with a professional aim in mind, and constrained by this setting" (1995:21), which should be explained to the students very early on once they enroll in a translation course. He explains that professional translation differs from non-professional one in two basic respects: firstly professional translation is aimed at the receiver/end-user rather the translator him/her-self and secondly professional translation is done on request and is paid for by the client. Further more, Gile believes that in order to gain a footing in the competitive job market, professional translators should properly handle such problems as:

(a) how to render a qualified translation as soon as possible? (b) how to maintain a sound relationship with the client for quantitative translation tasks with more reasonable reward?

(c) how to work in a good attitude and stick firmly to professional ethics?

Thus Gile has gone into the detailed aspects of the operation of professional translation, especially the professional translator's role, the ethics standards, and the network of the working people involved. However, he goes no further on it.

Allison Beeby (1996) proposes a TC model in Teaching Translation from Spanish to English, and mentions some aspects of PC which is labeled as "awareness of the translation process (pragmatic purpose of ST)" and "awareness of the multiple contexts involved in translation (the SL text author, reader, purpose, the translator, the purpose of the translation, the reader of the TL text, etc.)" (1996:186-187). By applying this TC model to his 1995-1997 empirical study, he concludes that students could acquire some of the controlled TC through training. However, he lays his focus on the relationship between language/strategic competences and TC rather than professional competence.

Douglas Robinson (1997) wrote a book Becoming a Translator—An accelerated course, which is intended for professional translator training. His viewpoints are market-oriented and expose many aspects of working translators in real life. In his book he tries to innovatively integrate translation theory and the practical skills required by the working translator in order to provide novice translators with some practical information: (a) how to translate faster and more accurately? (b) how to deal with arising problems? (c) how to deal with stress? (d) how does the market work?

Robinson emphasizes on textual reliability and the translator's reliability, as well as translators' professional pride, income and enjoyment in the process of translating. He believes that translators' reliability considerably comes from their responsibility for

meeting the needs of clients and end-users (such as delivering the translated text before the deadline and transferring the ST' purpose correctly, etc.). Particularly, he argues that translators should be familiar with the target readers and the client in order to translate the SL more exactly.

Therefore, he regards translators as social beings involved in various interpersonal relationships, and relates the study of translation activities to the study of the society—different needs and expectations of target readers and clients as well as translators' communication skills with participants in the translation activities.

Like Douglas Robinson, Wertsch (1998) also makes a similar claim that "translation is essentially a communicative activity and it is social by nature. The term social includes notions of the interpersonal and the socio-cultural". (quoted from Zhao Ran, 2004:93-94) That is to say, even when the translators are working in solitude, they are constantly engaged in communication with the potential reader and take the readers' expectations into consideration. The translator is also situated in a certain social and cultural milieu, which could greatly influence the translators' decision-making process.

As a research group working on translation competence in Universitat Autònoma de Barcelona in Spain, PACTE (Process in the Acquisition of Translation Competence, 2000) is definitely among the first to make professional competence a part of the TC model. In their TC model, professional competence was mentioned in the "Instrumental/Professional Sub-competence", which is defined as a competence "composed of knowledge and skills related both to the tools of the trade and the profession" and has many diverse sub-components: "knowledge and use of all kind of documentation sources and new technologies, knowledge of the work market (translation briefs, etc.) and how to behave as a professional translator, especially in relation to professional ethics".(2000:101-102) Then it becomes part of the "Knowledge About Translation Sub-competence" in their revised 2003 TC model. Translation knowledge is defined as the "knowledge of the principles that guide translation (processes, methods and procedures, etc.) and the profession (types of translation brief, uses, etc.)". Here PACTE seems to undermine the importance of PC by putting it under the "Knowledge about Translation Sub-competence", which is, to some extent, partly due to the fact that professional sub-competence tend to be the starting point of any translation training in the West (which is quietly different situation from that in China) and needs not to be listed as a sub-component of TC. In this case, they fail to present a through, systematic and monographic study on PC.

Maria González Davies (2004) divides TC into six parts —language work, encyclopedic knowledge, transfer skills, resourcing skills, computer skills and finally, professional skills, in which professional skills refers to "awareness of translator's rights, contracts, payment, familiarization with different editing processes and as much real life practice as possible, interrelating with the clients".

Other scholars have also touched upon professional competence in their studies on translation competence, such as Gunilla Anderman and Margaret Rogers (2000), Jean Vienne (2000), Dorothy Kelly (2000), Maria González Davies (2004), etc. In their studies, professional competence is closely related to instrumental competence as well as translation situations.

As to the domestic studies in this field, Wen Jun (2004) attaches overriding importance to "translation situation" (who, why, what for, where, etc.) in cultivating translators' translation competence, by which he means that translators should learn to ask the translator requestor for information about the target readers, extra-linguistic information and the specific requirements of TT as detailed as possible before translating the ST. Such information would help translators to work out what the TT is and what it is for, and thus choose correspondingly the translation strategies. Therefore, his agrees with Pym's idea that we should train for "not specialist translators, but specialists in translation". (quoted from Jean Vienne, 2000: 100)

Li Haiyan (2006) states that under the context of cooperative learning, students work together not only to complete their task but also to make comments on their achievements. This raises students' self-awareness of translation evaluation, which is a must for a professional translator. The better students can judge their own or their peers' work, the better they will appreciate a good translation text. Such evaluation competence may help students produce better translations.

Actually, more researchers pay their special attention to the professionalization of translation and translators' professional ethics rather than an overview of the PC. Li Bo (2004) holds that professional translators should keep translation texts confidential, refuse translation tasks that is beyond one's ability and take initiative to correct mistakes made by the author of the source text. Liu Liandi (2006) agrees with the idea that professional ethics should include five basic elements: translation competence (here she refers to translators' linguistic/extra-linguistic competence and awareness for continuous self-development), being confidential of the translation texts, behaving impartially, transferring the exact information of the source texts and being honest to the people involved in the translation task.

In a word, studies concerned are still at their embryonic stage, and thus a through, systematic and monographic study concentrated on PC in translation back with experimental/empirical studies is needed.

Through an overall study on the relevant literature on PC mentioned above, the author comes up with her own understanding of what PC is about under the academic environment. Placed in a wide-framework, PC in translation is infinite and inexhaustible for it includes multi-faceted skills and abilities that are required from a translator to accomplish his/her professional translation task. Fundamentally speaking, sufficient professional competence concerns socio-pragmatic skills and cognitive strategies, which helps a translator in the following aspect: 1) to get constant information flow by means of various translation resources; 2) to filter the relevant/useful information out of the mass; 3) to be efficiently guided by the useful information. In this sense, it also includes bilingual competence, transfer competence, strategic competence and subject knowledge, etc. However, bilingual competence, transfer competence, strategic competence and subject knowledge, etc. can also be well developed in the traditional translation class and cannot be well developed in a short period of time. Therefore, the author focuses her research on PC in translation in a narrow sense, which is a part of TC and can be best developed in the Constructivist translation class in a short period of time rather than in the traditional translation class (see 2.3). In a narrow sense, professional competence mainly concerns about three aspects: labor market situations (e.g. prices, translation briefs, etc.), translator's professional behaviors (e.g. ethics, etc.) and instrumental competence (e.g. ability to use dictionaries, network, translation memories, etc.).

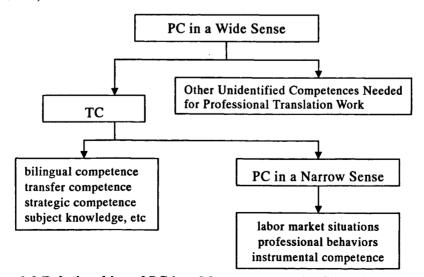


Figure 2.2 Relationships of PC in a Macro sense and PC in a Narrow Sense

As for the functions of PC in translation, it plays an important role in (professional) translation activities. As a component of TC, PC corresponds to the needs of a higher standard, the need from the society, the need from the actual translation manipulation. To a certain extent, professional competence serves as a filter in the decision-making process, an accelerator to translation process by putting all the professional factors into a full play, and a regulator to monitor translator's professional behaviors. Thus development of professional competence will undoubtedly promote developing translation competence. In a word, PC in translation enables translators to better manage the translation resources available, to perform more efficiently and thus to render a qualified translation more easily.

### 2.1.2 Components

It is necessary to define what constitutes PC in translation (the knowledge and the skills it involves, the sub-competencies it entails) before we further any study on it.

By summarizing different scholars' viewpoints mentioned above in 2.1.1 and by mainly utilizing the "professional elements" normalized by eleven international organizations of translators and interpreters (see table 2.1) for reference, the author proposes tentatively the components of professional competence, attached with detailed sub-components and some further explanations:

Table 2.1 List of International Organizations of Translators and Interpreters

AILIA: Language Industry Association

ACCTI: Association of Canadian Corporations in Translation and Interpretation

ATA: American Translators Association

ATC: Association of Translation Companies

BQTA: Belgian Quality Translation Association

CHARTER: Charter of Translators

CTTIC: Canadian Translators, Terminologists and Interpreters Council

EUATC: European Union of Association of Translation Companies

FIT: International Federation of Translators

<sup>&</sup>lt;sup>®</sup> The information sources are:

a. Development of professional standards: Assessment of the translation and language training situation 2006, 2. http://ailia.ca/documentVault/Rpts/Development\_of\_professional\_standards.pdf, 2007-08-01.

b. The Translator's Charter. http://www.fit-ift.org/en/charter.php#oblig, 2007-05-06.

c. American Translators Association in 2002. http://www.atanet.org/bin/view.fpl/13653.html, 2007-05-06

#### GET: Guild of European Translators

### ITI: Institute of Translation and Interpretation

#### Physical and Psychological Conditions:

- (a) Physical endurance: be in a good physical state to perform the work.
- (b) Psychological anti-intension: always be confident and calm as possible to perform the mentally intense work.

#### Translation Resources Management:

- (a) Effective management of text materials, such as various types of reference books, dictionaries, terminology glossaries, parallel text ("L<sub>2</sub> and L<sub>1</sub> texts of equal informativity which have been produced in more or less identical communicative situations". (Neubert, 1985:75)
- (b) Effective management of electronic tools, such as computer-aided tools, translation memory software, electronic dictionaries, or even computer-aided editing process etc. It requires translators to keep an eye on technology development in our society since this competence is technology-driven.
- (c) Effective management of human resources: such as subject experts, teachers and peers, etc.
- (d) Be able to utilize proficiently means of communication available and try to get the access to useful information. It is a prerequisite and will give a translator definite advantage over others if he/she knows how to use translation resources and where to look for them. For professional translators, one of the main points is locating adequate information and then making the right choices.

#### Ethics:

The ethical norms on the official website announced by the associations of translators and interpreters reflect different understandings of people from different regions. Although there are not any definite ethical norms worldwide-accepted, there are some basic rules in general in the interests of both the client and the translator.

According to Tang Jun (2007), ethics can be subdivided into professional ethics and personal ethics. The former approaches ethics from the relationships between/among the participants involved in the translation activities, and delves into the relevant participants' concepts of values and their moral standards of behavior under social and historical influence, such as power, politics and so on. While the latter pays attention to the personal moral standards underlying translators' behavior, which may be related to aspects such as translators' subjectivity and decision-making process, etc. Sometimes, the two kinds of ethics may be confronted with each other. For example,

the former requires the translator to be in a neutral position when any cultural/ideological conflicts arise in translating. However, at the same time, *personal* ethics would prevent the translator from being the adverse to his/her own country.

- (a) Be truthful about one's qualifications and will not accept any assignments for which one is not fully qualified. Self-assessment before translation includes whether a translator is capable of the specialized knowledge and whether it is possible to accomplish the task before the deadline, etc.
- (b) Time management skills: work fast and render out a qualified TT by the deadline.
- (c) Fidelity to the ST: refrain from any misrepresentations.
- (d) Practice the profession with integrity: safeguard the interests of the clients or the nation for any reason.
- (e) Confidentiality: one should divulge no confidential information to any third party without authority at all times, and should treat any information which may come to them in the course of their work as privileged information.
- (f) Never terminate a contract unilaterally, except for fair and reasonable reasons.
- (g) Avoid unfair competition between/among one's peers.
- (h) Promise to upgrade one's knowledge (subject knowledge and knowledge related to the profession) and translation skills.

#### Working Attitudes and Behavior:

- (a) Be objective, moderate, and behave with dignity.
- (b) Demonstrate availability and diligence, and be sensitive to the needs and requirements of the client.
- (c) Be sensitive to the changeable market situations in order to better protect one's rights.

#### Interpersonal Skills:

Professional translation is a social activity involving much interpersonal relationships. Generally speaking, professional translators "are commissioned by clients to translate texts for particular purposes and readerships within the target culture" (Gary Massey, 2005) and then (usually) share the translation task with their team members. Therefore, professional translators' work is closely related to their relationship with the client and team members.

- (a) Establish a mutual trust relationship between translators and clients.
- (b) Ask actively for the necessary information of the translation task offered: translators are authorized to ask for terminology glossaries, contextual

information and additional documentation as detailed as possible. Questionnaires can be sent to the client, which includes the TT evaluation in terms of how well it fulfils its purpose or meets its readers' needs. By doing that, translators are more likely to have a better understanding of the ST and then render out a qualified TT.

- (c) Respect any instructions given out by the clients and try to negotiate new terms with the client when necessary.
- (d) Try best to reach an agreement if there is any conflict between translators and the client on whatever things and maintain a favorable relationship of cooperation between the two parties.
- (e) Share personal knowledge with one's team members and try to maximize the team effort.

#### Training

- (a) Continue unremittingly to improve one's translation skills, broaden one's encyclopedic knowledge and subject knowledge (especially the terms) in languages concerned.
- (b) Learn and update one's knowledge of market situations and translation theories in order to gain an insight into one's role and social status and into the development of translation studies.

#### Quality Management Skills:

At the very heart of translation studies is the issue of translation quality.

- (a) Translators should transfer the information and function of the ST into the TT accurately and completely.
- (b) The text must follow the convention of presentation in the target language and be properly edited.
- (c) Translators should verify the translation before giving it to the client.
- (d) Translators should try to ask for and then evaluate the client's feedback information in order to justify TT to the client's satisfaction, which is important in practice.

#### Certificates:

Certificates account for part of professional competence evaluation although it is not a must for translators. As a professional translator living on translating, it is recommendable to strengthen one's self-image as professionals by getting some key certificates nationwide.

- (a) Certificate of language proficiency
- (b) Certificate of translation proficiency

In sum, this model is not exhaustive and only stresses the fundamental items in the author's primary study and may be operational to some extent. On the other hand, it is an "idealization of the translator, an image which professional translators aspire to and achieve with varying degrees of success. Not all translators need to overflow with these qualities". Anyway, they must "have them in sufficient measure to be able to translate their material in a manner acceptable to their clients." (Chriss, 2007) However, had identified aspects of PC in translation, it would be of help to develop a framework to students' professional competence assessment.

### 2.1.3 Empirical Studies

Literature shows the scarcity of empirical studies on translation competence, especially on PC in translation, both abroad and at home.

Empirical research into written translation can be traced back to 1980s, which shares some light on the components of translation competence although not in a holistic way.

PACTE (2000) holds that, "there is little consensus on how to formulate working hypotheses, design experiments, choose subjects, define experimental and control groups, control random variables, etc." and what's more difficult is "how to create reliable instruments to measure the parameters which are used to provide data for analysis". (2000: 99) Despite the difficulties, some empirical studies have been carried out and some isolated hypotheses have been confirmed.

PACTE (2002) has done an observational exploratory study with 5 professional translators. The study was undertaken preparatory to the final experiment, which was designed to investigate translation competence and its acquisition in written translation into and out of the mother tongue. Based on the holistic model of translation competence (see figure 2.1), PACTE resorts to empirical-experimental researches, using various instruments (such as the commercial software program PROXY, protocol texts, questionnaires, a direct observation chart, retrospective/dialogued Think-Aloud Protocols) to assess the translation process and product. The aim of the exploratory tests is to validate the holistic model of translation competence proposed and the instruments, and then to establish empirical hypotheses and select variables.

PACTE (2005) presents the design of its translation competence research project, and results of the pilot test carried out with 3 professional translators and 3 foreign-language teachers in 2004. The results of the pilot test are related to translation decision-making as well as the interrelation between the use of internal and external support. In this way they try to work out a working system of how TC works in translation process and TC acquisition mechanism. Different types of materials have

been used to collect data about the translation process and product such as texts and translations, translation protocols, direct observation; questionnaires, etc.

The main purpose of Mariana Orozco (2000) 's research is to measure translation competence acquisition in translation students at university, specifically at the first stage of their learning process (in the students' first academic year) and focusing only on translation from foreign language (English) into their mother tongue. The three instruments adopted are the translation notions instrument, the problems instrument and the errors instrument. The translation notions instrument is a test which includes 12 items about the general notions of translation and of translation competence. The problems instrument is applied when the subjects are facing with problems in translating process. It is decided that importance is to be given to the three different stages involved in solving translation problems: a) detecting the problem, b) choosing the right strategies to solve the problem, and c) solving the problem. The errors instrument for assessment of the errors is just like a normal assessment carried out by any translation teacher in class. Depending upon the subjects' answers, 0, 1, or 2 points will be awarded. By using the same instruments several times, one can know if translation problems are always related to translation errors, if the students learn first to detect problems and then solve them, if their use of translation strategies progresses with their notion of translation. The research would provide even more answers to many other related questions.

Hence, as we can see from the above, Orozco uses an experimental method in the translation teaching to test students' strategic competence. She compares students' competence before and after the experiment. A marking system (between 0 to 2) is applied to provide exact data on how the students changed during this experimental period. Although she doesn't process those data in a systematic way by using any statistics method, the result does illustrate students have improved their strategic competence.

Besides, some other researchers, such as Stuart J. Campbell (1991) and Maria González Davies, Christopher Scott-Tennent and Fernanda Rodríguez Torras (2001), etc. have also contributed to the empirical studies on translation competence with different research focuses.

These previous studies are important for at least three main reasons. Firstly, they have opened up new perspectives to the understanding of translation competence and performance supported by empirical evidence. Secondly, they have tested and validated some instruments to measure this competence. Finally, they have confirmed

some earlier intuitions about it, e.g., the translation process is not lineal but recursive, strategies play a decisive role in the process, and procedures vary significantly according to the individual, the text, or directionality.

However, as far as the acquisition of translation competence is concerned, very few proposals have been made, especially the diachronic study on students' acquisition of PC in translation.

### 2.2 Translation Quality Assessment

Translation competence is very abstract in nature. In order to look for evidence of whether the translation competence has been developed or not, researchers attach equal importance to translation competence assessment and tend to take two indirect approaches: one is TT-oriented and aims to assess the quality of translated text, while the other is translation process-oriented and aims to assess translators' decision-making efficiency. The latter is much more complicated due to the uncontrollable translation process and invisible thinking process of translators. Thus the former one is more widely adopted since the translated text is visible, assessable and is the most direct evidence of a given level of translation competence. Still, literature conforms to the fact that it is a very popular and validated angle to assess translation competence, as can be seen in researches conducted by Allison Beeby (2000), Mariana Orozco (2000), Beverly Adab (2000), Gerard Mcalester (2000), etc.

Therefore, translation competence assessment discussed hereof focuses on the quality evaluation of the translated text. Thus in this part of literature review, the author firstly explores three aspects of TQA: (a) what translation quality is about, (b) the criteria of translation quality assessment mainly from the functionalist approach (theoretically) and (c) TQA in practical operation. Then a practical criterion of TQA applicable to translation teaching class is proposed, which integrates the client's judgment (based on TT analysis) and linguistic analysis (based on ST-TT comparison).

## 2.2.1 Development of the Concept of TQ

Translation quality means different things to different people due to their different understandings of translation, translation competence and criteria of translation quality assessment.

There is a striking absence of any serious discussion. Several definitions of quality in translation have been advanced, although very few definitions seem to be adequate for quality assurance purposes. It is nowhere explicitly articulated in the literature at hand, except in Juliane House (1997)'s Translation Quality Assessment. Researchers

tend to approach translation quality from aspects such as the accuracy, precision, correctness and faithfulness of the TT.

Pym (1992) approaches translation quality by talking about distinguishing the right from wrong translation text. He states that in translation quality assessment, a mistake can not be considered as a translation error only when the difference between equivalence and mistranslation assumes a non-trivial meaning of its own.

Darwish (1995) argues that despite textual factors such as errors of meaning, syntax, lexis and so on, translation quality would be better assessed in terms of how effective TT is in meeting the requirements of the translation product. Thus translation quality is closely relative to purpose. He then comes to the conclusion that the main criteria in translation quality assessment is to ascertain whether the translator has succeeded in applying the chosen approach to the translation product to meet the information needs and requirements set out in a translation specification, no matter what assessing approach is adopted—be it literal, communicative, semantic, reader-centered or text-oriented, etc.

Conforming to the basic statement of functionalistic approach, Riccardo Schiaffino and Franco Zearo (2005) defines translation quality as meeting the needs and expectations of the customer or user.

Therefore, translation quality premises the notion that translation is not a haphazard activity, which is beyond the scope of quality assessment scope. It is rather a rational, objective-driven, result-focused process that yields a translation product meeting a set of specifications regulated by the initiator, client or the end-users.

## 2.2.2 A Proposal on Criteria of TQA

House (1997) believes TQA criteria should not be objectively given by stating that "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". Therefore, first and foremost, before any TQA is made, the assessor should make it clear what TQA criteria is adopted and TQA is made for whom. If TQA criteria is not defined and explicitly stated, the task of quality assurance becomes somewhat pointless or contentious. Secondly, there would not be one common criterion in TQA due to the different translation evaluators with different theoretical frameworks of TQA. For example, we may lay our focus on different perspectives such as the translator, translation process and the translated text (the product).

However, our interest in the present study lies in textual/ functional compatibility

(which is text-based) rather than the translator and translation process. After all, the ultimate end-users are interested in the quality of the end-product (the translated text) and not the subject and the means sought to serve its creation.

#### 2.2.2.1 Functionalist Approaches to TQA

The common ground of translation quality assessment that was once dominated by the original linguistic approaches is now analyzed from a functionalist standpoint which brings textual and situational aspects into the highlight and changes the focus of translation as text reproduction to text production (Schäffner, 1998: 1). This is true especially for technical translation, which belongs to instrumental translation based on Christiane Nord's translation typology. Nord (2001) states that instrumental translation aims at "producing in the target language an instrument for a new communicative interaction between the source-culture sender and a target-culture audience, using (certain aspects of) the source text as a model" (2001:47). From the functionalist approach to TQA, the concept of "Skopos" plays a transcendental role, defining the way in which the translated texts respond to or fit in the culture in which they will be inscribed; the concept is used as the main evaluation criterion. (Trad. J, 2005:129-147)

Reiss (1971) calls for that the function and type of source text should be determined as the starting point for any quality assessment. Unfortunately, she stopped short from designing any objectively measurable norms to validate her approach in practical assessment.

Reiss and Vermeer (1984) then give a more elaborated explanation to how the "skopos" or purpose of a translation plays the overriding role in translation quality assessment. They claim that the function that the translation is to fulfill is determined by the translator and, under more circumstances, by the translation brief provided by the client. Moreover, ST and TT should reach the point of intra-textual coherence. Since to translate is "to produce a text in a target setting for a target purpose and target addresses in target circumstances" (Vermeer, 1987:29), whether target culture norms are heeded or flouted by a translation should be taken into consideration in translation evaluation. If TT conforms to the target culture norms, it would be a intelligible and acceptable text to the supposed readers.

One further step has been made by Christiane Nord, who makes a thorough explanation of functionalist approach which is conducive to translation quality assessment. Her viewpoints falls into three aspects: skopos rule, coherence rule and loyalty rule, with skopos rule in the dominant place. The former two rules are inherited form Reiss and Vermeer, and the last one is her initiative viewpoint.

Nord (1991) elaborates on Reiss's (1981) premise of translation as intentional, interlingual communicative action and proposes an analytical model based on the function and intention (skopos) of the target text in the target culture and applicable to pragmatic as much as to literary documents. Firstly, she asserts that target text should be assessed from perspectives of the skopos and the corresponding strategies adopted by the translator, which resorts to a textual analysis of source text and target text. She further points out that micro-textual error analysis is insufficient in ST/TT comparison, since "[i]t is the text as a whole whose function(s) and effect(s) must be regarded as the crucial criteria for translation criticism" (1991: 166). This argument suggests that it is feasible for the translator to eliminate or compensate for the ST items when formal equivalence is not possible — that kinds of "shifts of meanings" cannot be considered as errors at all. Secondly, from the perspective of loyalty rule, Nord claims that the translator should maintain the inter-textual coherence between ST and TT, and meanwhile, be responsible to the ST author, the client (the initiator) and the target readers in the translating process. To be more specific, on the one hand, the translator owns his/her explanation to the author or the target reader when he/she makes any changes to ST by adopting any strategies. On the other hand, once accepting a translation task, translators are supposed to ask the client for a translation brief, on which the relevant information about the sender's intention(s), the addressee(s) the (prospective) time and place of text reception, the medium over which the text will be transmitted and the motive for text production or reception, etc. is made clearly. When there is any conflict between or among the interests of the parties involved in the translation activity, the translator should act as a coordinator and strives to make a consensus among them.

Nord's approach is designed to circumvent the problem of uniform standards by assessing quality against a specific work statement prepared for a specific project. However, the approach assumes an ideal and cooperative client who has the time and patience, and also understands the translation process and product well. In real professional life, translators and their client are too busy to be that intimately communicated, and translators tend to make their own assumptions based on their knowledge of the client and the text type.

From what has been presented above, it is clear that Nord's assessments are not related to a measurable scale of values, let alone being applied into any practical assessment. "How exactly one is to go about determining the (relative) equivalence and adequacy of a translation and how exactly one is to go about determining the

linguistic realization of the 'skopos' of a translation is not made clear". (cited in House, 2001: 245)

From a perspective of combining the Functionalistic trend in translation with the Quality paradigm, María Pinto (2001) holds that the reader (the client, user, the receiver of the target text) is the main agent in swaying the decisions of the enterprise and the translator. There is no denying that translation quality assessment is a philosophy of suiting individual needs, to end up with user satisfaction as the basic principle. He then quotes the systems of Quality Management (QM) which aspire to ensure the complete satisfaction of users, personnel, business managers, and society in general. The QM systems pursue quality as it is defined in terms of customers' perceptions.

Trad. Juan Guillermo Ramirez Giraldo (2005) presents an assessment system comprised of five basic evaluating parameters to evaluate a translation text. According to him, TT should be assessed based on ST's intentionality (purpose), situationality (the situation within the ST) and intertextuality (how the ST/TT will be inserted into their corresponding different textual system). Two more parameters are regarding the TT—the TT would be assessed based on its acceptability by conforming to the norms in the target culture, and its cohesion in terms of being textually logical.

Hans G. Hönig (1998) advocates a functionalist approach to TQA by arguing that the purpose of the TT will determine the method to be used in order to achieve the maximum level of communicative acceptability. Functionalist approach leads to an assessment system that evaluates TT based on the supposed readers' reaction and how effectively the TT transfers the purpose of the ST. It is even forgivable if translators make some mistakes in the target texts but the readers don't realize the mistakes. A comparison of functional approach and non-functional approach (see table 2.2) was made, which serves as the guideline of his argument.

On the other hand, when delves into practical TQA and analyzed different TQA criteria in different evaluation situations, Hönig admits that "there are no common translation criteria" and in half of the translation evaluation situations it is unclear whether the assessment is ST-oriented or TT-oriented. He then suggests a re-integration of readers' response and linguistic approach on a contrastive base, since maybe there it is not safe enough to base TQA on the putative readers' response.

Table 2.2 A Schematic View of Functionalist and Non-functionalist Approaches
(Hans G. Hönig, 1998:14)

FUNCTIONALIST		NON- FUNCTIONALIST		
Is loyal to his client	Translator	Faithful to the author		
Must be visible	Tansiator	Should be invisible		
Target text oriented	Translation processes	Source text oriented		
	should be	Source text offented		
Communicative Acceptability	Aim of translation is			
Psycho-, sociolinguistics Text linguistics (supporting decisions)	Translation tools taken from	Contrastive linguistics Lexical semantics (applying rules)		
Building bridges	Analogy	Crossing rivers		

#### 2.2.2.2 Eclectic Approaches to TQA

Based on text typology and systemic-functional linguistics, Juliane House (1997) proposes a revised model for TQA. Since she defines the nature of translation as "the replacement of a text in the source language by a semantically and pragmatically equivalent text in the target language" (1997: 31), her TQA model is based on both pragmatical and semantical equivalence between ST and TT.

Firstly, two basic translation types are suggested by House: overt translation and covert translation in a similar like documentary translation and instrumental translation mentioned by Nord. A source text and its covert translation have equivalent purposes, and they are based on contemporary, equivalent needs of a comparable audience in the source and target language communities. In the case of covert translation texts, it is thus possible and desirable to keep the function of the source text equivalent in the translation text". (1997:69)

Secondly, House states that the function of a text is "the application or use which the text has in the particular context of situation". (1997 36) She defines the basic criterion of functional match for translation equivalence: "a translation text should not only match its source text in function, but employ equivalent situational-dimensional means to achieve that function, i.e., for a translation of optimal quality it is desirable to have match between source and translation text along these dimensions which are found—in the course of the analysis—to contribute in a particular way to each of the two

functional components, ideational and interpersonal, of the text's function" (1997: 42). Thus a translation is not a private affair of the translator but is normally embedded with the translators' threefold responsibility for the author, the reader, and the text.

Thirdly, in the operation of TQA, House holds that functionalist equivalence should be assessment through analyzing and comparing ST and TT by indicating how it is realized syntactically, lexically and textually, which bring linguistic approach into consideration.

Therefore, House asserts that, when one tries to make translation quality assessment, one thus addresses the crucial question of the nature of translation, or, more specifically, the nature of (1) the relationship between a source text and its translation, (2) the relationship between (features of) the text(s) and how they are perceived by human agents (author, translator, recipient), and (3) the consequences views about these relationships have for determining the borders between a translation and the other textual operations. Thus, her statement provides an overall theoretical framework in which all the essential elements in actual translation activities are taken into consideration.

In summary, the development of functional approaches to TQA is a complex process conditioned by a series of parameters: the textual unit, the immediate context, the superior context, the function of the source text, the function of the target text in its specific cultural situation, and most importantly, the client (the initiator) etc. From functionalist approaches to translation quality assessment, the philosophy of quality requires that a marked customer-oriented approach be applied to all the activities involved in the translating activities, which marks a breaking point with other conceptions of translation quality assessment. This approach leads to an assessment criteria based on how effectively the TT meets the needs and expectations of the customer or user. At the same time, in order to put functionalist approaches into measurable scales, linguistic approaches also finds its way to a complement part of functionalist approaches.

## 2.2.3 Applications of TQA Methods

From what have been stated in part of 2.4.2, we come to the conclusion that translation quality assessment (especially TQA of technical translation) should oriented to analysis of the end product (the translated text), with the end-users (represented by the client) as the major assessor. In this sense, the author tries to propose an effective method of TQA in quantitative terms, and have a discussion on the assessing parameters and scales of the client's TQA operation. The method is,

however, to advocate the use not of "universal" method of TQA, but of a checklist specifically tailored to the translation training of EFL students at college level. Here follows description of the TQA method in operation.

The method of TQA applied in the present study is based on both functional approach and linguistic approach and is designed to attach importance both to functional equivalence as well as textual comparison of ST and TT. Regarding the functional equivalence, it should be assessed from perspectives of intentionality (the specific purpose of ST and TT), acceptability (whether TT heeds the norms of the target culture and whether it is intelligible to the target readers) and cohesion (whether there is a logical relationship among element of TT). Regarding the textual comparison of ST and TT, it should be assessed based on information integrity (the complete transfer of ST information) and exactness (accurate transfer of ST content, especially terminological translation). In addition, an overall mark of TT quality is asked to be given by the assessor at the end.

In a translation project, the client of the project can serve as the assessor of the TQ since he/she decide whether the TT is acceptable to a large extent.

To make it more specific and convenient to assessing operation, a checklist is given (as shown in table 2.3). All the parameters of TQA as well as the overall assessment of TT are assessed in a five-point scale, corresponding to five different level of translation quality, namely, totally inadequate, inadequate, adequate, almost completely successful and successful.

Table 2.3 Parameters and Scales of the Client's TOA

Table 2.5 I al	umeters an	a scares or	the Chem	3 1 211	
Parameters	Totally inadequate	Inadequate	Adequate	Almost completely successful	Successful
1. Spelling and Punctuation	1	2	3	4	5
2. Grammatical Correctness	1	2	3	4	5
3. Consistent Use of Terms	1	2	3	4	5
4. Information Integrity	1	2	3	4	5
5. Accuracy	1	2	3	4	5
6. Style/Register	1	2	3	4	5
7. Expression	1	2	3	4	5
8. Edition	1	2	3	4	5
9. Functional Equivalence	1	2	3	4	5
10. Intelligibility/Readability	1	2	3	4	5
Overall Assessment of TT	1	2	3	4	5

The ten assessing parameters listed in the checklist are explained as follows,

- (a) Spelling and Punctuation: spelling and punctuation errors are not allowed which would affect the meaning of TT.
- (b) Grammatical Correctness: proper grammar should be adopted, such as gender, construction and so on.
- (c) Consistent Use of Terms: this refers to the uniformity of terminological use.
- (d) Information Integrity: TT should retain the same information of ST, without any deletion or alteration of ST information.
- (e) Accuracy: this refers to the conformity to the information content of the original, especially terminological translation in different context.
- (f) Style/Register: the ST style/register should be rendered according to the target culture.
- (g) Expression: TT should be expressed with clarity according to the target culture.
- (h) Edition: TT should be well edited in line with the text type according to the target culture.
- (i) Functional Equivalence: the purpose of TT should fit for that of ST.
- (j) Intelligibility/Readability: TT should be intelligible to target readers, represented by the client.
- (k) Overall Assessment of TT: a point would be given by the client based on his/her holistic impression of TT.

All the parameters of TQA are designed in a 5-piont scale for statistic analysis. Then the raw data would be conveniently analyzed with the help of the Statistical Package for Social Sciences (SPSS, version 13.0).

### 2.3 Constructivism

Research on Constructivism has a long and distinguished history, although many different perspectives coexist within it. The paper will give a brief introduction to what Constructivism is about and then the Constructivist approaches adopted to translator education.

## 2.3.1 Background

The latest catchword in educational circles is "constructivism". As a branch of cognitive science and social psychology, Constructivism was firstly proposed by Jean Piaget, a psychologist from Switzerland in 1960 and continued its ongoing development. The verb "to construct" comes from the Latin con struere, which means to arrange or give structure. Constructivism is a theory about knowledge and learning.

The conceptual heart of constructivism is that knowledge is not about the world as a fixed object, but it is constructed by an individual through one's outcome of experience mediated by one's own prior knowledge and the experience of others. According to Constructivism, whether the knowledge can be better learned depends on learners' constructing ability of knowledge, instead of learners' memorization of teaching contents in the class or on books.

### 2.3.1.1 Cognitive Constructivism

Jean Piaget develops Cognitive Constructivism from his view of the psychological development of children. The implications of his theory help shape the foundation of constructivist education. He suggests that human beings cannot be "given" information but must "construct" their own knowledge by building their knowledge through experience, which helps to create mental images in their minds. Piaget (1969) puts forward that children's intellectual growth is a continually adaptive process: assimilation, accommodation, and equilibration. Assimilation refers to assimilating new events into children's preexisting internal mental structures. Accommodation refers to changing internal mental structures to accommodate to the new information when the previous schemas or operations must be modified and new schemas are created to account for a new experience. This dual process is interacted and helps children to form their schema. Equilibration means striking a balance between the learner and the environment, between assimilation and accommodation. For Piaget, equilibration is the major factor in explaining why some children advance more quickly in the development of logical intelligence than others.

According to Piaget (1973), the fundamental basis of learning is discovery, and children's understanding of knowledge is built up step by step through active involvement. "To understand is to discover, to reconstruct by rediscovery, and such conditions must be complied with if in the future individuals are to be formed who are capable of production and creativity and not simply repetition." (1973:20)

Based on Piaget's studies, some other varieties of Cognitive Constructivism have been explored and discussed, such as social constructivism, radical constructivism, sociocultural cognition, information-processing constructivism and cybernetic system, etc., among which social constructivism has gained the widest recognition. Although with different focuses, those varieties have some premises in common —knowledge is not transferred to students passively but is constructed actively by the students themselves based on their prior knowledge and experiences, and learning is a cognitive process influenced by "situation", "cooperation", "conversation" and "meaning

construction".

#### 2.3.1.2 Social Constructivism

As a variety of cognitive constructivism, Social constructivism was developed by Lev Vygotsky (1978). Although Vygotsky shares many assumptions with Piaget in that how children learn, he places more emphasis on the social context of learning. Piaget puts his emphasis on learners' knowledge construction as individuals, while Vygotsky lays his focus on the role of individuals' interactions with their sociocultural environment in this process of constructing knowledge. Robert Edgar (1995) once made a metaphor to this effect, "Personal Computer is to Piaget as WWW is to Vygotsky". Generally speaking, Vygotsky comes into three general claims: "(firstly) culture —which is that higher mental functioning in the individual emerged out of social processes; Secondly language —which human social and psychological processes are fundamentally shaped by cultural tools. Lastly, the developmental method Zone of Proximal Development (ZPD) —which is the concept that the potential of the child is limited to a specific time span". (Jarvis M & Chandler E 2001:149-150).

As for knowledge construction, Vygotsky (1978) argues that learning is not simply the assimilation and accommodation of new knowledge by learners but the process by which learners are integrated into a knowledge community. "Every function in the child's cultural development appears twice: first, on the social level and, later on, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals." (1978: 57) Thus he emphasizes the role of language and culture in cognitive development and believed that language and culture are the frameworks through which humans experience, communicate, and understand reality. Further, he attaches more attention to the guidance of teachers and students' collaboration learning by developing the concept of "zone of proximal development", which refers to "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers". (1978: 86) Unlike cognitive constructivism, teachers in social constructivism do not just stand by and watch children explore and discover. The teacher should guide students as students approach problems, encourage students to figure out problems in groups, and support students with encouragement and advice. In a word, peer interaction, teachers' scaffolding and students' active construction of knowledge are important ways to facilitate students' acquisition of new knowledge.

Gao Wen (1999) delves into the process of how knowledge is socially constructed. He then makes the conclusion that while regarding learning as a process of individual's inner construction, Social Constructivism focuses on the role of language and students' active involvement in social activities, which serves as the medium of knowledge construction.

Wu Qingling and Hu Yi (2003) also claim that individuals construct their knowledge via the interaction with both the physical world as well as the social environment, which are composed by the learners' peers, teachers and other medias, etc.

### 2.3.2 Applications to Translation Education

Constructivism represents one of the prevalent trends in pedagogical development. Don Kiraly (2000) argues that the social constructivist approach is particularly well-suited to the training of translators since translator competence can be seen as "a creative, largely intuitive, socially-constructed, and multi-faceted complex of skills and abilities" (2000:49). By proposing some key principles of Social-constructivist Education, Kiraly aims to cultivate students who are able to function autonomously and confidently in the professional world when they leave school.

Kiraly systematically elaborates his ideas of Constructivist teaching in A Social constructivist approach to translator education: empowerment from theory to practice, which covers three cornerstones of Constructivism, namely, the concept of learning through authentic action, the concept of collaborative learning and the concept of guided participation of learners.

Authentic or real-world Environment: it is an attempt to create an environment that fosters students' professional competence based on reality, since socially oriented experience is paramount to knowledge construction.

"Applied to the field of translator training, the concept of learning through authentic action, which is a cornerstone in social constructivist education, means that to acquire professional translator skills requires acquaintance with equally professional translation tasks, under real constraints, but with the collaboration/supervision of a professional translator." (Marta Rosas, 2005)

Kiraly holds that "for learning to be authentic and productive, learning tasks need to remain embedded in their larger, natural complex of human activity. As learning, from a constructivist perspective, is always directly related to the situation in which that learning occurs, we must retain the complexity of the situation — taking into

consideration, of course, the learners' current knowledge level and skill development". (2000: 42)This point of view is fundamental to the constructivist view, which believes that meanings are better constructed by learners involved actively in authentic and experiential learning.

Kiraly insists on the importance of teachers being practicing translators themselves and on involving students entirely in translation activities in the real world. He illustrates with examples that there is no need to reduce the complexity of a translation situation at any level if students are provided with adequate scaffolding.

Students involved in the authentic translation practice have to deal with every aspect of the job, such as translation situation (translation brief): the translation requester (the client/reader), the reviser, the target text user, translator(s). Many problems may come up in the translation courses, including those pertaining to ethics, technology, and translation strategies, which would be solved later by students themselves or with the help from their peers and teachers.

Collaborative Learning: contrary to one-way transmitting knowledge from the teacher to the learners, it is advisable to set up a "Translator's Workstation" where various personal perspectives are displayed and kinds of learning experiences are provided for discussion. Rorty Richards (1979) argues that human beings cannot obtain "objective truth", so we should create or construct knowledge through interpersonal communication of information and emotions.

The process of internalizing cultural and social knowledge cannot be isolated from interpersonal communication, in which the "interference" of different ideas from different people can help enhance learners' ability to think about and then to solve problems popped up. In this case, the teacher is no longer the controller and instructor of the class but an advanced learner who constructs the knowledge of his/her own with the students. Kiraly proposes the concept of "Translator's Workstation", in which students construct knowledge through team work and make progress with their teacher.

Guided Participation of Learners: this concept concerns the roles of students and teachers in the Constructivist class, where students are the active constructors of meaning, rather than the passive acceptors being infused with stimulation from the outside. While teachers serve primarily as the assistant and promoters of meaning construction, knowledge navigator, not simply teaching or infusing knowledge to learners.

Then Kiraly works out An Authentic-collaborative Translation Practice Classroom (see figure 2.3) that maintains a link with the real world and utilizes factors of

authentic situated action, the collaborative construction of knowledge, and the inter-relationship between the teacher (facilitator) and students.

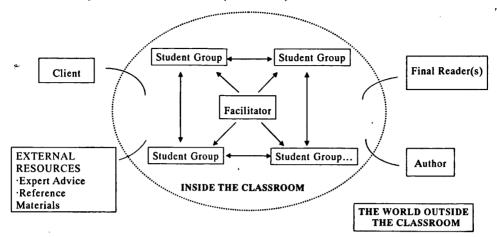


Figure 2.3 An Authentic-collaborative Translation Practice Classroom (Kiraly, 2000: 69)

From figure 2.3 it can be seen that, contrary to the traditional translation class, translation teaching is no longer limited within the class but extends to the outside world, to every aspect involved in the authentic translation practice. In the world outside the classroom, students have access to a vast variety of external resources (human resources, textual resources and electronic resources) and thus are given more chances to enhance their overall translation competence. In the learning process, students are organized in small groups which are inter-related with other groups, with the teacher being the facilitator rather than an instructor standing high above in the platform. Thus this kind of class forms an interactive web between and among each student group, between and among each individual student and between the student and his/her peers.

In summary, the basic principles of Social Constructivist teaching are: (a) the process of knowledge construction is closely related to the interaction of students and the environment (especially authentic learning environment) — knowledge construction is not a private thing of the student but is affected greatly by the learning situation; (b) knowledge can be better constructed through discussion and communication with other people, especially peers and teachers, who are an important source of information.

This kind of Social Constructivist teaching is obviously market-oriented since students are provided with the chance to accumulate working experiences in authentic translation activities — to analyze different translation situations, to handle with

complicated interpersonal relationships involved, and finally to internalize translation skills and foster the professional competence. Just as Susanne J. Jekat and Gary Massey (2003) conclude, more specifically, participants would learn what tools are available to the translator, why these tools should be used, where and how they can be found, and how they can be employed with maximum efficiency and effectiveness; acquire useful insights into the professional practices, processes and workflows of translation; increase their awareness of, and sensitivity to, complex translational problems; evolve, both individually and in groups, appropriate problem-solving strategies in handling text-based research tasks and assignments; strengthen their ability to work in teams and reinforce their willingness and capacity to cooperate with others; develop self-reliance and independence in their studies. All these mentioned above comprise the key perspectives of professional competence in translation. Therefore, Social Constructivist teaching can be appropriately employed in the present study of developing EFL students' PC in translation.

### 2.4 Summary

In this chapter, the literature concerned is reviewed in the three aspects as mentioned above. Firstly, background information, definition and components of PC in translation are reviewed in details, based on which the author comes up with her definition and components of PC in translation for the present study. The relevant empirical studies on TC are also discussed. Secondly, the concept of translation quality is discussed, followed by the discussion of a proposal of Functionalist/Linguistic approach to translation assessment and the corresponding method of translation quality assessment applied to the present study. Finally, a brief introduction to the background information of Constructivism, including Jean Piaget's Cognitive Constructivism and Kiraly's Social Constructivism, and then the application of Constructivism to professional translation training is discussed.

The literature review helps the author move toward the following reflections and observations:

(1) The present translation market is in urgent need of professional translators, especially EFL graduates from institutions of higher education. Correspondingly, more and more institutions of higher educations tend to cultivate professional translators catering for the market' need, ever for students' benefit in their later professional life or in their translation practice at the moment. Thus it has the practical significance to cultivate EFL students as professional translators. On the other hand, Constructivism

provides a theoretical support to bring translation projects into translation education under the academic environment. In sum, it is desirable and feasible to foster EFL students' PC through the translation project.

(2) Professional Competence in translation is hard to be measured, so it is an expedient to take translation quality as the yardstick of professional competence assessment. In practice, the quality of students' translated texts can be assessed by the experienced client of the translation project, who has a good mastery of English and Chinese as well as the specialized knowledge concerning the translation materials.

For the reasons above, the present research is proposed to explore EFL students' PC acquisition in a translation project and the relationship between students' PC and TQ, which can be elaborated into the following four research questions:

Research question 1: Will the students' overall professional competence be improved after going through the translation project?

Research question 2: Is the improvement of each component of PC in translation in a hierarchic rank in its significance? If any, what kind of hierarchic rank is it?

Research question 3: Will the quality of the students' translated texts be improved after going through the translation project?

Research question 4: Is there any correlation between the professional competence and the quality of the translated texts? If any, what kind of correlation is it?

# **Chapter 3 The Empirical Research**

As stated above, the research problem was chosen for the present study and dissected into four specific research questions mentioned in Chapter One. In order to answer those questions, the author has designed the empirical study in the following ways.

## 3.1 Organization of the Translation Project

The empirical study under the authentic environment is carried out in line with the Constructivist translation class mentioned in 2.3.2.

First and foremost, the present translation project was provided by the teacher, Doctor Wang, who searched for the project from the job market. She served as the project manager organizing the students and also the intermediator between the students and the client from the factory. The translation materials adopted were two instruction books of machinery provided by the client. Since the client had assigned translation work to college students for several times before this project, he was experienced in not giving students materials that would be totally beyond their understanding even after they tried hard to work out the materials.

The 16 students were divided into groups, with a group leader in each group. Each group was responsible for a part of the translation assignment. Doctor Wang arranged a classroom for the 16 students, where they translated the materials together and were able to communicate with each other when necessary. They could also bring the materials to their dormitories or wherever they liked. They were supposed to finish the whole translation work by themselves, but not always under the teacher's instructions in the translation class.

In the translation project, the students could resort to any translation resources and have a better understanding of the translation situations that were available to them since they were not "encaged" in the limited space of the traditional translation class and were free to manage themselves. In addition, the teacher kept an eye on the students and helped solved problems that popped up in students' translation process.

#### 3.2 Methods

Research methods adopted in this research fall into the following three categories: literature studies, questionnaires and follow-up interviews.

#### 3.2.1 Literature Studies

The research is based on an overall study on the relevant literature, including monographs, dissertations and journals (such as Meta and CSSCI journals etc.), most of which are among the latest research findings at home and abroad. The literature review is closely related to the present study, ranging from theoretical research to empirical studies on professional competence in translation, from the criterion of translation quality assessment to their applications, and from constructivism to project-based learning in PC in translation.

### 3.2.2 Questionnaires

The Professional Competence Questionnaire for EFL Students was designed to testify and investigate the students' acquisition of PC in translation in the translation project.

The Quality Assessment Questionnaire for the client was designed to assess the students' translation quality.

### 3.2.3 Follow-up Interviews

Follow-up interviews, face to face or by telephone, were conducted for complementary information or background information that the two questionnaires might fail to cover.

## 3.3 Subjects

The first case study was designed for a group of 16 students (2 females & 14 males), fourth-year students in the college of electric and information engineering in one of the 211 Project Universities in China. Their average age is 22 and all of them haven't any authentic translation experiences before. They were randomly selected from all the students in the fourth academic year and in the same college, who had passed CET-4 and also accumulated certain subject knowledge through highly controlled formal education.

The second case study was designed for Mr. Li, the client of the translation project and also the representative from the factory. Mr. Li had passed CET-6 as a non-English major and had a good mastery of English and Chinese. On the other hand, he possessed years of relevant work experiences in translation project of the like. Last but not the least, his strong sense of cooperation, consideration and patience throughout the experimental study contributed a lot to the author's research.

### 3.4 Instruments

The instruments used in the present empirical study consist of two questionnaires: (a) a questionnaire of professional competence questionnaire for EFL students and (b) a quality assessment questionnaire for the client. A description of the instruments is as follows.

(a) The Professional Competence Questionnaire for EFL Students (see Appendix B) consists of 50 randomly-ordered items designed to measure the 16 students' professional competence. The first 39 items are designed in the form of *Likert Scale* (using a five-point scale, as seen in figure 3.1) for quantitative analysis, with a high score indicating a strong agreement with the statement. The rest 11 items are to collect some general information of the subjects for further analysis.

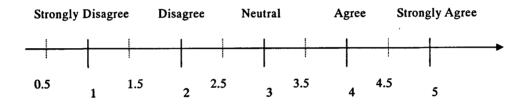


Figure 3.1 Recalibration of the 5 point Likert Scale (1)

The 50 items are based on "professional elements" normalized by eleven international organizations of translators and interpreters (see Table 2.1), from which the author has selected the common elements based on her exploratory research. Then the author develops seven parameters composing the Professional Competence in Translation (see 2.1.3), namely, Physical and Psychological Conditions (Parameter 1), Translation Resources Management (Parameter 2), Ethics (Parameter 3), Working Attitudes and Behaviors (Parameter 4), Interpersonal Skills (Parameter 5), Self-conscious of Training (Parameter 6), Quality Management Skills (Parameter 7) and Certificates (Parameter 8). Table 3.1 presents the composition of The Professional Competence Questionnaire, in which items C11, C34, C35, D32 are worded negatively in case that the students would give their answers on the one side of the rating scale.

In addition, the author's name and phone number is attached to the end of the questionnaire in case of any questions raised from the student. A high score given by the subject indicates a strong agreement with the statement. The Cronbach alpha index of internal consistency for the Professional Competence Questionnaire (including the 39 items on a five-point scale) is an acceptable 0.857.

Table 3.1 Composition of the Professional Competence Questionnaire

Table 3.1 Composition of the Professional Competence Questionnaire								
Parameters	Factors	Items	Items in the Questionnaire					
A Physical and	A1 Physical Conditions	A11	1					
Psychological Conditions	A2 Psychological Conditions	A21	2					
<b>5 6 1 1 1</b>	B1Translation Resources Usage in Practice	B11, B12	40, 41					
B Translation	B2The Importance of Translation Resources	B21, B22, B23	42, 3, 4					
Resources	B3 Visit to the Factory and Workers	B31, B32, B33	5, 6, 7					
	C1Preparation Work before Taking the Project	C11, C12	8, 9					
	C2Delivering the TT in Time	C21	10					
C Ethics	C3Awareness of Translation Quality Control	C31, C32, C33, C34, C35, C36	11, 12, 13, 14, 15, 17					
	C4 Sense of Confidentiality and Loyalty	C41, C42	16, 18					
	C5Keeping the Latest Information of the Translation Project	C51	19					
D Working	D1Modesty and Cooperation	D11	20					
Attitudes and	D2Awareness of One's Own Right	D21	21					
Behaviors	D3Attitude toward the Payment	D31, D32, D33	22, 23, 24					
E Quality	E1Revision of Translated Texts	E11, E12, E13	33, 34, 35					
Management Skills	E2Attitude toward Translation Quality Management Criterion	E21, E22, E23	36, 37, 38					
F Interpersonal Communication	F1Interpersonal Communication within the Team	F11, F12	25, 29					
Skills	F2 Interpersonal Communication with the Client	F21, F22, F23	26, 27, 28					
	G1 Awareness of Further Training on Translation Practice	G11	30					
G Awareness of	G2 Awareness of Further Training on Translation Theories	G21	31					
Further Training	G3 Awareness of Further Training on the Subject Knowledge concerning the Translation Project	G31	32					
	H1 Certificate of English Language	H11	43					
H Certificates	H2 Translation Certificate	H21	44					
	H3 Awareness of the Importance of the Certificates	Н31	39					
Others	Background Information and Follow-up Questions	_	45, 46, 47, 48, 49, 50					

Total	_	50	50

(b) The Quality Assessment Questionnaire (see Appendix C) consists of 11 randomly-ordered statements (in the form of *Likert Scale* as seen in figure 3.2) designed for the client to assess student's PC in translation.

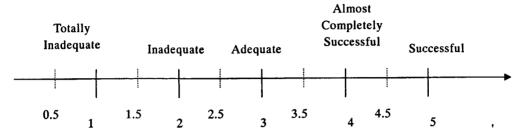


Figure 3.2 Recalibration of the 5 Point Likert Scale (2)

The questionnaire is based on Ali Darwish, Gile (1995: 31-38) and the translation quality requirements adopted by eight local translation companies/agencies in Changsha, Hunan province<sup>®</sup>. Zou Yuping, a member of our research team (on translation competence) led by our supervisor Doc. Wang Xiangling, conducted the pilot survey on the translation quality requirements of eight local translation companies/agencies. The 11 items measure four major factors deciding the quality of a translation and the average grade for the translation (see Table 3.2).

Table 3.2 Composition of the Quality Assessment Questionnaire

Parameters	Items
E21 Edition	TQ1, TQ8
E22 Expression	TQ2, TQ7
E23 Loyalty to the Source Text	TQ3, TQ4, TQ5, TQ6, TQ9
Other Aspect	TQ10
Overall Assessment	TQ'
Total	11

In addition, the author's name and phone number is attached to the end of the questionnaire in case of any questions raised from the students. The client was asked to

The eight translation companies/agencies are Xuedi Translation Agency, Changsha Simultaneous Interpretation Co., Ltd, Translation and Consultation Center of Hunan Sci-tech Translators Association, Win-win Translation (Changsha) Co. Ltd, Hunan Translation Center, Pacific Translation (Changsha) Inc., Keqi Translation Co. Ltd and Bronze Translation Co. Ltd).

assess quality of students' translation texts at the first stage and at the second stage, on a 5-point Likert-type scale. A high score indicates a strong agreement with the statement. The Cronbach alpha index of internal consistency for the Quality Assessment Questionnaire (including the 11 items on a five-point scale) is an acceptable 0.799.

### 3.5 Procedures

In this section, the procedures of the experiment will be introduced, which include three aspects: measures adopted to control the study's validity, data collection, and data processing.

### 3.5.1 Validity

Validity is an indispensable factor in scientific studies, especially in empirical studies. Validity can be divided into internal validity and external validity, the former referring to "the extent to which the conclusions of an empirical investigation are true within the limits of the research methods and subjects or participants used" and the latter referring to "the extent to which the conclusions of an empirical investigation remain true when different research methods and research participants or subjects are used". (Colman, 2001)

In a designed experiment, some factors should be controlled to ensure that any changes in the dependent variables are caused by the changes in the independent variables, rather than caused by changes from any other factors. The major factors that would influence the internal validity are then controlled.

History: the passage of time may exert some negative impact on the experiment. In this follow-up study lasting for 2 months, the students might also obtain some professional knowledge either from their College English teacher or training courses outside the class, which would be the interfering factors to the study. Thus the author kept the translation project a secret to the students' English teacher in case of the teacher's improvisational instruction on professional competence in translation. On the other hand, since the students were following a busy schedule of studying regularly their college courses and doing their translation work, they didn't have any spare time to attend translation training courses or the like. After the experiment, all the students stated that they hadn't received any instruction from their teacher nor translation training.

Time allotted for treatment or data collection: an experiment needs enough time to allow changes in the variables and for data collection. In this follow-up study, if the

time is too short, the experimental result would be suspensible since students might fail to make remarkable progress in such a short period of time. Thus the author designed a two-stage experiment, which lasted for two months instead of one or two weeks and allowed the students to translate two instruction books.

As for factors influencing the external validity of the experiment, the author would mainly deal with the following two factors involved:

Hawthorn Effect: participants of an experiment may treat themselves as kind of "special members" since they are the chosen ones, and they may be aware that they are in an experiment, intending to do their best to help the researcher get a successful result. In order to get rid of this negative effect, the author didn't inform the students there would be a questionnaire survey after they had finished their first book, and didn't tell them that there would be a follow-up questionnaire survey after their second book, saying nothing of the Quality Assessment Questionnaire prepared for their client. Under such circumstances, the students would have less pressure to go through the whole experiment.

Research Effect: like Hawthorn Effect, the researcher's behavior, attitude, tone or even facial expressions (in addition, the researcher's guided opinions/explanations) may give the subjects some hints, which would influence the subjects' behaviors and ideas. The author took measures to minimize such a research effect by trying to avoid close communications with the students as possible, neither talking with them about personal problems nor sensitive things about the ongoing study. In that case, those subjects' behaviors and attitude toward the study were guaranteed from any abnormal influence of the author's intentions implied in her (un)conscious talks or behaviors. As for the client, the author also hadn't told the purpose of the experiment but asked the client to finish the questionnaire according to his judgment.

#### 3.5.2 Data Collection

Before being distributed to the 16 subjects, the Professional Competence Questionnaire for EFL students had been distributed to other 10 students (also in their fourth academic year but in different college in the same university and with different translation tasks) in the same translation project to ensure that the questionnaire was properly-organized and clearly-worded. The Quality Assessment Questionnaire was also distributed to the client in the pre-experimental stage for pilot testing and further revision. Both questionnaires underwent several revisions with the help of Doc. Wang Xiangling and other students in our research team on translation competence, and thus the number of variables was reduced.

The Professional Competence Questionnaires were given to the 16 subjects after they had finished their translation of the first book in May, 2007. Although most of 50 statements and questions are short and easy to be answered, the author let the subjects to bring the questionnaires back, giving them enough time to read and answer all the questions clearly and slowly rather than in haste. In this way, the validity of the data would be guaranteed to a certain extent. One day later, the author collected all the 16 questionnaires and asked students who missed any questions to finish their questionnaires. The same questionnaire was given to the same 16 students again a month later, when they had finished their translation work of the second book. Also, one day was given to them and all the information required were collected.

The Quality Assessment Questionnaire were distributed to the client by e-mail separately at the two stages, namely, right after the client had checked the instruction book one translated by the students at the end of May and then when he had checked the instruction book two by the students at the end of June. The author communicated with the client through mobile phone and successfully collected the questionnaire by email within an hour both at stage one and stage two.

### 3.5.3 Data Processing

The powerful Statistical Package for Social Sciences (SPSS, version 13.0) was applied to data processing. Here the author would go to the collected data processing step by step.

- (1) Entering the data. Students' personal information, the scores of each item in The Professional Competence Questionnaire for EFL Students and The Quality Assessment Questionnaire were entered into an SPSS computer file;
- (2) Checking the completeness of the data collected through the questionnaires and making sure there's no missing data in both questionnaires.
- (3) Recoding values. As mentioned in 3.3, there were some negatively-worded items in The Professional Competence Questionnaire. We needed to reverse the scoring of these items before any further analyses were conducted, by recoding score 1 into score 5, score 2 into score 4, score 3 remaining as score 3.
- (4) Summarizing the parallel items that account for the same aspect of PC in translation to be explored (as seen in Table 3.1).
- (5) Checking the internal consistency reliability. The Cronbach alpha indexes of internal consistency of the two questionnaires in the present study were calculated. Internal consistency reliability was measured by the Cronbach Alpha coefficient, which was a figure ranging between .00 and 1.00 and should exceed .70 in order to be

an acceptable one.

- (6) Comparative analysis. Wilcoxon test was adopted for a contrastive analysis of the students' professional competence demonstrated at the two different stages. "Wilcoxon test for paired samples is the non-parametric equivalent of the paired samples t-test. It should be used when the sample data are not normally distributed, and they cannot be transformed to a normal distribution by means of a logarithmic transformation." In addition, the frequency and percentage of each variable were calculated to describe the general situation of the subjects.
- (7) Spearman Rank Correlation analysis. It was used to examine the correlation between students' PC in translation and the quality of their translated texts. Since the sample of the present study is limited and fails to follow a normal distribution, Spearman Rank Correlation a non-parametric test is adopted to analyze the collected data. "Spearman's Rank Correlation is a technique used to test the direction and strength of the relationship between two variables. In other words, it's a device to show whether any one set of numbers has an effect on another set of numbers. It uses the statistic Rs which falls between -1 and +1."

http://www.medcalc.be/manual/wilcoxon.php

http://www.revision-notes.co.uk/revision/181.html

# **Chapter 4 Results, Analyses and Findings**

In this chapter, the results of the empirical study in relation to the four research questions mentioned in the introduction part are presented. First and foremost, the author will delve into whether the students' PC in translation (both their awareness and behaviors) got improved after the translation project, and whether this improvement in PC won the client's recognition (since the client had the authority to make a relatively objective judgment on students' translation quality throughout the project). Then, the author explores into the correlations of students' PC in translation and the quality of their translated texts. In this way, students' PC in translation would be well assessed both from the inner side (the students' self-assessment) and the outer side (the client's assessment). Methods of analyzing the collected statistics are Wilcoxon Test (Comparative Analysis), Ranking Method and Spearman Correlation analysis. The inner logical relationship of the empirical study is presented in Figure 4.1.

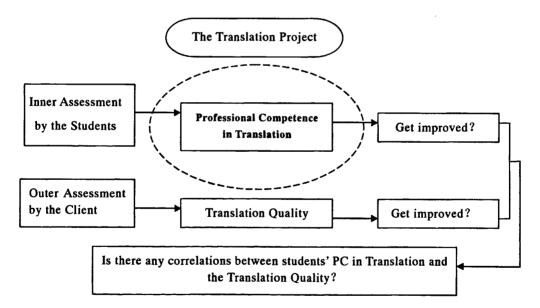


Figure 4.1 Inner Logical Relationship of the Empirical Study

# 4.1 Statistical Analyses of the Students' PC Questionnaires

This part explores whether the students' PC in translation was improved at the second stage compared with that at the first stage. The author will try to make a comparative analysis of students' PC at the first stage and that at the second stage, and then present a ranking list of PC components developed in the translation project.

# 4.1.1 Comparative Analyses of Students' PC

This part explores whether the students' professional competence has been improved, and to what extent each specific component of professional competence has been improved throughout the translation project. The author will approach the two questions through statistical analyses, accompanied with a brief introduction to the background information. Since the subjects are less then 30, Wilcoxon Test, together with some descriptive analyses, is adopted to compare students' PC at the beginning and at the end of the project.

Table 4.1 Wilcoxon Test of Students' PC in translation at the Two-staged Project d

	T					
	Z	Asymp. Sig. (2-tailed)		Z	Asymp. Sig. (2-tailed)	
A: Phys	sical and Psy	chological Conditions	D: Working Attitudes and Behaviors			
A11	-1.732	0.083ª	D11	-3.276	0.001 a	
A21	-3.025	0.002 a	D21	-3.207	. 0.001 a	
B: Tran	slation Reso	urces	D31	0.000	1.000 °	
B22	-1.604	0.109 a	D32	-2.414	0.016 a	
B23	-3.017	0.003 a	D33	0.000	1.000°	
B31	-2.236	0.025 <sup>b</sup>	E: Q	uality Ma	nagement Skills	
B32	-3.213	0.001 a	E11	-1.964	0.050 a	
B33	-2.530	0.011 a	E12	-1.428	0.153 <sup>b</sup>	
C: Ethi	cs		E13	-0.707	0.480 <sup>b</sup>	
C11	-2.873	0.004 a	E21	-2.636	0.008 a	
C12	-3.226	0.001 a	E22	-2.640	0.008 a	
C21	-2.588	0.010 a	E23	-2.449	0.014 a	
C31	-3.247	0.001 a	F: In	terpersor	al Communication Skills	
C32	-2.919	0.004 a	F11	-3.153	0.002 a	
C33	-2.976	0.003 a	F12	-3.086	0.002 a	
C34	-2.251	0.024 a	F21	-2.828	0.005 a	
C35	-2.360	0.018 a	F22	-1.992	0.046 a	
C36	-2.449	0.014 a	F23	-2.972	0.003 <sup>a</sup>	
C41	-2.126	0.033 a	G: T	raining		
C42	0.000	1.000 °	G11	-1.748	0.080 a	
C51	-3.307	0.001 a	G21	-2.013	0.044 a	
			G31	-3.207	0.001 a	
	·····					

- a: Based on negative ranks.
- b: Based on positive ranks.
- c: The sum of negative ranks equals the sum of positive ranks.
- d: Wilcoxon Signed Ranks Test

From Table 4.1, it is drawn that all the items, except for items B22, C42, D31, D33, E12 and E13, are at a significance level (P < 0.10), which claims a significant difference between statistics at the first stage and that at the second stage. In addition, items C42, D31 and D33 fail to pass the significance test of difference since students gave the same answer at the two stages, while item B22 approximately passes the significance test of difference. Then each item in the Professional Competence Questionnaire for EFL Students will be discussed as follows.

A11: As the statistics show, at the first stage, the majority of the students agreed that one's physical conditions is closely related with the quality of the translated work, among which 25% strongly agreed with it, 43.8% agreed with it, 25% took a neutral stance on it, and only 6.3% disagreed with it. At the second stage, 31.3% strongly agreed with A11, 43.8% agreed with it, and the rest 25% took a neutral stance on it. We can see that at the second stage, students' viewpoints of A11 tend to be identical. It might be inferred that after the 2-month translation project, some students in weaker physical conditions felt exhausted and thus began to realize the importance of their physical conditions.

A21: As for A21, at the first stage, 3 quarters of the 16 students thought psychological conditions are closely related with the quality of the translated work, among which 12.5% strongly agreed with it, and 31.3% agreed with it. Another 31.3% took on a neutral ground, with the rest 25% disagree with it. When it came to the second stage, all the students took a positive stance on A21, namely, 68.8% agreed with it and 31.2% strongly agreed with it. This showed a great difference in the two stages, from which we may conclude that the authentic translation experience contributes a lot to fostering students' awareness of psychological conditions.

B11: As to B11, at the first stage, all the students used dictionaries in their translation process, 11 used the internet, 6 consulted subject teachers and 3 asked their subject experts for help, 5 used encyclopedias, 3 used translation software and only 2 consulted professional books in the specific subject. At the second stage, the number of students, who used the internet translation software and professional books, increased respectively by 2, 6 and 5. On the contrary, fewer students resorted to encyclopedias, teachers and subject experts. This showed that students tended to resort to translation resources that were more convenient and efficient to them. Meanwhile, as they could

handle their translation task better and better, fewer students turned to subject teachers and experts at the second stage.

Table 4.2 Descriptive Statistics of B11 (Number of Students Using Various Translation Resources)

		1		
Number of Students	Number of Students	Number of Students		
Translation Resources	(1st Stage)	(2nd Stage)		
Dictionaries	16	16		
Parallel Texts	0	0		
Encyclopedias	· 5	2		
Professional Books	2	7		
Translation Software	3	9		
Internet	11	13		
Experts	3	2		
Subject Teachers	6	4		

B12: When it came to the utilization frequency of translation resources used by students, internet ranked the first at both stages, and the rankings of translation software and professional books in the specific subject grew at the second stage. This explicitly indicated that students tended to show favor to those specialized and effective translation resources.

Table 4.3 Descriptive Statistics of B12 (Utilization Frequency of Translation Resources Used by Students)

Translation Resources Translation Resources Rank of Rank of Tendency (2<sup>nd</sup> Stage) (1st Stage) Frequency Frequency 1 **Dictionaries** 1 **Dictionaries** 2 Internet 2 Internet 3 Encyclopedias 3 Translation Software 1 Translation Software 4 Professional Books 1 4 5 Encyclopedias 1 5 . **Experts** Subject Teachers 6 **Subject Teachers** 6 7 **Professional Books Experts** 

B21: According to the collected data of B21, at the first stage the students only listed three basic requirements on translation resources, namely, personal computer (2 students), electronic dictionary (1 student) and professional translation software (1 student). While at the second stage, more translation resources were required by them,

namely, parallel text (7 students), personal computer (3 students), subject professionals (3 students), professional books in the specific subject (2 students) and electronic dictionaries (2 students). The translation resources they needed at the second stage fell into a wider range and tended to be more involved with the subject knowledge. Thus they became more aware of the importance of various translation resources, which actually could make their translation activities more efficient.

Table 4.4 Descriptive Statistics of B21 (Translation Resources
Wanted by Students)

Translation Resources Wanted	Number of	Translation Resources Wanted	Number of
(1 <sup>st</sup> Stage)	Students	(2 <sup>nd</sup> Stage)	Students
Personal Computers	2	Parallel Texts	7
Electronic Dictionaries	1	Personal Computers	3
Professional Translation Software	1	Experts	3
		Professional Books	2
		Electronic Dictionaries	2

B22: At the first stage, 62.5% of the students regarded translation resources as an important factor to translation quality management and 31.3% strongly agreed with it, with the rest disagreed with it. At the second stage, all the students thought B22 was true, among which 56.3% strongly agreed with it, and the rest agreed with it. As the students were more experienced in translation resources management, they began to realize the positive effect of translation resources on translation quality management.

B23: There is a relatively significant change in students' awareness of the importance of parallel texts. At the first stage, one third of the students had a negative opinion on it, with 6.3% strongly disagreed with it and 25% took a neutral stance on it. In addition, 62.5% agreed with it, and 6.3% strongly agreed with it. At the second stage, 68.8% strongly agreed with it and the rest agreed with it. This obvious change demonstrated that the students had a brand new look on the importance of parallel texts to the translated texts' organization, expression, terminology and so on, and made their progress to be professional translators who were sensitive to the textual resources available.

B31: With regard to B31, at the first stage 68.8% of the students strongly disagreed with that they often went to visit the client's factory, and the rest disagreed with it. However at the second stage, all the students strongly disagreed with this statement. This was not a desirable result, since frequent visits to the factory would lead to students' better understanding of how the machine was operated in practice. The reason

behind the result was that the factory was a military one and thus was not accessible to the students without permission. Some of the students gained a chance to visit the factory when the teacher (Doc. Wang) and the client (Mr. Li) co-organized the visit. Thus, the results of B6 were greatly influenced by the objective conditions.

B32: As a compensatory item to B31, B32 meant to assess whether the students recognized that visiting factory could help raise the efficiency of translation practice. Statistics displayed that at the first stage, the majority (62.5%) of the students agreed with B32 and 18.8% strongly agreed with it, with another 18.8% disagreeing with it. At the second stage, 81.2% strongly agreed with B32 and the rest agreed with it. This showed that all the students were aware of the importance of visiting the factory and thus had ever-increasing intentions to visit.

B33: There was a growing consensus of opinion on B33 throughout the translation project. At the first stage, 68.8% agreed with B33 and the rest strongly agreed with it. At the second stage, 81.3% strongly agreed with B33 while the rest agreed with it. Here the workers in the factory were valued, because they had a dual identity, namely, the machine operators and the target readers of the translated books. They possessed abundant knowledge of the technical terminology in Chinese and also were experienced in machinery operation, and thus could offer much instructive guidance to the students.

C11: 37.5% of the students disagreed that they would conduct a self-assessment before undertaking the translation task in order to see if the task fell within their scope of competence, and 43.8% strongly disagreed with C11. 12.5% agreed with C11 and the rest strongly agreed with it. At the second stage, only 6.3% strongly disagreed C11 and 37.5% disagreed with it. 12.5% took a neutral stance on it. On the other hand, 18.8% strongly agreed with C11, and 25% agreed with it. Generally speaking, it is a must for (semi-)professional translators to do such pre-translation assessment to assure that the TT would be rendered out in time. However, in the present study, the translation task was assigned by the teacher without taking much consideration of students' personal opinions. This might had a negative impact on developing students' awareness of pre-translation assessment.

C12: Students made a remarkable progress in terms of C12. A quarter of the students disagreed that they would make adequate preparations before taking the translation task. 31.3% took a neutral stance on it. At the same time, 31.3% agreed with it and the rest strongly agreed with it. At the second stage, 6.3% took a neutral stance on it. What's more, 37.5% agreed with C12 and 56.3% strongly agreed with it. From this

point of view, it was inferred that although students failed to pre-assess their competence before going down to the translation assignment, most of them did make enough preparations (searching for background information, etc.) for the forthcoming work.

C21: At the first stage, 12.5% of the students disagreed that it was very important to render the translated texts before the deadline, while another 12.5% took a neutral stance on it. 62.5% agreed with C21 and 12.5% strongly disagreed with it. At the second stage, half of the students agreed with C21 and the rest strongly agreed with it. It was clear that, at the end of the project, the students recognized that delivering a text in time was of primary importance in professional life.

C31: Statistics of C31 show that at the first stage, 6.3% of the students strongly disagreed and 31.1% disagreed that they were always thinking about transferring the functions of the ST in the translating process. 18.8% took a neutral stance on C31. 31.3% agreed with it and the rest 12.5% strongly agreed with it. At the second stage, no students (strongly) disagreed with it, while 6.3% took a neutral stance on it, 43.8% agreed with it and 50% strongly agreed with it. This demonstrated that the students had an ever-increasing awareness to attain the functional equivalence between ST and TT, which was target reader-oriented and was also a part of professional sense. As a matter of fact, in the present study, the translation materials (instruction books of machineries) were highly informative and instructive for workers' practical operation. Any mistranslations semantically and pragmatically would render serious consequences. C31 thus reflected the students' sense of responsibility for the task.

C32: C32 is related to the students' translation sequence, namely, whether it is a down-up sequence or the top-down sequence, with the latter starting from analyzing the function of the ST, comparing the different system of SL and TL, scanning through the source text, and then beginning to translate word by word/ phrase by phrase/sentence by sentence. At the first stage, 12.5% of the students strongly disagreed and another 12.5% disagreed that they thought it's important to scan the source text for a general understanding before going down to translate it. 6.3% took a neutral stance on it. The majority of students (62.5%) agreed with it and the rest strongly agreed with it. At the second stage, only 12.5% took a neutral stance on it, 43.8% agreed with it and the rest strongly agreed with it. It can be seen clearly that nearly all the students had learned to follow a top-down sequence at the second stage, which could contribute to translators' rational decision-making in their later translation practice.

C33: C33 concerns the necessity of diversified translation for an English word (especially the term) in different contexts. 6.3% strongly disagreed and 37.5% disagreed with C33. A quarter of the students took a neutral stance on it. 18.8% agreed with C33 and the rest strongly with it. At the second stage, 6.3% strongly disagreed with C33. Another 6.3% took a neutral stance on it. More students (50%) agreed and 37.5% strongly agreed with C33. By comparing the statistics collected at the two stages, we concluded that more students were inclined to identify various meanings of a word in different contexts.

C34: C34 is about information equivalence between ST and TT that belong to different cultural backgrounds. At the first stage, 31.3% of the students disagreed that total equivalence of information can be obtained between ST and TT. 6.3% took a neutral stance on C34. 56.3% agreed and 6.3% strongly agreed with C34. At the second stage, fewer students (6.3%) disagreed with C34, and 12.5% took a neutral stance on it. The number of student who agreed with C34 has increased slightly by 6.3%, however, fewer students (6.3%) strongly agreed with it. Therefore, students could better comprehend ST and could better manipulate the TT expressions, as they were more familiar with the operational mechanism of the machinery and had a deeper understanding of the subject knowledge and the bilingual knowledge, etc.

C35: C35 deals with the necessity of suitable addition/deletion in translation due to the English-Chinese differences. At the first stage the minority (18.8%) strongly agreed with it, 6.3% agreed with it. The majority (43.8%) disagreed with C35, with another 31.3% taking a neutral stance on it. While at the second stage, the result displayed that the majority (43.8%) agreed and 25% strongly agreed with C35. Only 12.5% took a neutral stance on it and the rest disagreed with it. This showed that students had a better understanding of the differences between English and Chinese and recognized that sometimes free translation should be adopted in translation. Such a change in students' awareness may largely due to their frequent exposure to the sophisticated technical translation assignments in the translation project.

C36: When it comes to being confidential about the information concerning the project, 12.5% of the students strongly agreed with it and 56.3% agreed with it. 6.3% took a neutral stance on it. 12.5% disagreed with it and another 12.5% strongly disagreed with it. At the second stage, students who strongly agreed with C36 increased to 43.8% of the students, and 37.5% agreed with the statement. 12.5% took a neutral stance on it and the rest 6.3% disagreed with it. In professional translation activities, confidentiality is one of the most basic requirements for translators for it

directly concerns with the factory's benefit, technologically or commercially.

C41: Nearly all the students thought the TT should be faithful to the ST throughout the translation project, since it is the prerequisite for any translation activities. At the first stage, 6.3% took a neutral stance on C41, 87.5% agreed with it and 6.3% strongly agreed with it. At the second stage, more students (37.5%) strongly agreed and 62.5% agreed with C41 at the second stage. Thus the translation project effectively helped the students enhance their consciousness of faithfulness in translation.

C42: The results of C42 show no difference at the first stage and the second stage, with 6.3% of the student agreed with it and the rest strongly agreed with it. All the students came to the common sense since it was a question about the personality of human beings.

C51: At the first stage, most of the students (56.3%) disagreed that they always tried to get the latest materials or information concerning the translation project in their spare time, and 31.3% took a neutral stance on it. Only 6.3% agreed with C51 and the rest 6.3% strongly agreed with it. Quite on the opposite, the majority of the students turned to value C51 at the second stage, with a quarter of them strongly agreed with the statement and 31.3% agreed with it. 37.5% took a neutral stance on it and merely 6.3% disagreed with it. From the statistics, it was suggested that the students became more actively involved in the translation project and were more responsible for the client as well as the target readers.

D11: At the first stage, half of the students took a neutral stance on D11, 43.8% agreed with it and 6.3% strongly agreed with it. At the second stage, only 12.5% took a neutral stance in it, 31.3% agreed with it and 56.3% strongly agreed with it. It proved that all the students were modest and cooperative in their work, especially at the second stage. This was partly because that the students were more experienced in getting along with other students as well as the client after going through the first stage of the translation project.

D21: At the first stage few students cared about their own rights in the translation project, with 43.8% strongly disagreed with D21, 18.8% disagreed with it and 31.3% took a neutral stance on it. Only one people (6.3%) agreed with it. At the second stage the result was improved to some extent, namely, 12.5% strongly disagreed with D21, a quarter disagreed with it and 37.5% took on a neutral stance on it and 25% agreed with it. However, the result was still not desirable since the majority of students knew nothing or just a little of their rights. This might closely related to their motives to participate in the translation project — most of the students regarded the project as a

chance for further study of English or the subject knowledge. Thus they didn't treat the project as anything commercial or socially-involved and failed to think of their own rights in the translation project.

D31: All the students strongly disagreed that translation quality should be related to the payment as stated in D31. It reflected that nobody had the commercial awareness throughout the translation project. This was largely due to the students' identity of being a college student, and also their motives to participate in the project as mentioned above. Thus they failed to understand it was their rights to get the deserving payment for their laboring work.

D32: 18.8% of the students strongly disagreed that they cared much about the payment they had got, 6.3% disagreed with it. 12.5% agreed with D32 and 6.3% strongly agreed with it. 56.3% didn't care about it. Only 12.5% agreed with it and 6.3% strongly agreed with it. While at the second stage, only one student strongly disagreed with D32, 43.8% took a neutral stance on it, 31.3% agreed with it and 18.8% strongly agreed with it. Then half of the students began to take payment seriously. Actually, most of the (semi-)professional translators care much about the payment since they are living on the job. From this perspective, the students tended to be professionalized by paying more attention to the payment. On the other side, as revealed in the statistics of D33, all the students claimed that they wouldn't negotiate with the client when they were not satisfied with their payment. For those students who cared about their payment, the results revealed a departure of what they intended to do and what they really had done. The reason behind was simple, the majority were not clear about their own right as translators or they dared not to negotiate with the client.

E11: At the first stage, half of the students agreed that they had revised the TT for several times before handing it to the client and 25% took a neutral stance on it. 18.8% disagreed with this statement and the rest 6.3% strongly disagreed with it. At the second stage, 12.5% strongly disagreed with E11, and another 12.5% took a neutral stance on it. The majority (62.5%) agreed and 12.5% strongly agreed with it. Here more students agreed with E11, which indicated that students became more considerate and responsible for the quality of their translated text.

E12: Most of the students stated that they hadn't gone through the client's feedback information very carefully, with 18.8% of the students agreed with E12 at the first stage and 12.5% at the second stage. This was due to mainly two reasons according to our follow-up interview: (a) the quality of the translated text were better than that at the first stage and (b) the client didn't give the students the feedback information in

time at the second stage since it was drawing near the summer vacation.

E13: As for the importance of the client's feedback information to the TT revision, at the first stage 75% agreed with E13 and the rest strongly agreed with it. At the second stage, 62.5% of the students agreed and 25% strongly agreed with E13, 6.3% took a neutral stance on it and the rest (6.3%) disagreed with it. From these statistics we knew that actually the students attached great importance to the feedback information for further text revision at the two stages. However, at the second stage the importance of feedback information was undermined to some extent, which was mainly due to the same two reasons as stated in the analysis of E12.

E21: At the first stage, 12.5% of the students strongly disagreed and 31.3% disagreed that the edition of their translated texts was of great importance, and 25% took a neutral stance on it. Only 31.3% agreed with E21. At the second stage, the majority (43.8%) agreed with E21 and 12.5% strongly agreed with E21. 18.8% took a neutral stance and 25% disagreed with it. Thus the majority began to realize the importance of editing works, on which the client and target readers laid their first impression of the translation work. In addition, two more students strongly disagreed with E21, which was partly because all the translated texts were delivered in written form rather than in typed ones.

E22: E22 is about the expression of the target text. At the first stage, 12.5% of the students strongly agreed and 62.5% agreed that TT should be expressed in line with the norms in the target culture. At the first stage, most of the students 62.5% agreed with and 12.5% strongly agreed with E22, 18.8% took a neutral stance on it and 6.3% disagreed with it. At the second stage, all the students came to reach the common sense, with 56.3% agreed with and the rest strongly agreed with E22. This change served as powerful evidence that the students were highly sensitive to a comprehensible TT for the target readers.

E23: Statistics of E23 proves that nearly all the students regarded "faithfulness to the ST" as one of the criteria in translation quality assessment at the two stages. At the first stage, 6.3% of the students took a neutral stance on E23, 87.5% agreed and the rest strongly agreed with it. At the second stage, 62.5% of the students agreed and the rest strongly agreed with E23, with more students starting to recognize the dominant position of the information equivalence between ST and TT. This result also corresponds to that of C34.

F11: As for the interpersonal relationships within one's translation group, 31.3% of the students agreed and 18.8% strongly agreed with F11, 25% disagreed with it and the

rest 25% took on a neutral stance. When it came to the second stage, 56.3% strongly agreed and 37.5% agreed with F11, with only one student (6.3%) taking a neutral stance on it. From the dramatic change in statistics at the two stages, it is clear that nearly all the students were on good terms with their fellow students at the second stage. This showed that students had recognized the importance of team work and thus learned gradually how to maintain good relationships with their peers as time went on.

F12: F12 is closely related to F11. At the first stage, 12.5% of the students strongly agreed and 31.3% agreed that team work was of great help to effective translation activities. 12.5% took a neutral stance on it. 37.5% disagreed and 6.3% strongly disagreed with it. At the second stage, 43.8% strongly agreed and another 43.8% agreed with F12, with 12.5% taking a neutral stance on it. We knew from the data that the great majority admitted the positive effect yielded by team work, which in turns would improve their interpersonal communication skills with other students.

F21, F22&F23 As professional translators, it is a must to go on well with the client who pays them directly. Compared with their relationship with other students, the relationship between the client and the students are relatively undesirable. Nevertheless, we can still see that students had made certain progress in this aspect at the second stage. At the first stage, only 18.8% agreed with F21, and 37.5% took a neutral stance on it. 37.5% showed their disagreement and the rest 6.3% strongly disagreed with it. At the second stage, a quarter of the students agreed and 6.3% strongly agreed with F21. Half of the students took a neutral stance and the rest disagreed with it. The reason behind was that in the translation project, students had been used to connecting the client via their teacher since they took the task. Then as they got acquainted with the client, they tended to make personal interactions with the client for information or others. This situation was also reflected in the statistics of F22 and F22: as the students learned to communicate with the client, they turned directly to the client for referential materials and feedback information. Students did better in F22 than in F22, since F23 was a collective behavior asking for the feedback information for the whole group. According to the follow-up interview with the students, they tended not to be troublesome by communicating with the client personally, although they had the client's phone number. That was to say, they were still on the way to actively improve the relationship with the client.

G11: Concerning training, at the first stage, 31.3% of the students strongly disagreed and 6.3% disagreed with G11. 18.8% took a neutral stance on it. 31.3% agreed and the rest 12.5% strongly disagreed with G11. That showed at the first stage half of the

students had the intentions to participate in translation training for further development. At the second stage, more students expressed their wishes to take formal translation training to develop their translation competence, with 37.5% agreeing and 18.8% strongly agreeing with G11. In addition, 12.5% took a neutral stance on it, and 18.8% disagreed and 12.5% strongly disagreed with it. This showed that the students were gradually fostering their sense of further study.

G21: The majority of the students had a negative opinion of G21 at the first stage, while at the second stage they took a neutral stance on it. At the first stage, up to 43.8% of the students strongly disagreed and 18.8% disagreed that they wanted to study translation theories for self-improvement, and a little more than a third of them took a neutral stance on G21. Only 18.8% agreed with G21. It was because, for most of the EFL students, translation theories seemed to be loosely connected with the translation practice, especially technical translation practice. At the second stage, students began to rethink about G21 since translation theories helped in their decision-making process in translation, 31.3% agreed and 18.8% strongly agreed with it. Still, 18.8% disagreed and the rest 31.3% strongly disagreed with G21.

G31: As for subject knowledge, most of the students (56.3%) agreed and 12.5% strongly agreed with G31, since it is of great benefit for their future work either as professional translators or professionals in the subject. Only 18.8% strongly disagreed and 6.3% disagreed with G31, with the rest 6.3% taking a neutral stance. At the second stage, the awareness of G31 was intensified — 62.5% strongly agreed and 12.5% agreed with G31. 6.3% strongly disagreed and 12.5% disagreed with it, with the rest 6.3% taking on a neutral stance.

H11 &H21: All the students have passed CET 4 but none of them have got any certificates of translation or interpretation. However, as statistics show in H3, the majority of the students (43.8%) agreed and 6.3% strongly agreed that both certificates were very important for professional translators. 31.3% disagreed with the statement and the rest took a neutral stance on it, which might due to the fact that they had done the translation work well without any certificate.

## 4.1.2 Ranks of PC Components

From the result derived from Wilcoxon Test mentioned above, it is clear that the students are more professionalized, both in their awareness (regarding translation as a profession) and behaviors as professional translators at the second stage of the project. Then the paper will delve into which components of PC in translation can be best developed through the translation project. As shown in table 4.5, we can see that the

top three components of PC in translation that are best developed are: Ethics, Interpersonal Communication Skills and Translation Resources, followed by Physical and Psychological Conditions, Training, Working Attitudes and Behaviors and finally Quality Management Skills.

Table 4.5 Ranking List of PC Components Developed in the Translation Project

Components of PC in translation	Rank
Component C: Ethics	1
Component F: Interpersonal Communication Skills	2
Component B: Translation Resources	3
Component A: Physical and Psychological Conditions	4
Component G: Training	5
Component D: Working Attitudes and Behaviors	6
Component E: Quality Management Skills	7

The author then further focuses on the individual item within each PC component, and makes another more detailed ranking list to demonstrate that which item is best developed and which is least developed among the items listed throughout the translation project, as seen in table 4.6.

Table 4.6 Ranking List of PC Items Developed in the Translation Project

Item	Mean Difference	Overall Rank	Rank in Each Component	Item	Mean Difference		Rank in Each Component	
A: Physical and Psychological Conditions				D:	L	L	nd Behaviors	
A11	0.19	32	2	D11	0.88	11	1	
A21	1.00	8	1	D21	0.75	17	2	
B: Translation Resources		D31	0.00	33	4			
B22	0.38	29	4	D32	0.75	18	3	
B23	1.00	9	1	D33	0.00	35	4	
B31	-0.31	37	5	I	E: Quality Management Skill			
B32	1.00	10	2	E11	0.56	25	3	
B33	0.50	26	3	E12	-0.38	38	6	
	C: Ethics	1		E13	-0.19	36	5	
C11	1.13	5	4	E21	0.69	21	11	
C12	1.19	4	3	E22	0.63	23	2	
C21	0.75	14	7	E23	0.38	31	4	
C31	1.31	1	1	F: Interpersonal Communication Skills				

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C32	0.81	12	6	F11	1.06	7	2		
C33	1.25	2	2	F12	1.25	3	1		
C34	0.56	24	10	F21	0.50	27	5		
C35	0.75	15	8	F22	0.81	13	3		
C36	0.38	30	11	F23	0.75	19	4		
C41	0.75	16	9	G: Training					
C42	0.00	33	12	G11	0.44	28	3		
C51	1.13	6	5	G21	0.63	22	2		
				G31	0.75	20	1		

By analyzing the values of Mean Difference, we can get the top ten items that are best developed in the translation project, namely, C31, C33, F12, C12, C11, C51, F11, A21, B23 and B32. The ten items mainly fall into three aspects—Ethics (Component C), Interpersonal Communication Skills (Component F) and Translation Resources (Component B).

C31 concerns about students' awareness of transferring the functions of the source text in translation activities. As non-English majors, the students were lacking in translation theories and thus didn't possess any concept of functional equivalence in translation. However, the most outstanding characteristics of instruction books of machineries were highly informative and instructive for workers' practical operation, and thus students had to cultivate a strong sense of functional equivalence in the latter time.

Statistics of C33 proves that the students had made a great step forward in analyzing and distinguishing various meanings in different context in the translation project, which indicates they had increased their vocabulary and were more competent and flexible in manipulating translation skills.

C12 and C11 deal with the students' preparation work before going down to the translation work. The students were more active in pre-translation works as their sense of responsibility for the work grew.

C51 concerns students' extracurricular performance for self-improvement.

As for F12 and F11, the students were used to working individually in the traditional class but tended to recognize the positive impact of team work on translating efficiency. That was, to a large extent, because they had realized the positive role of interpersonal communication and group wisdom in their translation practice.

A21 is about students' competence in adjusting their psychological pressure.

B23 and B32 are about the students' awareness of the importance of translation resources (parallel texts and visits to the factory and workers).

The top three items that are least developed in the translation project are: E13, B31 and E12, which belong to Quality Management Skills (Component E) and Translation Resources (Component C).

E13 and E12 cope with the feedback information provided by the client of the translation project. These two items were least developed because (a) the quality of the translated text were better than that at the first stage and (b) the client didn't give the students the feedback information in time at the second stage since it was drawing near the summer vacation.

Developing students' competence in B31 was constrained by the practical situations as mentioned in 4.1.1.

## 4.2 Statistical Analyses of the Students' TQ

This part explores whether the students' translation quality was improved at the second stage compared with that at the first stage. The author will try to make a comparative analysis of students' translation quality at the first stage and that at the second stage, and then make a comparative analysis of TQA by the students and TQA by the client.

# 4.2.1 Statistical Analyses of the TQA Questionnaire for the Client

Statistical Analysis of students' translation quality assessment by the client (16 samples) mainly follows the following three methods: Wilcoxon Test, Mean Value Analysis and Ranking.

It can be inferred that students' translation quality was improved at the second stage compared with that at the first stage. Firstly, Table 4.7 demonstrates that all the items are at a significance level (P < 0.10), which claims a significant difference between statistics collected at the first stage and that at the second stage. Secondly, according to Table 4.6, the Mean Value for each item at the second stage is larger than that at the first stage, which shows a significant improvement in the students' translation quality. Thirdly, the author picks out the items that can be best developed in the present study by ranking the proficiency range increase. In line with the statistics, Grammatical Correctness, Spelling and Punctuation and Intelligibility/Readability rank the top three, followed by Style/Register, Format, Consistent Use of Term, Expression in Line with the Chinese Norms, Functional Equivalence, Information Accuracy, and finally Information Integrity. In addition, for the ten items listed in the table, students

practiced best in Format, Functional Equivalence, Spelling and Punctuation but worst in Style/Register at the first stage; while they practice best in Format, Spelling and Punctuation and Grammatical Correctness and worst in Information Integrity. This shows that, relatively speaking, students tended to attach more emphasis to aspects such as the formal settings of TT and then the functional equivalence between ST and TT throughout the translation project, since the TT was a technical one for publication. On the other hand, they consistently failed to work out a text with the most appropriate style/register, which was, however, well improved at the second stage.

Table 4.7 Statistical Analysis of Students' Translation Quality Assessment by the Client

Items	Statistics (1 <sup>st</sup> Stage)		Statistics (2 <sup>nd</sup> Stage)		Wilcoxon	Rank of Proficiency	
Tionis	Mean	Rank	Mean	Rank	Test	Range Increase	
TQ1 Spelling and Punctuation	3.5625	3	4.625	2	-3.690(a)* **	2	
TQ2 Format	3.6875	1	4.6875	1	-3.017(a) ***	5	
TQ3 Expression in Line with the Chinese Norms	3.25	7	4.1875	5	-3.419(a) ***	7	
TQ4Style/Register	2.625	10	3.625	10	-3.557(a) ***	4	
TQ5 Intelligibility/ Readability	2.9375	9	4	7	-3.690(a) ***	3	
TQ6 Functional Equivalence	3.6875	2	4.4375	4	-2.972(a)	8	
TQ7 Information Integrity	3.375	6	3.9375	8	-2.251(a)	10	
TQ8 Information Accuracy	3.4375	4	4.125	6	-2.810(a)	9	
TQ9 Grammatical Correctness	3.375	5	4.5625	3	-3.755(a)	1	
TQ10 Consistent Use of Terms	2.9375	8	3.875	9	-3.419(a) ***	6	
TQ' Overall Assessment	3.25		3.9375		-2.840(a) ***		

a: Based on negative ranks.

<sup>\*\*\*:</sup> Asymp. Sig. (2-tailed)<0.01 \*\*: Asymp. Sig. (2-tailed)<0.05

## 4.2.2 Comparative Analyses of TQA

Table 4.8 shows that, when it comes to the translation quality assessment, the students' self-assessment corresponds with the client's assessment. In other words, in the translation project, the students were best developed in the sequential three aspects: firstly Edition, and then Expression and finally Loyalty to the Source Text. This further identifies the consistency of data collected from the two questionnaire surveys and helps approve the improvement of students' competence of translation quality management.

Table 4.8 Comparative Analysis of Translation Quality Assessment
by the Students and that by the Client

by the Students and that by the Cheft							
Students' Self-assessment of Translation Quality (Inner Awareness) Rank of Proficiency Range Increase Client's Assessment of Translation Quality (Outer Performance)		Rank of Proficiency Range Increase					
E21 Edition	4	TQ1 Spelling and Punctuation	2				
	1	TQ2 Format	5				
		TQ3 Expression in Line with the Chinese Norms	7				
E22 Expression	2	TQ4 Style/Register	4				
LEE Expression		TQ5 Intelligibility/Readability	3				
		TQ9 Grammatical Correctness	1				
		TQ6 Functional Equivalence	8				
E23 Loyalty to the	3	TQ7 Information Integrity	10				
Source Text		TQ8 Information Accuracy	9				
Other Aspect		TQ10 Consistent Use of Terms (belong to Ethics)	6				

For the reason behind the results in Table 4.8, it is inferred that the students were exposed to the relatively all-around requirements from the translation profession in the translation project, among which the editing requirement is the easiest one to be fulfilled and contributes directly to the first impression of a TT. Secondly, for Expression, the students were gradually getting familiar with the regular expression and stylistic characteristics in technical translation due to their accumulated experiences in the two-staged project. Thirdly, students reinforced their sense of Loyalty to the Source Text both semantically and functionally, thus bearing more responsibilities for their translation work since it was for practical use in the end. Last

but not the least, Consistent Use of Terms is also one aspect of Translation quality control. The translation project was a team work, and terminology translation must be worked out under the team discussion and cooperation. Otherwise, inconsistent translation of terms would puzzle the end readers.

## 4.3 Correlation Analyses of Students' Translation PC and TQ

The relationship between students' PC in translation and the quality of their translated texts is explored by using Spearman Correlation analysis, which is presented in Table 4.9 and Table 4.10 with detailed information. In addition, Parameter H (Certificates) is omitted in the correlation analysis since it is not a competence that can be acquired in the present authentic translation study; and B1 (Translation Resources Usage in Practice) is also omitted because it consists two open questions which are not designed on the five-point scale.

Table 4.9 Spearman Correlation between Various Factors of PC in translation and

Translation Quality (at the 1<sup>st</sup> stage)

	Translation Quartey (at the 1 stage)									
	A1	A2	B2	В3	C1_	C2	C3	C4	C5	D1
TQ	0.523*	0.087	0.236	0.015	0.271	0.146	0.406*	-0.063	0.091	0.596**
	D2	D3	E1	E2	F1	F2	G1	G2	G3	
TQ	0.016	0.035	0.074*	0.292*	0.558*	0.100	-0.414	-0.411	-0.607**	

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

- \*\*: Correlation is significant at the 0.01 level (2-tailed).
- A1 = Physical Conditions; A2 = Psychological Conditions
- B2 = The Importance of Translation Resources
- B3 = Visit to the Factory and Workers; C1 = Preparation Work before Taking the Project
- C2 = Delivering the TT in Time; C3 = Awareness of Translation Quality Control
- C4 = Sense of Confidentiality and Loyalty
- C5 = Keeping the Latest information of the Translation Project
- D1 = Modesty and Cooperation; D2 = Awareness of One's Own Right
- D3 = Attitude toward the Payment; E1 = Revision of Translated Texts
- E2 = Attitude toward Translation Quality Management Criterion
- F1 = Interpersonal Communication within the Team
- F2 = Interpersonal Communication with the Client
- G1 = Awareness of Further Training on Translation Practice
- G2 = Awareness of Further Training on Translation Theories
- G3 = Awareness of Further Training on the Subject Knowledge concerning the Translation Project
- TQ = Quality of the Translated Texts

As seen from Table 4.9, it is evident that quality of the translated texts has significant positive correlations with A1 (Physical Conditions) (.523, p < .05), C3 (Awareness of Translation Quality Control) (.406, p < .05), D1 (Modesty and Cooperation) (.596, p < .01) and F1 (Interpersonal Communication within the Team) (.558, p < .05), positively but not significant correlations with B2 (Tthe Importance of

Translation Resources) (.236), C1 (Preparation Work before Taking the Project) (.271), C2 (Delivering the TT in Time) (.146), E2(Attitude toward Translation Quality Management Criterion) (.292, p < .05), and F2(Interpersonal Communication with the Client) (.100).

Significant negative correlations between TQ (quality of the translated texts) and G1 (-.414), G2 (-.411) and G3 (-.607, p < .01) are evident. All the three factors are connected with training for further development on translation. The unexpected results may due to the reason that students are capable of the present translation task and thus tend to ignore the importance of further self-improvement (concerning subject knowledge, translation theories and practice).

The quality of the translated texts has no correlations with A2 (.087), B3 (.015), C4 (-.063), C5 (.091), D2 (.016), D3 (.035) and E1 (.074, p < .05). The results of A2, B3, C5 and E1 are out of the author's expectation. In terms of A2, no correlation between Psychological Conditions and TQ has been found, which might appear to be counterintuitive. The reason behind may lay in that the students were not overloaded with much translation task and were confident to handle their task both qualitatively and quantitatively, which makes them overlook the aspect of psychological pressures of the like. As for B3 (Visit to the Factory and Worker), it is supposed that more visits and connection should be of great benefit to students' understanding of the technical and other background information and thus to the improvement of the translation quality. However, as mentioned in 4.1.1, the unfavorable objective conditions prevent students from visiting the factory frequently. As a result, they fail to get the latest information of the translation project due to their limited connection with the factory and the workers, which contributes to the undesirable result reflected in C5. When it comes to E1 (Revision of Translated Texts), since text revision is, to a large extent, based on the client's feedback information, students failed to put much effort and time into the text revision when the client didn't give them the feedback information in time. In addition, as anticipated, statistics demonstrate that Sense of Confidentiality and Loyalty and Awareness of One's Own Right are not necessarily related with the translation quality.

Here follows the statistical analysis at the second stage of the translation project.

Table 4.10 Spearman Correlation between Various Factors of PC in translation and Translation Quality (at the 2<sup>nd</sup> stage)

		_			<u> </u>					
	A1	A2	B2	В3	C1	C2	C3	C4	C5	D1
TQ	0.526*	0.103	0.443	-0.097	0.427*	0.150*	0.735**	0.107	0.064	0.413
	D2	D3	E1	E2	F1	F2	G1	G2	G3	
TQ	-0.298	0.089	0.399*	0.348**	0.617*	0.388**	-0.465	-0.043	-0.383	

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

- \*\*: Correlation is significant at the 0.01 level (2-tailed).
- A1 = Physical Conditions; A2 = Psychological Conditions
- B2 = The Importance of Translation Resources
- B3 = Visit to the Factory and Workers; C1 = Preparation Work before Taking the Project
- C2 = Delivering the TT in Time; C3 = Awareness of Translation Quality Control
- C4 = Sense of Confidentiality and Loyalty
- C5 = Keeping the Latest information of the Translation Project
- D1 = Modesty and Cooperation; D2 = Awareness of One's Own Right
- D3 = Attitude toward the Payment; E1 = Revision of Translated Texts
- E2 = Attitude toward Translation Quality Management Criterion
- F1 = Interpersonal Communication within the Team
- F2 = Interpersonal Communication with the Client
- G1 = Awareness of Further Training on Translation Practice
- G2 = Awareness of Further Training on Translation Theories
- G3 = Awareness of Further Training on the Subject Knowledge concerning the Translation Project
- TQ = Quality of the Translated Texts

As Table 4.10 shows, quality of the translated texts has significant positive correlations with A1 (Physical Conditions) (.526, p < .05), B2 (The Importance of Translation Resources) (.443), C1 (Preparation Work before Taking the Project) (.427, p < .05), C3 (Awareness of Translation Quality Control) (.735, p < .01), D1(Modesty and Cooperation) (.413) and F1 (Interpersonal Communication within the Team) (.617, p < .05) and positively but not significant correlations with A2 (Psychological Conditions) (.103), C2 (Delivering the TT in Time) (.150, p < .05), C4 (Sense of Confidentiality and Loyalty) (.107), E1 (Revision of Translated Texts) (.399, p < .05), E2(Attitude toward Translation Quality Management Criterion) (.348, p < .01) and F2 (Interpersonal Communication with the Client) (.388, p < .01).

On the other side, quality of the translated texts has significant negative correlations with G1 (Training on Translation Practice) (-.465), negative but not significant correlations with D2 (-.298) and G3 (-.383) and no correlations with B3 (.097), C5 (.064), D3 (.089) and G2 (.043).

From the result we can see that more factors of PC in translation are correlated with the quality of the translated texts at the second stage compared with the first stage. B3, C5, D3, G1, G2 and G3 remain uncorrelated or negatively correlated with TQ.

As mentioned in 4.1.2, it is presented that Ethics (Component C), Interpersonal

Communication Skills (Component F) and Translation Resources (Component B) are the top three that are best developed in the empirical study. Such a result also roughly corresponds to the three factors that are positively correlated with the translation quality. Therefore, we come to the conclusion that Ethics (Component C), Interpersonal Communication Skills (Component F) and Translation Resources (Component B) are the most deciding ones in PC in translation, which need to be attached the greatest attention in translation teaching.

# **Conclusions, Implications and Suggestions**

In this chapter, a conclusion is presented at the very beginning, followed by the discussion of the pedagogical implications of the present study. Finally, the limitations of the present study and the corresponding suggestions for future research are put forward.

## Discussions and Conclusions Drawn from the Present Study

Through an empirical study and by mainly adopting Wilcoxon Test and correlation analysis, the present study tries to investigate students' acquisition of PC in translation in a translation project, and the relationship between PC in translation and TQ. Statistical analysis with the tentative explanations has been presented in Chapter four, based on which the author is going to draw the conclusions of the study.

- (1) The students in the present study have made a remarkable progress both in their PC in translation and in the quality of their translated text, which testifies the positive effect of the authentic translation experiences in cultivating EFL students' PC in translation. By being exposed to a translation project, students have the access to the translation materials and resources that are available to professional translators. In this way they are more likely to acquire PC directly.
- (2) The improvement of each component of PC in translation is in a hierarchic rank in its significance. The three best developed components of PC in translation are: Ethics, Interpersonal Communication Skills and Translation Resources, followed by Physical and Psychological Conditions, Training, Working Attitudes and Behavior and finally Quality Management Skills.

In addition, although the students haven't made a remarkable progress concerning the overall competence of Working Attitudes and Behavior, their working attitudes have been improved greatly (such as being modest and cooperative in their work). However, their working behaviors are still undesirable in that they are not sensitive to their own rights, especially their deserved payment, since they regard the project as a practice but not a commercial activity. As for the Quality Management Skills, the students fail to make a remarkable progress due to two reasons: (a) the students were more competent and could render out a TT with better quality (b) the students were constrained by the objective conditions.

(3) The students in the present study have made a remarkable progress in the quality

of their translated text, which helps testify the positive effect of the authentic translation experiences in cultivating EFL students' PC in translation.

(4) After the translation project, there proves to be a positive correlation between the PC in translation and the quality of the translated text, though some correlations were low and not significant due to the small size of subjects in the study. Ethics (Component C), Interpersonal Communication Skills (Component F) and Translation Resources (Component B) are the top three that have significant positive correlations with the quality of the translated texts.

The findings listed above contribute to our deeper understanding of EFL students' acquisition of professional translation competence in the translation project and the relationship between PC and TQ. Therefore, the findings are beneficial to our construction of translation courses.

## Beyond the Research Questions: Implications of the Study

Results drawn from the present study account for its pedagogical implications as stated below.

Firstly, it is crucial to take a constructivist approach to translation education/training by bringing authentic tasks into the academic environment. By increasing students' sense of responsibility and raising their interests, real-life situations increase the likelihood that students would be more engaged in their learning and thus invest more effort and time on learning. It is also one of the reasons that made the students stick willingly to the translation project from the beginning to the end.

Secondly, teachers should pay attention to those components of PC that are least developed, for example, Physical and Psychological Conditions, Training, Working Attitudes and Behaviors and Quality Management Skills. Teachers are supposed to act as an active project manager, teaching instructor and the facilitator (not as instructors dominating every aspect of the translation project) to create a more favorable environment for the students' overall acquisition of the PC in translation. In this sense, teachers are responsible for the following things such as acquainting students with market situations and then finding out the proper tasks, dividing the class into several groups according to the difficulty and the amount of the assignment, assessing students' translation competence with the help from the client of the translation project, etc.

Thirdly, in the translation teaching, great importance should be attached to those components of PC that can be best developed in the translation project and also are positively correlated with the quality of translated text, namely, Ethics, Interpersonal

Communication Skills and Translation Resources.

#### Limitations of the present study and Suggestions for Future Research

The serious limitations of questionnaires mainly fall into two aspects, namely, the research instrument and the sample size.

As for the instrumentation adopted in the present study, on the one side, two questionnaires are designed for the specific needs, the Professional Competence Questionnaire for EFL Students (see Appendix B) and the Quality Assessment Questionnaire for the client (see 3.3). Without any questionnaire sample on PC in translation, the self-designed questionnaires in the present study suffer from many limitations both in their content and structures which call for further improvement. For instance, it is hard to avoid simplicity and superficiality in the self-designed questions of the two questionnaires, in which the structures are not immune to further improvement. One suggestion made here for future research is that the questionnaire should be well-constructed based on literature studies in a wider range and discussions with the researchers who are doing the same research in the world.

On the other side, the follow-up interviews were not conducted in a systematic way. The author failed to form any specific questions to the sticking point but just asked for some information when she was puzzled by the information collected from the questionnaires or sometimes she just talked with the students whenever she got some new ideas. Therefore, it is suggested that in-depth interviews or even case studies can also be used as a complement for the questionnaire survey.

Secondly, the reliability of the final results is affected by the sample size in the present empirical study (16 samples). In such a follow-up survey designed for the translation project, the materials needed to be translated are limited and thus we needed only 16 participants. With such a small sample size, the change of any individual value may have strong influence on the entire statistical results. Thus future research is suggested to choose a larger sample size by creating more favorable conditions, by finding a larger translation project, for example.

In summary, the present study is a tentative and exploratory attempt to explore the field of PC in translation, which is bound to be a little superficial and bears many shortcomings needed to be improved. However, PC in translation is still an open question, so this paper only represents the author's personal ideas for the reader's reference. Thus further research on PC in translation and translation education/training under the academic environment is urgently needed, especially in China.

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I would also like to express my heartfelt gratitude to members of our research group, especially Doctor Xiao Hao from the College of Economics and Trade in Hunan University, who contributed a lot to the statistic analysis of the thesis and also gave me many constructive suggestions, thus making the thesis more logical both in structure and in argumentation. Moreover, Zou Yupin helped me a lot by sharing with me the result of her pilot survey on the local translation market.

Besides, my appreciation also goes to Mr. Li Cong, the client of our translation project, and the 16 students from the College of Electric and Information Engineering who cooperated patiently and considerately with me in my empirical studies.

Finally, I would like to take this opportunity to express my deepest thanks to my family for their endless encouragement and affection, especially when I was frustrated by difficulties in writing this thesis.

Needless to say, none of those people mentioned above bear any responsibility for any shortcomings this paper proves to have.

# Appendix A 攻读学位期间所发表的学术论文目录

[1] 王湘玲, 毕慧敏,建构基于真实项目的过程教学模式一兼评《翻译能力培养研究》,上海翻译[J],2008(2):52-56

## Appendix B 关于科技翻译职业能力的调查问卷

年龄:

专业:

性别:

男

女

姓名:

第一部分 单项选择题

	请	很挑	居您	参	加出	比阶	段	翻译	译功	目	的	实际	示情	祝	,	在「	面	的	题」	页中	·进	行	选:	择	(1	=
完	全不	符記	今,	2	=7	スオ	符	合,	Ĵ	<b>;</b> =	— <i>,</i>	贺,	4	1 = <u>2</u>	基	本行	合	,	<b>5</b> =	完	全	符	今)	, i	旨在	狩
合的	<b>的数</b>	字门	下面	i划	۷.																					
1.	我认	为	译	者健	康	程度	度与	i译.	文月	质量	密	切	相き	ŧ		1	2	2		3	4	4		5		
2.	我认	为	译	者的	心	理扎	亢压	能	力!	与译	文	质	量徑	密切	相	关		1		2		3		4		5
3.	我认	为	翻讠	泽工	[具]	对一	于翻	译	质量	量非	常	重!	要		1		2		3		4		5			
4.	平行	文	本戶	能有	效	帮具	助我	了1	解	并掌	[握	中	文和	斗技	文	本	用语	习	惯	和行	方文	こ规	则			
	1		2		3	4	4	5																		•
5.	在完	成	此	阶段	的	翻讠	圣功	目	期门	可,	我:	经常	常实	地	参	观、	考	察证	亥工	<b>:</b> 厂	1		2	3	4	5
6.	我认	为	参	见工	厂对	付于	-提	高译	文	质	量、	缩	短額	翻译	时	间目	非常	重	要	1		2	3	} .	4	5
7.	与工	人	面	付面	i地?	交礼	<b></b>	了	解_	口人	、及	有	关札	几器	操	作	的程	序	,	能有	可效	標	助	我说	载少	翻
	译时	间	, ;	是高	翻	译月	质量	ţ	1	l	2	•	3	}	4	ŀ	5									
8.	在决	定	接:	受翻	]译	任	务前	<b></b>	认	为	阻略	各衡	量		下人	原文	的	难	度和	印自	己	能	力	的丿	で小	不
	重要		1		2		3	4	4		5															
9.	在接	受	此	次翻	译.	项	目之	前	, -	践会	做	好	充り	分的	准	备.	工作	€ (	如.	上网	9 查	ŧ找	该	企业	上的	背
	景资	料	等	)		1		2		3		4		5												
10.	我认	人为	按	时向	可客	户	交付	寸译	文	非常	常重	要		1		2		3		4		5				
11.	翻译	附	我	时刻	引想	着	要》	佳确	传	达	東文	本	的	功能	Ľ Ľ		1		2	?	3	,	4	ļ	5	
12.	下筆	等	下	译文	て之	前	我会	色通	读	原)	文理	解	原	文大	意力	Ī	1		2	?	3	}	4	1	5	
13.	我认	人为	在	不同	引的	上	下	て中	,	同-	一个	英	文』	单词	] (	特:	别是	L 指	术	语翻	羽记	(利	可	以翻	羽译	成
	不同	的	汉i	吾		1	2	2	3	3	4		5	j												
14.	我讠	人为	中	英两	万种	语	言え	と间	虽	然石	字在	三词	义	差昇	₽,	但	是原	文	信	息利	口词	文	信	息瓦	可以	完
	全对	等		1	2	2		3	4	ļ.	5	;				•										
15.	我讠	人为	翻	译的	寸必	须	完全	è尊	重	原	文,	任	何均	曾译	ξ,	减i	泽的	现	象	都是	才	下	允	许占	出现	的
	1	2		3		4		5																		
16.	我会	₹对	源	文本	卜和	译	文才	卜信	息	进往	亍仴	密	非	常重	冟	Ę	1		2	2	3	}	4	ļ	5	
17.	我讠	人为	译	文是	忠实	于	原フ	文很	重	要		1		2		3		4		5						
18.	我讠	人为	译	者	生翻	译	过	程中	不	能	因之	为绍	经济	利	益	做出	出任	何	不利	利于	· 客	户	以	及国	国家	利
	益的	事	情	1		2		3		4		5														
												7	73													

19.	我总	是	自	觉 <sup>力</sup>	也有	在课	外	不断	ſ阅	读	与	翻	译	项	目	相	关的	竹	材料	斗,	注重	巨人	支斯	<b>才</b> 获	取材	目关	的信
	息资	讯	1			2		3	4		:	5															
20.	我太	客	户	和纟	1	员们	总	是表	现	出	表	现	谦	逊	,	合	作的	的	态质	茰	1		2	3	3	4	5
21.	我很	明	确	作さ	为-	一名	学	生译	者	我	所	应	该	享	有	的	权	利		1		2		3		4	5
22.	我会	:因	为	报四	HI.	的多	少	来决	定	自	己	译	文	的	质	量			1		2		3		4	;	5
23.	我毫	不	在	意非	段月	听应	得	的报	酬			1			2		3		4		5						
24.	如果	以对	所	得扌	R	駲不	满	意时	我	会	主	刻	向	客	户	反	映忖	青	况	1	;	2		3	4	:	5
25.	我和	同	组.	人员	员的	的关	系	处理	得	很	好			1		2			3	4	4		5				
26.	我和	1客	户	的	关	系处	理	得很	好	<u>:</u>		1		2			3		4		5						
27.	我总	是	主	动「	句名	客户	索	要平	行	文	本	,	术	语	表	等	资料	枓		1		2		3		4	5
28.	我总	是	主	刻扌	戈	客户	征	询对	于	译	文	的	反	馈	信	息			1	:	2		3	2	ļ	5	
29.	我认	人为	目	前	所	采取	白	团团	从台	合作	乍自	りフ	方元	t z	寸-	于海	或少	> 霍	羽译	計	间,	. ;	提高	高翻	译.	质量	t 1
	2	3		4	,	5																					
30.	我常	常	会?	想到	要	参加	翻	译垟	训	,	提	高	翻	译	实	践	能	力		1		2		3		4	5
31.	我常	常	会?	想到	要	学习		定的	了翻	译	理	论	知	识			1	l		2		3		4	:	5	
32.	我常	常	슺	想	要:	进一	·步	钻矿	开学	色彩	<b>‡</b>	<u> </u>	L 知	ij	į	(如	和	本	翻	译.	项目	相	美	的	学科	4理	论知
	识、	专	业乡	ni	<del>(</del> )			1	2		:	3		4		5	5										
33.	在把	译	文	交纟	合名	客户	之	前,	我	通	常?	会	将i	泽.	文i	人耳	复杉	ΣŹ	寸多	次		1		2	3	4	. 5
34.	会仔	细	研	读月	ηί	收到	的	客户	的	反	馈	信	息			1		2		3		4		5			
35.	我认	、为	客』	⇒損	是任	<b>共的</b>	反	馈信	息	有月	功	Fi	を	て修	多己	女和	1译	文	质	量的	的提	高	1	2	3	4	5
36.	我认	、为	翻	译的	的	司时	做	好译	文	的	排	版	很	重	要		1	l		2	;	3		4	:	5	
37.	我认	、为	译:	文业	必多	须符	合	中文	的	表	达	习	惯			1		2		3		4		5			
38.	我认	、为	译:	文に	忠	实于	原	文是	衡	量	译	文	质	量	的	重	要材	亦	准	:	1	2		3	4	:	5
39.	我认	、为	语	言证	Œ-	书和	翻	译词	书	对	·—	名	职	业	译	者:	来i	兑	很重	重要	į	1	2	2	3	4	5
40.	在此	翻	泽[	介目	足悠	S.所·	使	用过	的	翻	译:	资	源	有	<b>(</b> †	清石	玍沒	<u>t</u> I	页上	:划	勾	<b>(</b> )	:				
	a. 🛚	又语	词	典		b.	平	行づ	て本	τ.	(	c. É	手利	44	‡	<b>ţ</b>	ć	i.	其	他	参考	+	籍	е	. 番	11译	软件
	f. 🗷	引特	M	٤	g. <del>1</del>	专家	的	指导	:	h.	老儿	师的	的打	背	寻	i.	其	他							_		
41.	请将	在!	比翻	用词	例	个段:	您	使用	翻	译	资	源	按!	照	使	用步	页泽	Ξŧ	非序	₹ (	从且	艮官	常便	き用	的番	羽译	资源
	开始	排	字)	_																							
42.	目前	, 1	您且	長者	自	[得	到	的翻	译	资	源	是	: _						_								
43.	目前	您	拥ィ	有的	匀夕	卜语	等	级证	书	为	: 2	a.	无			b.	有	٠.									
45.	您的	英i	吾]	19	及月	<b>戈</b> 绩:	为	: _								_											
	你的															_											
47.	您参	加」	比	欠鄱	<b>1</b> 12	译项	目	的动	机	为	(	请	在	选」	项.	上步	訓な	J.	<b>(</b> )	:							

a. 经济收益 b. 个人兴趣 c. 为了增加知识面 d. 其他
48. 您觉得作为一名学生译者很骄傲 (请在选项上划勾 √): a. 是 b. 否
49. 在您看来, 学生译者与职业译者的最大差异在于(请在选项上划勾√)
a. 翻译技巧 b. 职业经历 c. 熟练程度 d. 工作条件 e. 心理素质
f. 其他
50. 您一般主要会从哪些方面来判断自己和同伴的译文质量?
a.是否符合中文的表达习惯 b.是否忠实于原文 c.译文手写是否清晰/电子
排版是否美观 d.其他
请按照重要性排一下次序

P.S. 如对此问卷有任何疑问, 烦劳电询: ××× ② *谢谢合作!* 

## Appendix C 关于学生译文质量的调查问卷

单选题(此题为 5 分制,1=完全不符合, 2=不太符合, 3=一般, 4=基本符合, 5=完全符合):

评估参数	完全不符合	不太符合	一般	基本符合	完全符合
1. 译文拼写和标点正确	1	2	3	4	5
2. 语法正确	1	2	3	4	5
3. 全文中术语翻译很连贯	1	2	3	4	5
4. 信息传达完整,不存在 漏译或不译的现象	1	2	3	4	5
5. 信息表达精确,不存在 误译或错译的现象	1	2	3	4	5
6. 文体翻译正确	1	2	3	4	5
7. 译文表达符合中文规范	1	2	3	4	5
8. 译文排版符合规范	1	2	3	4	5
9. 译文准确传达原文功能	1	2	3	4	5
10.译文具有可读性和可理 解性	1	2	3	4	5
11.译文质量总体评分	1	2	3	4	5

P.S. 如对此问卷有任何疑问, 烦劳电询: ×××

<sup>◎</sup>谢谢合作!

## Appendix D 详细中文摘要

翻译工作是一个复杂的过程,需要译者具有相应的翻译能力。翻译教学的最终目标是提高学生译者的翻译能力,培养适合社会所需的翻译人才。因而,翻译能力研究是发展翻译教学的基础,研究翻译能力在翻译活动中的作用可以有效地指导相关翻译教学原则的制定和实施。

20世纪90年代以来,翻译能力及其培养已成为翻译及翻译教学领域内的主要研究对象之一。关于翻译能力的定义、组成成分培养方式的研究目前尚处于探索阶段。一般而言,翻译能力指译者进行翻译所必需的潜在的知识与技能体系。从不同的视角出发,翻译能力可以被划分为各类不同的组成成分,如语言能力、语言外知识能力、翻译策略能力、主题知识能力和翻译职业能力等(PACTE, 2000)。迄今为止,研究者们对于翻译能力构成成分的研究焦点多集中于语言能力和翻译策略能力等,对于翻译职业能力则鲜有著述。作为翻译能力的一个组成成分,翻译职业能力的提高能有效促进译者翻译能力的整体提高。同时,翻译市场需求以及高校翻译教学发展需求决定了在高校培养职业译者的必要性和紧迫性。

随着国际交流的日益频繁,翻译市场对职业译者的数目和素质提出了更高的要求。而现实情况表明,职业译者的供给远远小于市场需求,且大量兼职译者充斥着翻译市场,译者整体素质有待提高。与此同时,市场需求同时也给高校翻译研究方向的学生带来了巨大的就业压力。世界各高校也逐渐改变了以教师为中心的学院式封闭教学法,转而以市场和学生的需求为导向来培养学生的翻译职业能力。因而,本文作者选取了翻译职业能力作为切入点,来研究高校翻译教学中学生翻译能力的培养。

经文献研究,作者认为,就广义而言,翻译职业能力包含从事职业翻译活动所需的各种知识和技能,即往往等同于职业译者所需的综合素质,主要包括语言能力、翻译策略能力、主题知识能力和翻译职业操作能力等。其中,语言能力,翻译策略能力和主题知识能力等往往能在传统的翻译课堂上进行培养,并且,其培养绝非一朝一夕之功,需要译者通过日积月累不断内化各种知识和技能。因而,本文主要研究传统课堂所不能有效培养的翻译职业能力,主要包括译者的职业行为能力,工具能力和市场能力等方面,即在本文中所界定的狭义上的翻译职业能力。此外,经作者对本地翻译市场的需求调查表明,翻译市场更青睐具有一定专业知识的非英语专业学生译者而非英语专业学生译者。所以,职业译者培训以高校非英语专业学生作为培养对象更具可行性。

基于上述原因,本文在翻译项目中对非英语专业学生译者的翻译职业能力进行了一项实证研究,其目的在于探寻在翻译项目中培养非英语专业学生译者的翻

译职业能力的可行性,即:在翻译项目中,学生译者的翻译职业能力能否得到有效的提高?如果能提高,那么翻译职业能力的提高是否会具体表现在学生译者译文质量的提高?学生翻译职业能力和译文质量之间的相关性如何?通过研究这三个问题,本文试图得出一些探索性的结论,以期为高校非英语专业翻译教学提供一些建设性意见。

在组织结构方面,本文首先介绍了翻译职业能力的研究背景,介绍并探讨了翻译职业能力的定义、功能以及组成成分,作者进而总结出职业翻译能力的定义和组成成分,作为本文实证研究的基础。其次,本文回顾了关于译文质量评估标准的相关文献,如译文质量的概念,功能主义视角的译文质量评估标准以及功能主义和语言学视角相结合的译文质量评估标准,提出了适用于本实证的研究的译文质量评估标准和评估参数,使本文中实证研究中的译文质量评估得以量化。最后,本文简单介绍了建构主义的背景知识,主要包括认知建构主义和社会建构主义,然后基于基拉里(2000)的建构主义教学观,探讨了将翻译项目引入翻译课堂的协作式翻译教学模式,为本文实证研究的设置提供的理论基础。

在此文献研究的基础上,本文着重回答以下四个研究问题:

- 1. 经过翻译项目, 学生译者的翻译职业能力是否会得到提高?
- 2. 学生受试者翻译职业能力的提高幅度大小遵循怎样的次序。
- 3. 经过翻译项目, 学生译者的译文质量是否会得到提高?
- 4. 翻译职业能力和译文质量之间具有怎样的相关性?

其后,介绍了本研究的实验情况,包括受试者的选择,两份问卷(关于翻译职业能力的调查问卷以及关于学生译文质量的调查问卷)的设计,及实验的具体步骤(实验控制措施,数据收集和数据处理)。作者采取了一系列控制措施来增强实验的内部效度和外部效度。本研究第一份问卷的受试者为某综合大学电气院大四年级随机挑取的 16 名学生,问卷由学生自行填写,三日后收回;第二份问卷的受试者为本研究中翻译项目的客户(工厂方此次翻译项目的负责人),客户一小时内完成问卷并邮件回寄给作者。本文随后运用社会科学统计软件包(SPSS,13.0版本)对所收集的数据进行处理,主要的统计方法有:

- 1. 对学生译者在翻译项目中两个阶段中表现出来的翻译职业能力进行对比性统计分析:
  - 2. 对学生译者在翻译项目中体现出的翻译职业能力提升幅度大小进行排序;
  - 3. 对学生译者在翻译项目中两个阶段中的译文质量进行对比性统计分析:
  - 4. 对翻译职业能力和译文质量之间进行相关性分析。

通过对以上问题的研究,本文试图探讨在翻译项目中培养非英语专业学生的 翻译职业能力的可行性,通过评估学生的译文质量来测评学生的职业翻译能力, 并找出影响学生翻译职业能力提高的主要因素。通过对数据的定量分析,本研究

#### 得出以下结果:

- 1. 学生受试者在经过翻译项目之后,职业翻译能力在总体上得到了一定的提高。
- 2. 学生受试者翻译职业能力的提高幅度大小遵循一定的次序,即学生译者在职业道德,人际交往能力以及使用翻译资源这三方面得到了最为明显的提高;心理生理能力得到了较为明显的提高;提升幅度不明显的有:培训意识,工作态度与行为(其中,工作态度得到了较为明显的提高,而工作行为,尤其是对于自身权利的认识能力提升幅度不明显)以及质量控制能力。
  - 3. 经过翻译项目, 学生译者的译文质量得到了较为明显的提高.
- 4. 经过翻译项目,学生受试者的相关数据显示其翻译职业能力各成分总体上 与译文质量呈正相关。其中,职业道德,人际交往能力以及使用翻译资源这三方 面与译文质量呈显著性正相关。

基干以上研究结果,本文得出如下结论:

- 1. 在翻译项目培养非英语专业的职业翻译能力具有可行性: 经过翻译项目之后, 学生译者的职业翻译能力总体水平得到了较为明显的提高。
- 2. 翻译项目能够有效培养学生译者的职业道德,人际交往能力以及使用翻译资源的能力,然而在培训意识,工作态度与行为以及译文质量控制技巧方面却收效较小。
  - 3. 经过翻译项目之后,学生的译文质量得到了一定的提高。
- 4. 翻译职业能力在总体上和译文质量之间具有正态相关性。 基于以上研究,文章进一步对高校非英语专业翻译教学提出以下建议:
- 1. 翻译教师应将建构主义教学法引入高校翻译教学中,采用翻译项目来培养学生的翻译职业能力,全面提高学生的翻译能力。翻译项目能有效提升学生的学习兴趣,增强其对翻译工作的责任感,因而会主动花费更多的时间与精力在翻译学习中,有利于教学目标的完成。
  - 2. 在翻译职业能力的各项成分能力之中,职业道德,人际交往能力以及使用翻译资源的能力得到了较为明显的提高,然而心理生理能力,培训,工作态度与行为以及译文质量控制技巧的提高幅度不是很大。这种情况是由于在翻译项目中,学生往往受到各种客观条件的限制,不能有效地全面习得翻译职业能力。对此,教师应充分发挥其项目管理者,教学引导者和协助者的角色功能,同时寻求项目客户的耐心配合,为学生全面习得翻译职业能力创造有利的客观条件。
  - 3. 在翻译教学中,教师要注重培养和译文质量呈显著正相关的翻译职业能力组成成分,即职业道德,人际交往能力以及使用翻译资源的能力,从而有效地提升学生的译文质量。