Effects of the Innovative Learner-centered Corpus-based Interpreting Training System in the Age of Big Data

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Abstract

As a bilingual and cross-cultural activity, interpreting demands high level multi-tasking capabilities and immediate response in information processing and delivery. To this end, Students should always be encouraged to do simulated real-world featured self-reflective training in and out of class. This article reports an innovative learner-centered corpus-based interpreting training system aiming to establish a dynamically balanced interpreting corpus and create a customized out-of-class interpreting training system.

Keywords

Learner-centered; corpus-based; interpreting training system; big data.

1. Introduction

The acceleration of globalization, economic and cultural exchanges between different countries and regions has increased domestic demand for interpreters year by year. According to the data provided by Translators Association of China, domestic interpreting market share reaches more than 13 billion RMB per year, and it is still expanding rapidly. Currently，there are altogether more than 40,000 professional interpreters in China. Large figure as it seems, it cannot meet the exploding market demand because highly qualified interpreters are rare, which only accounts for 5% or even less. The gap is as high as 90% or more. In order to greet the challenges, universities and colleges throughout China have carried out reforms to enhance the effectiveness of interpreting course in the school system, such as updating teaching mode based on MOOC environment, optimizing interpretation curriculum setup and strengthening teachers' professional competence.

As a bilingual and cross-cultural activity, interpreting demands high level multi-tasking capabilities and immediate response in information processing and delivery. Developing interpreting competence requires both instructors' and students' efforts: skill transfer by expert instructors in the classroom and hundreds of hours of deliberate, self-directed out-of-class practice by students (Wang, 2015). Interpreting students across different training programs are now commonly required to complete an adequate number of practice hours (cf. Wang&Ye, 2009). Interpreting researchers （e.g. Moser-Mercer,2000）estimate that achieving professional standards requires 3000-5000 hours of deliberate practice (including class activities, group work and individual work).

1.1 Existing Problems in Interpreting Curriculum

In light of the growing demand of professional interpreters, students should always be encouraged to do simulated real-world featured self-reflective training in and out of class. However, a survey conducted in 30 universities throughout China reported that there are three challenges commonly existing in current interpreter education.

Firstly, the inappropriate pedagogy. According to the survey, almost 90% of the universities adopted the teacher-centered approach following a procedure like this: Firstly, the teacher presents interpreting

material and specific words or phrases that seems to be the best solution; then the students practice language points in some way using various sentence exercises; finally, the students produce interpretation in some kind of controlled communicative activity. This approach possesses the feature of overemphasizing language itself while neglecting the importance of practical interpreting skills and communicative competence. In this way, it is more likely to be an advanced oral speaking class or oral translation class rather than interpreting class.

Secondly, lack of authenticity in class activities and training material. There is a big difference between the mode of training mentioned above and on-site interpretation. Thus, interpreting majors are always faced with a huge gap between skills learned in interpreting class and skills needed in authentic workplaces. Their performance, such as accuracy, target text features, delivery features and processing skills are far from satisfactory in real practice. Only in simulated authentic interpreting training

settings can students acquire the competence to adapt to changing circumstances.

Thirdly, lack of professional instructions for students' out-of-class exercise. Following Ericsson (2002), "deliberate practice" is a key ingredient in the development of expertise. Out-of-class exercise plays no less important role than classroom instruction in acquiring interpreting skills. However, for out-of-class exercise, students are usually at a loss on how to evaluate their performance since they cannot get the professional advice.

1.2 Possible Solution to Address These Problems

In the age of big data, this research proposes to establish an innovative learner-centered corpus-based interpreting training system which utilizes interpreting corpora to connect the on-class instruction, authentic interpreting and out-of-class practice. The objectives are as followed.

(1) To establish a dynamically balanced interpreting corpus, from which real-world interpreting scenarios and on-site professional interpreting performances could be extracted as training material.

(2) To create a customized out-of-class interpreting training system with the aid of information and communication technology technicians.

(3) To interrelate professional interpreter' expertise with the interpreting classroom. Students are expected to explore the professional interpreting strategies from the corpus and put it into practice.

2. Literature Review

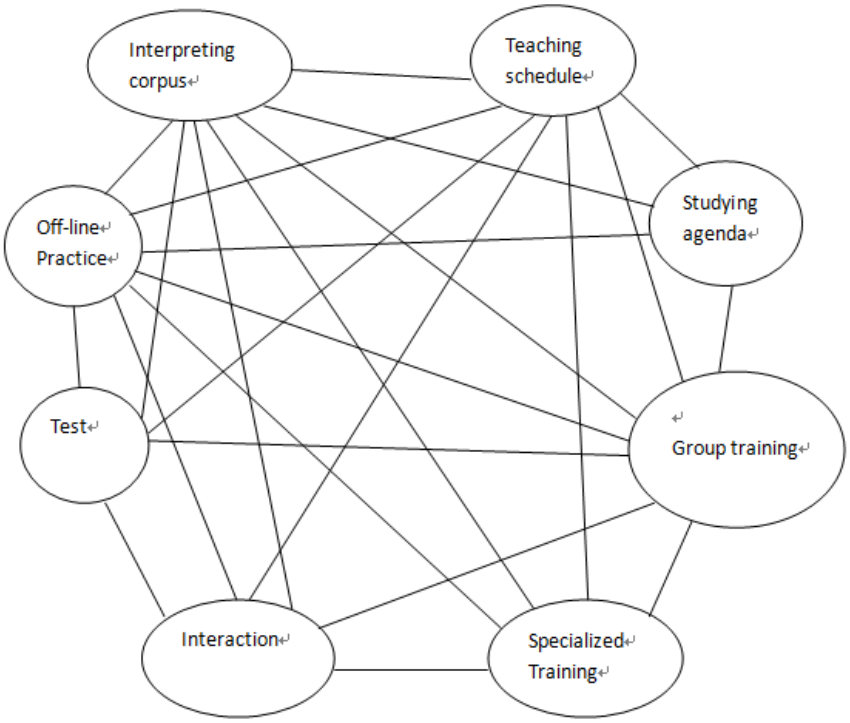
Learner-centered training system represents an educational and instructional philosophy in which the key elements of teaching and learning in the traditional teacher-centered format of education are redefined and reformed (Norman and Spohrer, 1996). In traditional teacher-centered methodology, teachers take the lead, and then, students follow. In learner-centered training, students are no longer passive receivers of knowledge; instead, they are "active participants in learning and co-constructors of knowledge" (Meece, 2003, pp.111). The instructors act the role of mentors to encourage students' involvement in active learning. Learner-centered training emphasizes students' intrinsic motivation to learn and the development of students' abilities to acquire appropriate techniques in problem-solving (Weimer, 2002). Curricula are designed around the learning process and not the content of knowledge in order to provide an environment that adapts to the developmental needs and social influence on learning (APA, 1997).

Learner-centered training methodologies have been widely applied in educational practices across a variety of subject fields, such as accounting (Adler et al.,2000), information systems (Law,2007), business statistics (Lockwood et al.,2007), social sciences (Watters et al.,1998 and have been successfully conducted in pedagogical reforms in countries, such as Thailand (Khemmani,2006). However, the effects of learner-centered training system in interpreting courses have seldom been examined.

Corpus-based interpreting studies is a new branch of interpreting studies that has begun to take shape in recent years, following in the footsteps of what has already been done in Translation studies. (Claudio & Annalisa, 2009). The idea of applying corpus methodology to Translation Studies was put forward for the first time by Mona Baker, who predicted that "the availability of large corpora of both original and translated text, together with the development of a corpus-driven methodology will enable scholars to uncover the nature of translated texts as a mediated communicative event"(Baker, 1993:243) This intuition has had positive and fruitful implications amongst Translations scholars(Laviosa, 2004), as it opened up new research lines and methodologies(Baker,1995) that could be used to "study translation as a variety of language behavior that merits attention in its own right" (Baker, 1996:175). Many scholars conducted research on corpus made of written source and target texts (Halverson,1998; Zanettin,1998; Bowker,1998; Tymoczko,1998). Only one exception is Miriam Shlesinger's paper, which put forward the utilization of corpus-driven methodology to the study of interpreting. However, there is a considerable gap between corpus-based translation and corpus-based interpreting, both in terms of corpus size and availability and the number of studies and pedagogical applications. There are many difficulties in establishing interpreting corpus, mostly due to the time-consuming nature of data collection and transcription. Therefore, corpus-based interpreting study is still a young and promising area that has been seldom studied.

The innovative learner-centered corpus-based interpreting training system will cover most sections of interpreting training. Each section are interrelated and effectively connected with each other.

3. Materials



Subsystem 1: Interpreting corpus

Just like a library with the largest data among all the subsystems, the interpreting corpus will be a repository of authentic speeches and their interpretations. Recordings of real-world press conferences, keynote speeches, opening addresses and other interpreting scenarios will be well collected and stored into the corpus, with a wide array of topics covering every aspects of life. Either teachers or students have an access to the recordings anytime. They could enjoy the performance of professional interpreters working with actual speeches. They could also supplement or modify the corpus. However, the supplement or modification could be included into corpus after the auditing process by the professional corpus maintenance personnel.

Subsystem2: Teaching schedule

Through teaching schedule, students could clearly understand the training goals of current semester. To have a general knowledge of the whole teaching plan and the specific capability requirements would facilitate students to get prepared for teaching in each stage. In this subsystem, teachers should have the authority to upload interpreting training material and recordings so that students could review and practice repeatedly. Teachers should adjust the teaching schedule according to students' learning progress.

Subsystem3: Learning agenda

Students could work out their personalized learning plan according to the teaching schedule, including the training material and preferred hours. For instance, in the training hour's option, each user could input their preferred time into the system, and then the system will automatically select students who choose the same session to form a group, and notify them immediately. This subsystem has remarkably improved the arranging efficiency for group training on the basis of respect for each individual's favorable time.

Subsystem4: Group training

Interpreting students across different training programs are now commonly required to complete an adequate number of practice hours (cf. Wang& Ye, 2009). For example, the "European Masters in Conference Interpreting" (EMCI) program requires students to attend 400 hours of interpreting classes in the course of one academic year, complemented by about 600 hours of group work and self-directed practice (Wang, 2015). Result shows that students always encountered certain amount of retrogress in interpreting performance after the long vacation due to lack of practice. In this subsystem, students could conduct group training in the form of videoconferencing and don't have to rush to a certain destination. In summer or winter vacations, students from all around the world should carry out online group training. This subsystem could easily ensure the training hours.

Subsystem5: Customized training

Customized training is directed at rectifying the individual mistakes occurred in the interpreting process such as poor pronunciation, grammatical mistakes, note-taking problems, weak delivery, stage fright, to name just a few. With the significant improvement in accuracy of voice recognition system, many mistakes esp. those in pronunciation and grammar area could be easily identified and remedied by machine. The machine could also memorize the mistakes and keep reminding them in the following exercise. By investing the training hours, students could certainly manage to overcome those low-level errors by themselves.

Subsystem6: Interaction

In this subsystem, students could appoint the instructor for inquiry and also have the privilege to comment on other students' interpreting recordings anonymously. When a student appoints someone to make comments, the system would remind the appointed one to give feedback. Through this platform, teachers could answer students' questions promptly, monitor their group performance and make comments very conveniently.

Subsystem7: Test

Students could conduct self-examination, fill out questionnaires, and take tests regularly. The subsystem could trace the mistakes occurred in exams and in daily practice, and automatically report their learning progress.

Subsystem8: off-line practice

In addition to the training practice aiming to improve interpreting skills, there must be a large amount of input of both the source language and target language. Offline

learning could link various social media and professional website for students to search for information. In this way, students could guarantee their reading quantity and listening drilling.

4. Methodology

The methodology adopted for this topic is a mixed-methods approach. Data reported in this research were collected by means of t-test, open-ended questionnaire and in-depth interviews. Ahead of this, a pilot study has been carried out among my colleagues from School of Applied Foreign Languages to figure out the appropriate methodology and possible areas of research. This section details the participants, experiment procedure, data analysis, results and discussion.

4.1 Participants

Following the pilot study, I selected 30 junior English majors from Zhejiang International Studies University (ZISU) at random to participate in this experiment. ZISU is a provincial university, and in China a large majority of universities are run by provincial governments (Wang 2008). There are two types of interpreting course in ZISU. One is for English majors and the other is for non-English majors. The present study is concerned with the former one. Students in other grades are not included since the seniors are occupied with job-hunting and thesis writing whilst freshmen and sophomores are still in the stage of language training.

Of the 26 who volunteered to participate in my experiment, I subsequently chose 20 students as my database. Among all the participants, there are 16 females and 4 males with the average age being 21 years.

4.2 Experiment Procedure

At the beginning of the semester, a pre-test(T1) utilizing the past exam paper of Shanghai Interpretation Accreditation of Intermediate level will be administered to see participants' basic level. Following Wang（2015），this study applies the following four macro-level assessment criteria to evaluate participants' interpreting performances: 50% accuracy, 20% target text features, 15% delivery features and 15% processing skills.

Criteria	***Accuracy***	***Target text features***	***Delivery features***	***Processing skills***
Sub-criteria	*minimal unjustifiable additions*	*grammatically*	*clarity of articulation*	*time lag*
	minimal unjustifiable omissions	*appropriate vocabulary*	*fluency*	*a free-literal interpretation continuum with appropriate shifts in between*
	minimal unjustifiable substitutions	*conveying speaker register*	*natural prosody*	*strategic additions,*
	minimal unjustifiable intrusions			*strategic omissions*
	cohesion & coherence			*successful anticipations*

After using the innovative learner-centered corpus-based interpreting training system for one semester, a post test (T2) with the same test material was conducted to test all participants' performance by the same set of rubrics. All their individual performances were stored into database in details.

4.3 Instruments

T-test

For each participant, their individual performance in T1 and T2 are compared in a pair from every single sub-criterion listed above.

Open-ended questionnaire

After the students agreed to participate in the experiment, they were required to finish an open-ended questionnaire in their native language (Chinese) so that they could express ideas freely. The questions were:

(1) How often do you use the innovative learner-centered corpus-based interpreting training system

(2) Which subsystem benefits you most? And why（please be specific）

(3) What difficulties have you met in the learning process（please be specific）

(4) Do you think there is any room to refine this training system（please be specific）

In-depth interview

Based on the preliminary data gathered from open-ended questionnaire, the research consider in-depth interview as the major source of data collection. The interviews were semi-structured and reflexive (Hammersley and Atkinson 1983); that is, I, as the interviewer did not start with a specific set of questions, although I did start with a set of areas to be covered. The areas were listed as follows (1).perceptions of the innovative learner-centered corpus-based interpreting training system. (2).benefits that the new training system bring to self-directed practice. (3). conflicts and challenges that you meet in using the new training system. (4). Improvement that could be done to optimize the new training system. Each interview last no less than one hour and was conducted in Chinese. All the recordings were stored into my database.

4.4 Data Collection

To ensure the feasibility and conscientiousness of the data, I invited a colleague majoring in statistics to join my research. We discussed on the coding principle and how to code the data into categories which is obviously important for data collection. We commenced coding one participants' questionnaire data and a complete transcript of his interview separately and then met to compare the codes, calculate the percentage of consistency and resolve the disparity by negotiation.

4.5 Results

A significant discrepancy between T1 and T2 is presented. All of the involved students in T2 outperform T1 in the interpreting performance according to the rubrics listed above. The hours devoted into self-directed exercises has been improved significantly. Feedback from the questionnaires and interviews indicate that the out-of- class training is time-efficient and labor-saving.

5. Discussion and Limitations

The Innovative Learner-centered Corpus-based Interpreting Training System has proved to be effective in extending the out-of-class training hours and improving their learning efficiency. Also, instructors now find it easier to monitor students self practice and offer timely comments. In addition, since teachers no longer dominate the learning process. Instead, they provide proper guidance and scaffolding for the students. Thus, students gain much more independence in the learning process. Their sense of innovation, team-work and communicative competence has been enhanced remarkably.

However， the sample size of 20 participants is still comparatively small for analyzing the effectiveness of a training system, which may limit the statistical power and generalization of the results from the t-test. Further studies should include a larger sample of interpreting majors from different provinces in China.

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