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BADANIE MODELU NAUCZANIA TŁUMACZENIU NA PODSTAWIE NAUCZANIA W MIEJSCU PRACY W ERZE SZTUCZNEJ INTELIGENCJI

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Adnotacja. Ten artykuł ma na celu zbadanie i opracowanie modelu nauczania warsztatów tłumaczeniowych na podstawie ekosystemów inteligentnego nauczania tłumaczenia po zmianach nowej ery w porównaniu z tradycyjnym modelem nauczania i uczenia się tłumaczenia oraz omówienie zastosowania tego modelu w tłumaczeniu, praktyki szkoleniowe za pomocą tłumaczenia komputerowego i innych technologii tłumaczeniowych w celu zwiększenia kompetencji uczniów tłumacza. Autor przeprowadził eksperyment przez jeden semestr, aby sprawdzić wykonalność tego nowego modelu za pomocą testu wstępnego, testu końcowego, wywiadu i ankiety przeprowadzonej wśród studentów eksperymentatorów. Dzięki analizie porównań zebranych danych wyniki pokazują, że ten nowy model poprawił efektywność nauczania, zwiększył kompetencje tłumaczeniowe uczniów w zakresie umiejętności tłumaczeniowych, wierności i wolności, dokładności posługiwania się językiem i kreatywności. Nowy sposób nauczania tłumaczenia zyskał uznanie studentów. Badanie to ma dalsze implikacje dla poprawy wiedzy teoretycznej i umiejętności tłumaczeniowych studentów, a także struktury wiedzy nauczycieli.

Słowa kluczowe: model, pracownia tłumaczeniowa, nauczanie tłumaczenia, kompetencje tłumacza, koedukacja.

A STUDY OF TRANSLATION TEACHING MODEL BASED ON WORKPLACE LEARNING IN ARTIFICIAL INTELLIGENCE ERA

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Abstract. This article aims to explore and develop a translation workshop teaching model on the basis of the smart translation teaching ecosystem after the changes in the new era, compared with the traditional model of translation teaching and learning, and discuss the application of this model into the translation teaching practices, with the aid of the computer-assisted translation and other translation technologies, so as to enhance the translation learners' competence. The author has carried out an experiment for one semester to verify the feasibility of this new model with pre-test, post-test, interview and questionnaire survey on the experimental students. Through the analysis of comparisons on the collected data, the results show that this new model has improved the effectiveness of teaching, promoted the learners' translation competence in translation skills, fidelity and fluency, accuracy of language use, and creativity. The new mode of translation teaching has won the students' recognition. This research has further implications for improving students' translation theoretical knowledge and skills and teachers' knowledge structure as well.

Key words: model, translation workshop, translation teaching, translator's competence, collaborative learning.

ДОСЛІДЖЕННЯ МОДЕЛІ НАВЧАННЯ ПЕРЕКЛАДУ НА ОСНОВІ НАВЧАННЯ НА РОБОЧОМУ МІСЦІ В ЕПОХУ ШТУЧНОГО ІНТЕЛЕКТУ

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Анотація. Ця стаття має на меті дослідити та розробити модель навчання перекладацьких семінарів на основі екосистеми інтелектуального навчання перекладу після змін нової ери порівняно з традиційною моделлю викладання та навчання перекладу, а також обговорити застосування цієї моделі в перекладі, навчальні практики за допомогою комп'ютерного перекладу та інших перекладацьких технологій, щоб підвищити компетенцію учнів перекладача. Автор провів експеримент протягом одного семестру, щоб перевірити доцільність цієї нової моделі з дотестовим, післятестовим, інтерв'ю та опитуванням студентів-експериментаторів. Завдяки аналізу порівнянь зібраних даних результати показують, що ця нова модель покращила ефективність навчання, підвищила перекладацьку компетенцію учнів у перекладацьких навичках, правильності та вільності, точності використання мови та креативності. Новий спосіб навчання перекладу завоював визнання студентів. Це дослідження має подальші наслідки для покращення теоретичних знань і навичок студентів з перекладу, а також структури знань викладачів.

Ключові слова: модель, перекладацька майстерня, навчання перекладу, компетенція перекладача, спільне навчання.

Introduction. The vigorous development of artificial intelligence is reshaping the nature and type of translation with revolutionary power. Technology blurs the boundary between interpretation and translation. Human assisted machine translation, machine assisted human translation and interpersonal collaboration are the main subjects of translation (human or machine), which are more difficult to distinguish. With the advent of the era of artificial intelligence and market demand, interlingual translation has gradually stepped out of the classroom and focused on social needs. In this way, it has become an inevitable trend to reconstruct the translation teaching model. How to cooperate with artificial intelligence technology to realize an intelligent translation teaching model, which is in line with the characteristics of the times such as globalization, technicalization, informatization, localization, project-based and professionalization of translation, is a major problem for translation teaching researchers to think about.

The 5th generation and artificial intelligence technology are not only changing the way of human life and production, but also endowing education with new connotation and mission. In the artificial intelligence era, the concept of translation has been greatly enriched and expanded. How to develop an intelligent new model of translation teaching with artificial intelligence technology is a key issue for translation researchers (Massey, 2018). We intend to explore a new model of intelligent translation teaching.

Analysis of relevant research and publications. The translation workshop teaching models are discussed in the works of contemporary scholars (Xiao Hong, 2005; Visintin, 2008; Li Ming, 2010; Chen Chuanbin, 2013; Shu Xiaoyang, 2011; Song Pingfeng, 2015; Wang Jing, 2018; Sun Ran, 2020). All researches on translation workshop can be divided into four categories: the first is to discuss the conceptual definitions in general; the second is to focus on the professionalization through the translation workshop, like the learner's autonomous management; the third is involved into the aid of network and software in translation workshop; the fourth is to promote the classroom teaching and improve translation competence, with the device like flipped classroom.

As a result, pedagogical models of translation workshops are built by integrating constructivism, learning theories and education at the levels of bachelor's education and master's education. This pedagogic model, characterized with application and practicality, has been adopted by the universities at home and abroad to enhance the translation professional knowledge and abilities (Shore, 2004; Li Ming & Zhong Weihe, 2010; Song Pingfeng, 2011; Yin Yan & Xiao Zhiqing, 2017). Visintin concludes nine steps for learners to communicate and find out the translation difficulties in teamwork activities as a practical community (Visintin, 2008: 4). It is very vital to regard the translation workshop as a pedagogic approach from the macro level, and the model can be developed well.

The purpose of the article is to design and develop a translation workshop teaching model on the basis of the smart translation teaching ecosystem.

Main part. In a broader sense, an intelligent translation teaching ecosystem in the new era needs to be taken into consideration. The author attempts to reconstruct the intelligent translation teaching ecosystem after examining the changes in the process of teaching and learning in the new era. The elements in the educational scene, such as teachers' educational ideas and teaching methods, learners' learning methods, resources and environment, are facing changes (Li Ruilin, 2011). The original traditional translation competence has been difficult to meet the training requirements of translation talents in the context of the new era. It is necessary to take the road of "artificial intelligence plus translation teaching" and build a new ecological model of intelligent education. The changes need take place in three aspects.

In terms of teaching purpose, translation competence is the core of translation education. Translation competence is a complex aggregate of a series of knowledge and skills, which can be taught. The core of the purpose of education is to cultivate what kind of people, which is a purposeful activity of value pursuit. In the era of artificial intelligence, the identity of the translator in translation begins to be diversified and complex. Translation teaching also needs to get out of the knowledge-based trap (Yu Zeyuan & Zou Jinghua 2019).

As far as translation tasks are concerned, translation teaching should also change the materials, which often come from teaching materials and are divorced from real life, to pay attention to effectiveness and authenticity, and from a single text subject lacking style to a variety of subjects. The reference materials and paths pushed by artificial intelligence to each translator (learner) are not exactly the same, and the resource push will change from the static to the dynamic personalization. In the process of in-depth learning, translators constantly practice translation projects, and relevant resources will be intelligently extracted and structured.

Information technology and translation teaching will be normalized and integrated. In translation teaching, teachers should be aware of where to use information technology, what information technology should be used in specific teaching contents, and how to use these technologies appropriately (Shu Xiaoyang, 2014). Artificial intelligence can understand and analyze translation learners' needs through intelligent assistant and speech recognition, and accurately push content through big data to help translators do some repetitive and programmed initial translation.

As the changes take place mentioned above, the author has attempted to propose a translation workshop model in the light of the workplace learning. This teaching model draws on the machine translation and big data technology and takes full advantage of such learning strategies as self-accumulative learning through "observation", assimilation and adaptive learning through "experience" and extended participation through "cooperation" in the workplace, aiming to improve translation learners' competence. Workplace learning refers to a reasonable and effective real environment, which is helpful for learners to develop their cognition from novices to experts.

In traditional translation workshops, teachers create translation tasks for students to participate directly. This method does not emphasize the process of students' self-thinking. Translation teaching in the environment of artificial intelligence requires learners to participate in translation tasks through thinking and action, so as to realize the internalization of knowledge and produce workability drive. The translation teaching model aiming at translation competence holds that translation competence can be transformed into specific translation knowledge and translation skills. In fact, this kind of teaching mode can transfer static and specific knowledge and translation skills to students, in which students only are observers and learners. Thus, they can't really participate in translation projects. As for the new model, teachers and professionals teach not only translation skills, but also technical skills, interpersonal skills, creativity, internalization of translation norms, and management skills (Király, 2000). The new translation workshop model based on the workplace learning is constructed, in which teachers set up the real or virtual situation, students participate in real projects from the translation market, by using three learning strategies in the workplace, and the transformation of "observation – marginal participation – full participation" will be completed.

– **Demonstration.** Through introductory workshop, teachers demonstrate the complete process of completing a real translation project, so that students can observe and learn and accumulate experience. In this cognitive process, translation teachers and students should regard it as an effective learning process and experience.

– **Engagement.** Autonomous Learning and discussion before class. The teacher shall set up a translation team with 5–6 people in each group according to the wishes of students, and set and assign project posts. Then arrange translation projects, and the training for students should be purposeful and systematic. Students practice translation according to the project operation process of the translation company. Teachers make multi-modal resources such as courseware, micro class and text related to translation projects in advance, directly show them to students, and guide students to creatively internalize knowledge. Each translation team carries out pre-translation. And they need give full play to the advantages of modern technology, carry out machine pre-translation by using online translation, database, translation software, cloud translation, etc. Then each group arranges feedback information, queries materials and interactive discussions in groups, forms translation ideas, and records the whole project completion process, including problems and puzzles encountered. Each group will share their translation results in the virtual practice community for reference and use by other translation workshops, and save the results with translation memory technology for reference in case of similar sentences in the next translation.

– **In-class presentation and discussion.** Each group uses PPT to show the translation, stating the text style, translation difficulties and key points, as well as the ideas and specific translation strategies to solve these problems. Creative discussions on divergent issues. Teachers guide students to study relevant translation theories to understand the problems encountered in the translation process and discuss their own ideas in time. Teachers are grading each group, writing reasons, reflecting with students, including whether the final translation results are recognized, and whether there are still unsolved problems. In accordance with the completion of the project, the problems and the learners' translation cognitive level, the teacher provides a reference basis for the design of the next translation project.

– **After-class reflection and exploration.** After class students upload the reflection experience and translation results in the classroom to the workshop to share with each other, make further exchanges, stimulate learning motivation, and realize knowledge sharing by using tools such as collaborative text editing system, which is a typical feature of workplace learning in the cloud era. According to the whole process of completing the translation project, teachers further expand the translation theoretical knowledge or skills involved in the translation project, so as to achieve in-depth learning. At the same time, they systematically sort out all the key points and difficulties of the project, so as to achieve accurate learning content and avoid learners' wrong learning.

Analysis of results from teaching experiment. A teaching experiment was conducted for a semester to verify the feasibility of the model, providing ideas and reference for other similar teaching practices. The objects of experiment are students of translation majors from a certain university in Sichuan province, China. In this experiment, questionnaire survey, interview and proficiency test were carried out and the data were collected and analyzed to examine the effect of the teaching model. Tests are taken before the experiment and after the experiment, including two texts for two-way translation between Chinese and English. Professionals and teachers will mark the translations to examine students' abilities in the use of translation skills, the version's fidelity and fluency, language use and translator's creativity. The results are presented in the table below.

Table 1

Grouping description and independent sample test of students' pre-test and post-test scores

Category	Testing	Mean value	Standard Deviation	T	P
Translation skills	pre-test	64.61	5.32	-21.083	0.000
	post-test	78.83	4.46		
Fidelity and fluency	pre-test	66.39	4.86	-12.791	0.000
	post-test	81.23	5.06		
Translator's creativity	pre-test	63.12	4.79	-20.461	0.000
	post-test	75.69	5.25		
Language use	pre-test	68.36	5.71	-15.116	0.012
	post-test	82.49	4.96		
Total score	pre-test	68.09	5.19	-19.166	0.000
	post-test	79.38	5.02		

Through the analysis of data collection and category, the results of the experiment from the table above show that the translation workshop model has remarkable effects in improving teaching effectiveness, and promoting the translation learners' competence, winning high recognition among students.

The results of the proficiency tests show that the average score of the experimental students on the pre-test was significantly higher than that of post-test, including translation skills, fidelity and fluency, translator's creativity and language use accuracy at the micro level.

The results of the questionnaire survey and interviews show that the vast majority of students were in favor of the "introductory workshop" in the model. For students who were not able to accept or understand the tasks of the workshop in a short period of time, especially after teachers demonstration of the process of completing the whole project, the model solved the problem and supported computer-assisted translation in the artificial intelligence environment, which provided a framework for translation norms.

Conclusions. To draw a conclusion, this research has the following three implications. First of all, the first step to implement smart translation teaching is to create a smart translation teaching environment, in which the deep integration of artificial intelligence technology and machine translation can greatly improve efficiency and accuracy of translation and a sound teaching ecosystem can facilitate effective learning. Secondly, it is necessary to build a high-quality translation workshop with an emphasis on learning content, learning motivation and interaction, in which the participants strive to change in the direction of "observation" – "peripheral participation" – "full participation", so, that the students' translation theoretical knowledge and translator competence can be acquired and improved. Finally, the age of artificial intelligence necessitates the updating and improving of teachers' knowledge structure. Teachers must integrate translation teaching methods with educational technology and translation technology to achieve the goal, with an ongoing comprehension of translation content, pedagogy and artificial intelligence technology.

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