Wiki as a Tool in Teaching Translation: An Online Peer-Assessment Model of Evaluation

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Abstract

The complexities of the real professional world the trainee translators are to enter requires the utilization of the large scale instruction, flexibility and highly facilitated and interactive learning that online learning and its associated facilities put at our disposal within an instructional design. This paper is an attempt to investigate the effect of incorporating wiki (an asynchronous text-based online collaborative tool) in a web-based social constructivist specialized translator training workshop on trainee translators’ performance in comparison with conventional contact classrooms applying the same instructional framework. An experimental research methodology was utilized to answer the research question and test the hypothesis. The results revealed that using such a collaborative tool as wiki in the translator training workshop had improved the performance of future translators as a consequence of more developed translation and translator competences when compared with the conventional contact classroom.

Keywords: social constructivism; peer-assessment model of evaluation; online learning; wiki collaborative tool; translation and translator competences

1. Introduction

Among all other prominent challenges facing mankind, education is perhaps one of the most ancient and significant ones, evolving in accordance with man’s temporal needs and circumstances over the ages. Education and knowledge have always influenced each other in a recursive manner, i.e. knowledge is built upon educational activities and has also contributed to them accordingly. After all, the computer is by and large the most influential realization of modern knowledge (Sadeghieh, 2009). What is widely known as Electronic Learning, more commonly referred to as online learning, is today a computational approach to this ancient challenge of human beings.

Educational experts and educators need to extensively pursue this computational approach, to utilize computer and to create communicative learning environments in order to meet the needs of the Net Generation learners of the Information Age – people with a vast resource of computers and electronic entertainment and communication experience. Learning theories based on social constructivism and collaboration, as the best fit theoretical frameworks to correspond to the specific characteristics of a web-based learning environment, emphasize that learners learn more by constructing new (their own) knowledge through problem solving and inventing alternative solutions in a giant enterprise – where translation is nothing but a problem solving and decision making process (Pym, 2004). Correspondingly, collaborative learning is a powerful strategy in learning today, helping to facilitate the social construction of meaning, knowledge and development of learning communities. Social constructivists evaluate learners on production, “what they can generate, demonstrate, and exhibit” (Brooks & Brooks, 1999, p. 19). If learners are to have the opportunities necessary to generate, demonstrate and exhibit their translations, instructors must create learning environments that accommodate and promote such outcomes. A new and effective method of assessment in social constructivism and collaborative learning theories is the peer-assessment model of evaluation which leads learners to exercise, verify, solidify and improve their mental models through discussions and information sharing.

In order to promote learner participation and engagement in learning activities and to create more learner-centered and social learning opportunities, instructors can avail themselves of new interactive applications and services the
Web 2.0 provides, such as wiki. As a representative of the Web 2.0 facilities, the wiki provides learning contexts that allow learners to “interact” in a virtual environment in which they have to diverge or convergence ideas, in a structured or unstructured way, in order to contribute to a common goal. Therefore, wikis are pertinent to the peer-assessment model in the context of social constructivist and collaborative learning theories and are applicable in the web-based training environment, instigating an interactive environment appropriate for the problem solving and decision making process of translation.

1.1 Research Question and Statement of the Hypothesis

This study was motivated by the following question:

Does utilizing wiki in the web-based specialized translator training workshops have any effect on the performance of trainee translators, when compared with conventional contact classrooms?

As far as the above question was concerned, it was assumed that the following hypothesis might prove true:

Utilizing wiki in the web-based specialized translator training workshop positively affects the performance of trainee translators, when compared with conventional contact classrooms.

1.2 Background Information and Theoretical Framework

Training professional translators has always been “a central topic in writing about translation” (Gile, 1995), the main concern of which is offering trainee translators the translation profession skills in combination with an acceptable degree of specialization (Lobo, et al., 2005, p. 136). Translation involves variable tasks that make peculiar demands on the cognitive system of the translator at the problem solving stages during the translation practice; without translation and translator competences on the part of the translator those tasks cannot be coped with adequately.

The multifaceted and open-ended nature of translation competence has resulted in a shift towards task-based process-orientation in translator training and has created a favorable climate for the entrance of social constructivist methods to the world of translation education, the basic tenet of which is the active involvement of trainee translators in authentic, experiential learning situations (Kiraly, 2003 quoted in Massey, 2005).

Social constructivism, adopted as the theoretical framework of the study, is based on the idea that learning involves constructing one’s own knowledge from one’s own experiences through interactions with his/her surroundings within culture and via language, and no one can “’know’ in any complete sense of that term what someone else has constructed” (Duffy & Cunningham, 1996, p. 172). The basic methodological framework that governs the theoretical foundation of the present study is a set of methodological criteria, introduced by Duffy and Cunningham (1996) as:

A. All knowledge is constructed; all learning is a process of construction;
B. Many world views can be constructed; hence there will be multiple perspectives;
C. Knowledge is context dependent, so learning should occur in relevant contexts;
D. Learning is mediated by tools and signs;
E. Learning is an inherently social-dialogical activity;
F. Learners are distributed, multidimensional participants in a socio-cultural process;
G. Knowing how we know is the ultimate human accomplishment.

Given the pivotal role of online, computer-based tools and resources in the translation process, online learning solutions are “extremely well positioned to become an established, integral part of process-oriented, social constructivist translator education: authentic, situated and purposeful” (Massey, 2005, p. 631).

‘Online learning’ is generally used as an umbrella term for any sort of computer-facilitated instruction or training of individuals over a networked environment, such as the Internet. It has been argued that online learning offers higher authenticity (i.e. learning takes place in real-life context), higher interactivity, and higher opportunity for collaboration (Rice & Wilson, 1999). However, online learning is in fact far more than a collection of advanced computer-based technologies that deliver the instruction, hence demanding a precise paradigm for the treatment and design of the materials and activities used in its environment (see Ring & Mathieux, quoted in Ally, 2004). Ally (2004) defines online learning as:

“… the use of the Internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience.”
Ally’s (2004) obviously social constructivist definition of the online learning environment emphasizes its role in the realization of the constructivist approach to education. The major concern of constructivism is that learning is an active process. Introducing activities that encourage learners to apply information in practical situations facilitates the construction of meaning. In an online learning environment, original information is imparted to the learners without being filtered by individual instructors whose understanding of the information is contextualized to their own background and knowledge. Collaboration and social negotiation are then encouraged among learners to allow metacognitive skills to flourish and to enable them to make use of the ‘strength’ of other individuals. This level of interaction promotes learning and social presence by making it possible for the learners to apply and confirm what they have received, processed, personalized and contextualized beforehand (Rice & Wilson, 1999).

The peer-assessment model of evaluation, fostering on an autonomous learning environment, aims to increase the independence of adult learners in order not to be reliant upon the instructor for their learning and thinking, which will change the climate of the class from a teaching to a learning environment, where the instructor undertakes the role of a facilitator (Falchikov, 1995). The model may be used to develop in learners the ability to be critical of others’ work and receive critical appraisals of and feedbacks on their own work. Peer-assessment is a process whereby groups of individuals rate their peers, and learners are encouraged to observe the learning process of their peers (Falchikov, 1995). Sluijsmans, Dochy, & Moerkerke (1999) found that the peer-assessment model engaged learners in judgment making and helped them learn about learning, and enhanced their meta-cognitive understanding about their own learning process. However, there is unfortunately no evidence of implementing this model in translator training workshops, which might have been effective in making students conscious, responsible, and lifelong learners.

Wiki is one of the facilities that the highly-facilitated and interactive online learning puts at our disposal within the peer-assessment model to foster collaboration and social negotiation among learners under the supervision of the facilitator, but not under his/her direction, in a social constructivist learning approach (Desilets, Gonzalez, Paquet, & Stojanovic, 2006). This study makes an attempt to utilize this collaborative tool in a web-based social constructivist specialized translator training workshop.

2. Research Methodology

2.1 Research Design

In order to answer the research question and test the hypothesis, an experimental research methodology was implemented which included a treatment group who availed themselves of a wiki-based translation platform in an online specialized translation workshop, and a control group composed of the trainees of a conventional translation workshop, as placebo. A pretest-posttest design was adopted to determine the achievements of the two groups.

2.2 Research Population and Sampling

The intended population of the study consisted of the undergraduate learners of English translator training program in the Iranian universities with preexisting active knowledge of the second language (i.e. English) and basic methods and principles of translation.

In order to select a random sample of sixty undergraduate trainee translators from the intended population, instructors of the ‘translation of economic texts’ (as a representative of specialized translation course) at University of Isfahan, Shahid Beheshti University, and Islamic Azad University of Tehran were asked to announce a call for qualified volunteer trainee translators. To be deemed qualified for the study; participants were required to have access to a personal computer and the Internet, and to have adequate typing and Information Technology (IT) skills to utilize the web-based environment.

Since homogeneity of the two subsamples was crucial to the validity of the research, the standard International Certificate of Financial English (ICFE) test was administered to identify the most linguistically homogeneous sample of subjects. Based on the results of this test, the most linguistically homogeneous sample – 60 out of 84 subjects (thirty subjects for each group) whose ICFE test scores fell within ±1 standard deviation (SD) of the mean – were equally assigned to the treatment and control groups respectively.

2.3 Research Instruments

The design of the article demanded the application of appropriate computer software for online instruction and data collection. The computer software used in the present study included a learning management system, wiki platform,
and an extension to the wiki platform especially developed for the purpose of this study. Moreover, a couple of translation tests were used for data collection as well.

2.3.1 MediaWiki and the Learning Management System

The present study used MediaWiki, a free web-based wiki platform licensed under the terms of GPL (Note 1), as the environment in which subjects were to do the actual translation activities. MediaWiki is a feature-rich wiki implementation. Only a browser is needed to access the wiki environment, and no special requirements are made on the type of browser or operating system. MediaWiki pages are written using ‘WikiText’, a special easy-to-learn markup language, so that users without knowledge of computer programming can format wiki pages easily. Editing in MediaWiki is facilitated with a toolbar which is quite similar to what is found in most popular word processing software. A freely available WYSIWYG (What You See Is What You Get) add-on editor was also installed to simplify the editing process even further.

Although MediaWiki is a standalone application that is usually installed and used independently of any other software, it was integrated into Moodle Learning Management System as an ‘assignment module’ so that an appropriate wiki page was initialized when the user chose the translation assignment from within the course content at any time. A learning management system, such as Moodle, is responsible for managing and organizing instructional content and providing support for a variety of learning activities (including assignments, discussion forums, quizzes, etc.) within each lesson or topic of every course. The idea of using wiki for educational purposes is not new and most of the learning management systems, including Moodle, feature built-in wiki modules as learning activity; however, MediaWiki (version 1.16) was selected for the purpose of this study instead of the built-in wiki module of the Moodle platform because MediaWiki appeared more familiar to the participants (thanks to the popularity of Wikipedia user-interface).

2.3.2 User Participation Extension

In order to collect user participation statistics from translation activities, an additional piece of software was specifically developed for this study as an extension to the MediaWiki platform. The User Participation Extension (UPE) prompts for the translation page title (a combination of the title of the source text page and the title of the translation submitted by a learner) and outputs the following information (Figure 1):

- A list of all contributors to the given translation page
- A list of all words that are modified by each contributor in each revision of the given translation page
- The total edit count, word count, and character count of each contributor through the history of the given translation page
- A color-coded version of the final draft of the translation page, with each color representing the words suggested by each contributor.

![Figure 1. A Screenshot of the UPE Page](image-url)
2.3.3 Translation Tests
The translation pretest and posttest consisted of two short English passages of about 300 words in total, excerpted from an economic textbook and a newspaper article. Learners were required to translate the passages into Persian within 90 minutes. Monolingual dictionaries or glossaries were allowed, and it was recommended that a subject area resource with encyclopedic information on the subject be available for everybody’s use at the site.

2.4 Procedures
The study was organized in three major subsequent steps: preparation, treatment, and data collection.

2.4.1 Preparation
As the first step of the research plan, a number of preparatory actions had to be undertaken before the beginning of the treatment: software development and installation, preparing instructional material, and designing research instruments.

The first priority was to prepare the software specifications. Software requirements and specifications were subsequently submitted to a computer expert for consultation. After the finalization of the software requirements and objectives, the planning, architecture design, coding, testing, debugging, and deployment of the software were followed successively.

Then, due to the learner-centered and self-paced nature of the online learning environment, it was not practical to use a free discussion web-based specialized translation workshop. Consequently, it was decided that a social constructivist syllabus and material should be prepared based on the requirements of the course description and features of the subject-specific text type. The required course content, activities, translation practices, and translation tests were gathered and converted to a compatible and appropriate electronic format to be used in the online specialized translator education environment.

2.4.2 Treatment
Before the actual treatment, the web address of the online course and a username and password were given to each participant of the treatment group to access the Moodle platform. Participants were required to spend at least 90 minutes per week, and 24 hours in total, on the online course interacting with material, completing activities, using available Internet resources, and interacting with peers and the facilitator using wiki. All actions of the participants during an active session, including logins, page visits, submissions, edits, constructive feedbacks, and discussions were logged and time-stamped for further observation, monitoring and analysis.

An introductory lesson at the beginning of the course was devoted to familiarizing learners with different features of the Moodle, and MediaWiki in particular. The second session was devoted to a pretest comprising two rather short English economics passages which were to be translated into Persian. The third session dealt with the syllabus and objectives of the course, as well as an introduction to the notions of translation briefing and translation quality standards. The rest of the treatment sessions were administered according to the course syllabus, which was prepared during the preparation phase. Every fourth session, subjects were divided into six different groups of five. The last session was devoted to the posttest using similar texts and conditions that were utilized in pretest.

From the fourth session on, participants of the treatment group were expected to interact with the course content in the following order: reading the theoretical explanations, familiarizing themselves with a financial concept and an important translation point with particular attention to the text-type, and engaging in all activities of the lesson. The last activity of every lesson presented an English paragraph of about 150 words to be translated into Persian using the MediaWiki tool. Learners were encouraged during the course to read the translation brief of each activity and translate in accordance with the specified translation quality standard model. Once submitted, the initial translation draft of every learner was accessible to other members of the same group for further discussion, proofreading, exchanging constructive feedback, and editing. The facilitator motivated participants’ participation in the discussions through posing different questions regarding the most prevalent errors in their translations. The facilitator also occasionally provided detailed feedback on participants’ errors referring him or her to appropriate sources for self-correction.

As for the control group, all the sessions and phases were the same except for the first session of the online treatment group and the specific online collaborative tool available for the treatment group participants. In the case of the short passage translation task, learners were to complete the translation of the text in class and hand out four copies of it to other members of their own group. Group members were then expected to proofread their peers’ translations, mark the translation errors, give constructive feedback, and take the copies to the class next session. The learners were to
read all the points that were written on their translation draft’s copies and edit or revise their own translation and finally give all the copies and their final draft to their facilitator.

2.5 Data Collection

Once collected, pretest and posttest of both treatment and control groups (converted to an electronic format by the researcher to be analyzable by the UPE software) were stored in a corpus of test results tagged with the learners’ identification information. All these tests were proofread and edited based on their specific translation brief and Mellange translation error typology model up to a publishable quality by the facilitator. They were analyzed with a careful look at each and every minute alteration or comment in terms of the number of characters that had been added to, deleted from or altered in the translated texts. This number was utilized to show the performance of the respective subject (based on his/her tagged identification information) in the peer-assessment model of evaluation. The average number of the characters that had been added to, deleted from or altered in the translation drafts of all the subjects of both treatment and control groups was used to compare their performance. This experimental research methodology was implemented to provide objective evidence of the possible effects of the incorporation of wiki on the performance of specialized trainee translators in the peer-assessment model of evaluation.

3. Data Analysis and Results

The wiki logs of the pretest and posttest of the treatment and control groups were processed using the developed UPE software in order to extract quantitative data of all the subjects’ performance. The total number of additions, deletions and alterations were interpreted as the representation of their performance, where the higher this number was, the lower their translation performance quality was considered to be.

Figures 2 and 3 illustrate the pretest and posttest results of the control and treatment groups, in terms of the total number of all additions, deletions and alterations made by the facilitator in order to proofread and edit them up to publishable quality, respectively:

![Figure 2](image-url)

**Figure 2.** Representation of the Total Number of Edited Characters in the Control Group Subjects’ Pretest and Posttest

The pretest data of the control group ranges from 292 to 1099 characters; thus, the mean characters changed to edit the pretests of the control group subjects is 695.5. In contrast, the posttest data of the control group ranges from 3 to 849 characters; thus, the mean characters changed to edit the pretests of the control group subjects is 426. Therefore, it can be inferred that following the instructions under the conventional translation classrooms improves the subjects’ performance, and that it reduces the total number of changes needed to be made in each translation draft as much as 269.5 characters on average.
Figure 3. Representation of the Total Number of Edited Characters in the Treatment Group Subjects’ Pretest and Posttest

The pretest data of the treatment group ranges from 215 to 902 characters; thus, the mean characters changed to edit the pretests of the treatment group subjects is 558.5. In contrast, the posttest data of the treatment group ranges from 3 to 450 characters; thus, the mean characters changed to edit the pretests of the treatment group subjects is 226.5. As a consequence, it can be inferred that practicing with the wiki-based translation activities improves the participants’ performance, and that it reduces the total number of changes needed to be made in each translation draft as much as 332 characters on average.

As can be ascertained, table 1 summarizes the descriptive statistics of the pretest and posttest of the control and treatment groups. Note that the mean has been decreased from the pretest to the posttest. Seeing that the subjects of the control and treatment groups have been homogeneous (see the pretest means of the groups), the total mean steadily reduces over time.

Table 1. Subjects’ Translation Performance in the Pretest and Posttest

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>694.66</td>
<td>30</td>
<td>260.518</td>
<td>47.565</td>
</tr>
<tr>
<td>Posttest</td>
<td>361.1</td>
<td>30</td>
<td>226.902</td>
<td>41.428</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>599.13</td>
<td>30</td>
<td>191.064</td>
<td>34.884</td>
</tr>
<tr>
<td>Posttest</td>
<td>212.53</td>
<td>30</td>
<td>149.270</td>
<td>27.253</td>
</tr>
</tbody>
</table>

The edited character difference between the pretest and posttest results of both experimental groups reveals that the highest edited character reduction (99%) is reported from the treatment group, while the lowest edited character reduction (13%) is reported from the control group. The mean edited character reduction is 465.5 for the treatment group and 243.71 for the control group. Figure 4 presents the edited character reduction percentage of each subject in the experimental groups.
4. Discussion
A comparison of the mean edited character reduction between the pretest and posttest of the treatment and control groups with each other reveals that the treatment group has had more improvement than the control group in terms of the performance of the trainee translators; notwithstanding the fact that the mean edited character of both experimental groups has decreased from pretest to posttest; in other words, both groups have improved in terms of the trainee translators’ translation and translator competences, which has resulted in a more improved performance in case of the trainee translators. Moreover, the treatment group participants have become a more homogeneous group than the control group subjects.

The results obtained may be the direct consequence of the perfect applicability of the social constructivist theory of learning and the peer-assessment model in the wiki-equipped web-based specialized translator-training workshop. For, the wiki-equipped workshop provides the trainee translators with an interactive environment in which they encounter the complexities of the real professional world of translation. Trainee translators’ knowledge of translation strategies, their knowledge of how to make use of the technological tools that are frequently used in the professional world of translators, their knowledge of how to interact with the other stakeholders of a specific translation project, their ability to construct understanding of new concepts and knowledge, and their capacity to peer-/self- reflect and assess are all enhanced in the wiki-equipped web-based environment, which closely simulates the real translation professional world. The collaborative, participatory and interactive nature of the wiki-equipped training environment makes the trainees face many additional points that are not included in the learning material of the course, and that are not therefore put forward in the conventional translator training workshop, which consequently results in a more enhanced learning. This in turn culminates in an improvement in the translation performance of the trainee translators working in the web-based translator-training workshop.

5. Conclusion
The purpose of this study has been to investigate the possible effects of incorporating the wiki technology in the web-based translator education workshop on the translation performance of the future specialized translators when compared with the conventional social constructivist contact classroom.

On the basis of the research question, the researcher hypothesized that utilizing the wiki in the web-based translator education workshops would improve the performance of the future specialized translators. In order to test this hypothesis, an experimental research methodology was applied, with the conclusion that incorporation of the wiki tool in the web-based specialized translator education workshops had improved the performance of the future translators as a result of the more developed translation and translator competences, when compared with the
conventional social constructivist contact classroom. Therefore, the analysis of the generated findings provided support for the hypothesis of the research study.

References

Note
Note 1. The GNU General Public License (GPL) is the most widely used free software license, which allows derived works be distributed freely under the same license terms. (For more information see Wikipedia’s page on GPL at http://en.wikipedia.org/wiki/GNU_General_Public_License)