

Collaborative Learning of Translation: The Case of TransWiki in Macao

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ABSTRACT

Pedagogy has undergone a paradigm shift since the focus changed from uni-directional transmission to collaborative construction of knowledge. The social constructivist approach calls for pedagogy to facilitate interaction between learners involved in collaborative problem solving of real life tasks. This paper describes a wiki-based implementation of this approach (TransWiki) in the learning of translation. The paper examines issues that arise both from the perspective of the learner/user and the pedagogue and discusses solutions supported by the customization of the wiki system. User surveys and a case study indicate that the platform for collaboration is generally well received, but there is marked ambivalence with regard to the advantages of asynchronous collaboration through TransWiki over real-time face-to-face discussions. From the perspective of the instructor, the platform is seen as enabling scaffolding and providing a wealth of data that could inform pedagogy.

Categories and Subject Descriptors

H.5.3 [Information Interfaces and Presentation]: Group and Organization Interfaces—*collaborative computing*

General Terms

Design, Experimentation

Keywords

Wiki, social constructivism, collaborative learning, translation

1. BACKGROUND

Macao Special Administrative Region, an autonomous enclave located near Hong Kong in the South of China, has a diverse mix of learners from various linguistic and cultural backgrounds. With regard to the learning of translation at the tertiary level, this mix makes a classroom an excellent site for discussion and collaboration. Such interaction is expected to expose learners to a wider

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spectrum of choices and also help them place their own choices in contexts. This pedagogy¹ is informed by the social constructivist theory of learning which advocates collaborative problem-solving by learners where the instructor scaffolds at crucial junctures to draw them into the discourse of the profession [15, p. 57]. Given that classroom contact is constrained by time, extended group discussions on the translation of a text may not be possible. Monitoring the discussions simultaneously taking place in different groups and providing scaffolding at appropriate junctures also becomes a challenge for the instructor. An online platform for collaboration, TransWiki², was thus sought to support collaborative learning. Before discussing this platform in detail, we examine the role played by wikis in education in general and translation in particular.

2. RELATED WORK

2.1 Collaborative Knowledge Building

Scardamalia and Bereiter [30, p. 1372] distinguished learning and knowledge building by pointing out that learning is an internal, unobservable process that results in changes of belief, attitude, or skill. Knowledge building, by contrast, results in the creation or modification of public knowledge—knowledge that lives ‘in the world’ and is available to be worked on and used by other people.

Knowledge building is described as the process of creating artefacts as a result of a common goal, group discussion and synthesis of ideas [30]. Paavola formulated a synthesis of Engeström et al.’s [12] expansive learning model and Scardamalia & Bereiter’s knowledge building model [29] to define collaborative knowledge building as an iterative, social process of collectively advancing and elaborating knowledge objects in the form of ‘conceptual artefacts’ (e.g. plans, ideas or models) or practices (e.g. enhance the current understanding of individuals within a group, at a level beyond their initial knowledge level) and should also advance the general understanding of the topic or idea, implemented instructional strategies or research methods ([25] cited from [13, p. 369]).

Paavola et al. [25] and Scardamalia & Bereiter [31] stated that knowledge building is a social act performed by a certain number of people sharing and exchanging information on/through their created artefacts. Collaboration is seen as mechanisms of interaction among the people involved, whether directly or through the created artefacts (using technology) [31].

¹For a discussion of traditional and social-constructivist pedagogy in translation see [1, 34].

²Online at <http://transwiki.cis.umac.mo>, guest access is available upon request.

Wikis are a suitable tool to permit and enhance all stages of knowledge building. In order to optimize the use of a wiki for knowledge building, depending on the targeted learning setting, specific adaptations of the wiki as proposed in this paper may lead to a fruitful knowledge building process for all participants. An example for such an enhancement has been described by Notari et al. in order to enhance formative assessment by enhancing the wiki engine with web widgets [23].

2.2 Collaborative Learning and Translation

A number of studies have also been conducted on implementations of social constructivism and translation in general and computer supported collaborative learning for translation teaching in particular. Deng & Wang apply collaborative social constructivism in translation teaching in the face-to-face synchronous mode [9]. Learners are divided into 4 groups; each group chooses a group member's translation work to have a face-to-face discussion every two weeks, and every learner has a chance to have a discussion with the teacher after group discussion. Comparing with traditional teaching models, the study finds that group work helps learners realize their translation mistakes and they learn from each other. The problems which learners face are limited time in the translation class, complexities arising from genre of texts etc. The data collected both at the end of class coupled with teachers' own experiences seem to show that the social constructivism in translation teaching is worth trying. The authors conclude that if the researchers can bring in a web-based platform to facilitate teaching, both the teachers and learners could have more time for group discussion.

With regard to the teaching of English-Chinese translation, web based collaborative learning platforms such as Moodle, Blackboard and BBS have been discussed in addition to wikis. Cai discusses an example of Wiki enabled translation teaching that explores if the model can help learners improve collaboration and quality of translation [5]. In the implementation, learners are divided into groups and provided with translation aids (such as dictionaries and references) and well as grounding in translation methods and procedures. Cai adopts an open editing and open access model where learners are free to access the pages of other groups. Learner presentations are used to discuss experiences and statistical analysis to analyse data regarding learner participation. The author concludes that the system indeed enhanced collaboration and quality of translation. However, the notion of collaboration or what the author calls "enhanced collaborative sense" [5, p. 69] is not defined. Participation in this case is measured by counting the number of times an individual learner participates in discussion. However, this might only reflect a partial picture of collaboration, as insignificant posts/comments would also count as participation. It is also unclear if there were incentives/disincentives in the design of the assignment that affected participation. The author also draws a correlation between participation and quality, but the manner in which quality is assessed is not presented. From a pedagogical perspective, it is also unclear how the author assesses each group or the kinds of interactions that take place. Liao discusses a model for a translation course (English-Chinese) in Taiwan based on the social constructivist principles using Moodle [18]. Under this model, learners were provided access to aids such as online dictionaries, Machine Translation (MT) applications, Translation Memory (TM) and translation corpora. This is in addition to common Moodle tools such as synchronous chat-rooms and asynchronous forums. Liao's study lasted for one academic year and involved 26 undergraduate learners. He concludes that learners liked this mode of collaboration but preferred using online chat-rooms

such as MSN Messenger. Network stability and system breakdowns are also seen as major issues with this web-based platform. Motta also uses Moodle as a course management system to teach translation (French-Italian) at the University of Geneva [21]. The program lasts for 4 months; questionnaires are distributed to the 12 learners at the end of the course. The responses to the questionnaires demonstrate that collaboration on Moodle helped learners in learning translation.

2.3 Wikis in Education

Wikis have been used as tools for facilitating teaching and learning since the early 2000s. The most simple use is as a knowledge repository for lecture and course material [32]. However, wiki technology has the potential to be used for greater interaction in an asynchronous learning environment [11]. The potential of wikis for facilitating collaborative writing is due to specific wiki properties such as ease of creation and update of content, possibility of linking, etc. [22]:

As such, wikis are often employed as platforms for university students to perform group work, such as projects and assignments. Examples include diverse majors in various countries around the world, such as creative industries students in Australia [3], language, information management, and mechanical engineering students in Hong Kong [7], literature students in the USA [16], education students in Turkey [24], software engineering students in Serbia [27], pre-service teachers in Switzerland [23], and IT students in Greece [33]. As wikis facilitate asynchronous collaboration by geographically dispersed users, some universities use wikis for cross-university collaborative projects: project groups with students from Sweden and the USA [6], and groups of students from Italy and the USA [14] are some examples. Besides at universities, wikis have also been successfully used in high schools [10, 19].

Wikis are not only being used for course assignments. A university in Germany has set up a course wiki for students to exchange notes taken during lectures and thereby improve their learning [20]. They also devised an incentive mechanisms which increased social competition and thereby led to higher numbers of contributions.

The degree of openness of a wiki was found to have an impact on the contributions made by students at a university in Italy which compared the use of a semi-public wiki (editing limited to registered students) with a public wiki (open to the world) in language teaching [14]. Writing on the public wiki was considered to be more challenging and gave students more pressure as it involved unknown contributors outside the classroom and a much broader readership, but also led to a greater sense of responsibility and empowerment.

When students work in groups, contributing to a common outcome, assessment of individual contributions becomes a challenge. One approach employed at a Spanish university involved students self-declaring the type of contributions made (such as markup improvement, new information, synthesis etc.) [8]. This allowed teachers to make a quantitative assessment, i.e. the length of the contribution multiplied with a weight for each type. However, the author cautions that such a kind of assessment is inherently limited as it does not consider the content of the contribution, and thus must be complemented by a qualitative assessment on the part of the teacher.

When used in education, wiki systems were almost always found to be unsuitable in their unmodified form, and had to be tailored to the university's needs [28]. When used for group project work, students often found the lack of a synchronous communication facility limiting [24]. In some cases the limitations and lack of user-friendly features of the commonly used MediaWiki wiki engine

cause universities to switch to a commercial site that offers the desired features, such as at an Australian university which switched to the Confluence system [4].

3. TRANSWIKI

In the following, we discuss issues faced by learners/users and instructors in implementing a collaborative platform based on social constructivist principles and the enhancements made to the wiki to address these issues.

3.1 TransWiki for Learners of Translation

We developed the TransWiki system, and evolved it through three sets of enhancements in response to issues that emerged from user surveys conducted at the end of two semesters of using TransWiki. The issues were:

1. Need for an easily accessible platform that encouraged collaboration and discussion.
2. Restricting access to group members during the initial stage of draft production.
3. Balancing advantages of asynchronous and synchronous collaboration.

3.1.1 TransWiki 1: Customized MediaWiki

As Kiraly points out in his research on employing the social constructivist approach to translation:

...by communicating and negotiating with peers and more experienced (and thus more knowledgeable) others, we acquire a feel for correctness, appropriateness and accuracy, a feel that is grounded in our social experiences... [15, p. 4].

Translating texts that are not decontextualized requires extended discussion as learners are required to make lexical and rhetorical choices based on a number of factors, including but not limited to linguistic/cultural contexts, genre and intended purpose. The platform thus had to allow for easy access and facilitate communication. Furthermore, learners in Macao generally avoid volunteering responses or contradicting one made by a peer, as these might be considered culturally inappropriate or rude. The platform thus needed to encourage discussion and mitigate factors that could result in hampering collaboration.

To support collaboration among translation learners, many different alternatives could be considered. For example, in the simplest case learners could email each other continually evolving versions of the translation text, each adding their own contribution to it until the group reached consensus. By copying each mail to the instructor, the instructor can be kept in the loop about the ongoing work. A slightly more sophisticated method would be a mailing list, which would ensure that no one is left out, and if coupled with a mailing list archive a record of the entire process would act as a record of discussions. However, using email can quickly result in long chains of replies which are hard to read.

Another variant would be the use of a group on a social networking site. For example, a closed Facebook group could be created, containing only the learners and their instructor as members. Instructors could create wall posts with assignments, and learners could post replies to collaborate on the assignment task. The entire process would be visible in the chain of replies, and unlike email, each reply does not quote the entire previous email. Moreover, in Facebook replies are only one level of nesting deep, so the resulting

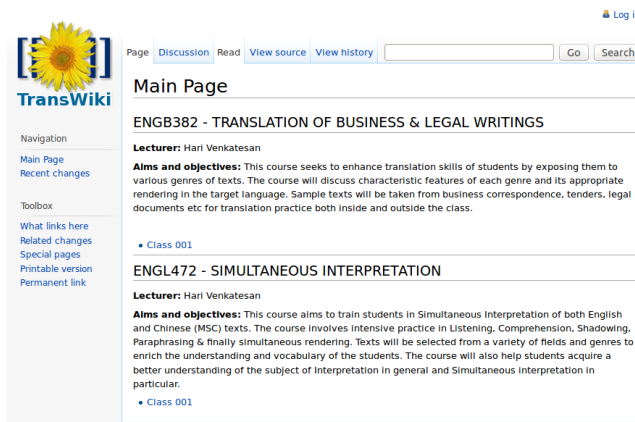


Figure 1: TransWiki main page

chain of replies is much more readable than a corresponding chain of deeply nested email replies. However, controlling access to material, such as when multiple learner groups separately work on assignments that they should not have mutual access to, is somewhat cumbersome in Facebook, and overall the collaboration facilities provided are quite rudimentary. Moreover, there is a recent reversal of social networking trends in that more and more youngsters choose not to have an account on such platforms as Facebook³, so it can not be assumed that all one's learners are present on these sites.

Many universities already use an online course management system, such as Moodle, Sakai, WebCT, Blackboard or others. Systems such as these include a variety of tools that could be used to support collaboration among learners, such as discussion forums, wikis, and assignment uploading, to name a few common ones. Using such a system has the advantage that it manages learner records – all learners are already registered and thus do not need to create a separate account. However, the provided tools are usually disjointed. For example in Moodle which is used at the University of Macau, there is no way to connect a discussion with an assignment or with a wiki. As each tool is a separate entity, it is difficult to offer a tightly integrated environment without any deep modification of the system itself. Also, the wiki that is built into Moodle is very limited when compared to a fully-fledged wiki system such as MediaWiki which is highly customizable, extensible, and offers a host of features that are absent in the Moodle wiki.

Having considered the other alternatives, we decided to employ a dedicated wiki system to support collaborative group work by our translation learners. The result was the TransWiki system. TransWiki is a customized and extended version of the popular MediaWiki system, which is the wiki engine underlying the Wikipedia website. As such the software is well supported and its interface is familiar to most users who have ever visited Wikipedia online.

Our first version of TransWiki was simply a MediaWiki site with some customizations made in the server's configuration file (LocalSettings.php), but without any of our own extensions. The customizations were simple: setting a site name and logo, limiting use of the discussion page to appending text at the end rather than editing of any of the page's content, and various other minor customizations. Figure 1 shows the TransWiki main page.

The deployment involved dividing learners into groups of 4-5

³See for example: Christopher Matthews, "More Than 11 Million Young People Have Fled Facebook Since 2011", Time Magazine, Jan. 15, 2014

TRANSWIKI USER SURVEY

Please circle or tick **only one** choice for each of the following:

1. How would you appraise the use of Transwiki for translation assignments?
a. Inconvenient b. Helpful c. Neither
2. Working in a group has been:
a. helpful b. a hindrance c. confusing d. neither
3. With regard to discussion for translation, would you prefer
a. to use the discussion page in the Wiki
b. to chat through MSN/Yahoo/ICQ/...
c. meet members of the group for a discussion face-to-face
d. discuss by E-Mail
4. When contributing to discussions would you like to be:
a. identified (as presently)
b. anonymous
5. If not mandatory would you prefer
a. to continue using Wiki
b. not use Wiki at all
6. What according to you is the main disadvantage of using Wiki?
a. Too slow
b. Lack of real-time discussion/chat (instant messaging, such as MSN/Yahoo/ICQ/...)
c. Lack of privacy (access to pages open to all)
d. Other: _____
7. What according to you is the main advantage of using Wiki?
a. Group effort, yielding better results
b. Lack of pressure to conform/agree as in face-to-face discussions
c. Easy access of content from any computer
d. Other: _____

Figure 2: TransWiki 1 user survey questionnaire

each that worked asynchronously on translating business letters and legal texts over a period of one week. Learners were advised to use the Discussion page associated with each Article page of MediaWiki for all discussions and post the final draft translation on the Article page before lapse of the time allowed. They were also advised that each member would receive a grade for participation in addition to one for translation, which remained the same for all members of a group. This format, coupled with the asynchronous mode of collaboration, was expected to encourage discussion and mitigate cultural and socio-psychological factors that could impede it. At the end of two semesters, a simple survey was used to determine user satisfaction with the platform (see the questionnaire in Figure 2). The survey asked questions on the general utility of the platform (Q1) and collaboration (Q2), and satisfaction with the deployment itself (Q3-Q7). Additional space was provided for comments. The results of this survey are shown in Table 1.

A large majority of learners found the experience of working together through TransWiki helpful: 73% of them said that both TransWiki and working in collaboration were helpful. Responses confirmed the utility of asynchronous collaboration which avoided potential conflict. However, communication through the discussion page had its issues: only slightly more than half (55%) of learners expressed a preference for discussing through the wiki discussion page, whereas 18% of learners preferred to discuss using a third-party synchronous chat service, and another 24% preferred face-to-face discussion. Thus a total of 42% of learners found the discussion page insufficient for the purposes of communication. Identify-

Table 1: TransWiki 1 user survey results

Question	Answers	%
Q1 (TransWiki)		
a. Inconvenient	4	12%
b. Helpful	24	73%
c. Neither	5	15%
Q2 (Collaboration)		
a. helpful	24	73%
b. a hindrance	2	6%
c. confusing	5	15%
d. neither	2	6%
Q3 (Platform)		
a. use the discussion page in the Wiki	18	55%
b. chat through MSN/Yahoo/ICQ	6	18%
c. group discussion face to face	8	24%
d. discuss by E-Mail	0	0%
Q4 (Privacy)		
a. identified	27	82%
b. anonymous	6	18%
Q5 (Working mode)		
a. continue using Wiki	28	85%
b. not use Wiki at all	5	15%
Q6 (Disadvantages)		
a. Too slow	2	6%
b. Lack of a real-time discussion/chat	21	64%
c. Lack of privacy	2	6%
d. Other	7	21%
Q7 (Advantages)		
a. Group effort, yielding better results	14	42%
b. Lack of pressure to conform/agree	4	12%
c. Easy access of content from any computer	6	18%
d. Other	5	15%

ing the main disadvantage of using a wiki, almost two thirds of all learners (64%) responded that TransWiki's main weakness was the lack of a real-time discussion/chat function, which led the members of one group to establish a parallel chat room on a third-party online chat service for this purpose. However, users showed a high preference to be identified 82% rather than working anonymously.

Comments received in response to the "Other" answer confirmed the above observations. About disadvantages, learners responded: "A little bit confusing in the discussion part, difficult to respond to relevant problem" a comment related to the strict chronological order of the discussion page; and "We need to type it out, I think a face to face discussion would be better" which reflected the dislike of discussing in writing. The issue of lack of immediacy in discussion was raised in the response of another learner: "Others give comments too slow". Finally, one learner expressed disagreement to the whole concept of using a wiki site to collaborate with others whom one meets daily: "Wiki is designed to make people (who does not know each other or in different time and spaces) to work together. Not people who meet everyday".

Interestingly, the point just mentioned by one of our learners contradicted what several of our other learners stated as an advantage of wikis: "Don't need to go out and discuss face to face, saving time, convenient.", "Saves time, convenient", "Work at home", "We don't need to come out because it is hard to have a whole group

together”, and “Save time because no need to meet outside” all affirmed the utility and convenience of collaborating asynchronously. Finally, one learner responded that non-face-to-face discussion was helpful in avoiding inter-personal conflicts: “Can give comments individually, not face to face. Coz face to face is ‘dangerous’, it will hurt and will not give true comments”.

Finally, while learners responded in the affirmative regarding general utility of the platform and the modus-operandi, they expressed dissatisfaction with the fact that discussion pages were accessible to all groups, allowing unfinished work to be viewed and also leaving work they considered intellectual property open to copying. Combined with the feedback about the perceived disadvantages of communicating through the wiki’s discussion page, this indicated the need for us to evolve TransWiki to better support our learners’ needs.

3.1.2 TransWiki 2: Improved Discussion, Access Control

The aforesaid feedback informed the next step in the evolution of our system. While Wikis typically work as open-access platforms for sharing information, user responses indicated a preference for access to be restricted to group members initially, and be changed to open access upon completion of the draft. Given the modus-operandi that encouraged (and more importantly justified) discussion by incentives in the form of grades, it became necessary to be able to restrict user access to some pages, and to be able to do this selectively for different learners. For example, an instructor may give an assignment to a number of groups of learners. Until the assignment deadline, each group should only be able to access their own assignment pages, and should have no access at all to assignment pages of other groups. The default MediaWiki access control does not make it possible to restrict access in this manner. Pages in MediaWiki may be protected, meaning that only an authorized user such as an administrator can edit them, but they still remain visible to all users. Thus we implemented our own group-based access control extension. Using this extension, an instructor can define groups, assign learner accounts into groups, and define access rights to pages belonging to each group. This makes it possible to have access to one’s own group pages only during the time an assignment is in progress, and to change the access permissions after the assignment deadline so that all groups have read access to each other’s assignment pages, but can not edit their own pages any longer. Figure 3 shows what the access control panel looks like through which we define access permissions. In terms of implementation, we create a MediaWiki namespace for each user group, and create assignment pages within the respective group’s namespace. Access control then limits the type of access (view, edit) namespace-wide.

Another comment that we received from our learners was that the discussion page within TransWiki was too rudimentary. Communicating meant appending a statement to a wiki page, in chronological order but without any visible connection to the thread of discussion. As communication within each learner group is crucial to arriving at a good translation, and for reaching consensus on the final product of their translation process, we decided to strengthen the discussion function by entirely replacing the MediaWiki built-in discussion page with a custom discussion extension. This extension would mimic the popular Facebook discussion in format: it would have separate discussion posts, each with any number of comments but nested only one level deep. By choosing a similar visual appearance as on Facebook, which is an important part of the online lives of a majority of our learners, we hoped to ease the adoption and stimulate the use of our discussion page. This new

Access control

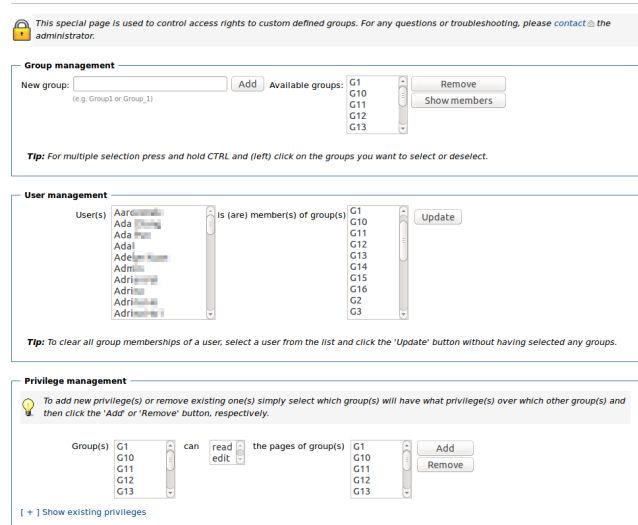


Figure 3: TransWiki access control panel through which groups can be created (top), users assigned to groups (middle) and access privileges granted (bottom)

discussion page did indeed help to better organize discussion posts. Now it was possible for learners to make comments within discussion threads even after subsequent newer threads had already been created.

A key advantage of collaborating through TransWiki over traditional face-to-face group discussions is that it mitigates cultural and socio-psychological factors that might affect collaboration [17]. By switching to asynchronous collaboration, conducted remotely and mediated through TransWiki, learners are enabled to focus on problem solving. Furthermore, collaborative exercises were designed such that participating in discussions was an important factor determining the grade awarded. Active participation could therefore be seen as a response to the instructor’s requirement rather than behaviour which would be considered culturally inappropriate.

However, users found the pace with which posts on TransWiki were refreshed frustrating. This was particularly so when they wanted to focus on a specific stumbling block that required intense discussion. This seemed like a contradiction as face-to-face collaboration would reinforce factors such as immediacy [17], which potentially compromised the ability of participants to express themselves freely and fully. In order to understand how learners related to either mode of collaboration the following study was conducted.

Learners attending a third year undergraduate course on translation were divided into groups of 4-5, forming six groups in all. The groups were asked to complete two assignments of the same length, each comprising of the translation of a business letter from Chinese to English. One half of the class, i.e. three groups (1-3) were asked to do the first assignment by collaborating face-to-face while the other half (groups 4-6) were asked to do the assignment collaboratively on TransWiki. This order was reversed for the second assignment. The time allowed remained one week in either case.

Again, a survey was conducted at the end of the experiment. Learners were asked to give their opinions anonymously through a questionnaire comprising a set of questions with multiple choices and space for other comments and suggestions (see Figure 4). The questions in this questionnaire are essentially the same as in our

TRANSWIKI USER SURVEY

Please circle or tick your choice for each of the following:

1. How would you appraise the use of Transwiki for translation assignments?
a. Cumbersome b. Helpful c. Unnecessary d. Whatever
2. Working in a group has been:
a. Productive b. a hindrance c. confusing d. all the same
3. With regard to discussion for translation, would you prefer
a. to use the discussion page on Wiki
b. to establish a chat session on MSN/Yahoo/ICQ
c. meet members of the group for a discussion face to face
d. discuss by E-Mail
e. not discuss at all
4. When contributing to discussions would you like to be:
a. Identified (as presently)
b. anonymous
5. If not mandatory would you prefer
a. to continue working in a group using Wiki
b. to work in a group but not use Wiki
c. use Wiki but not work with a group
d. not use Wiki at all
6. What according to you are the disadvantages of using Wiki?
a. Too slow
b. Lack of a real-time discussion/chat page (similar to MSN/Yahoo/ICQ)
c. Lack of privacy (access to pages open to all)
d. All of the above
7. What according to you are the advantages of using Wiki?
a. Group effort, yielding better results (Peer review)
b. Lack of pressure to conform/agree as in face to face discussions
c. None of the above
d. Others: _____

Figure 4: TransWiki 2 user survey questionnaire

TransWiki 1 survey, however the provided answers differ slightly in most questions except question 4.

Twenty-one learners took part in the survey anonymously. Results of this survey are shown in Table 2. The results are mixed and seemingly contradictory. In response to the first question whether using TransWiki was helpful, 11 learners believed so while 5 found it cumbersome and 3 unnecessary. As such it can be said that over 50% of learners found working with TransWiki favourable. However, at the same time in response to the third question that asked whether learners would use the discussion page on TransWiki, use live chats/mail or meet members face-to-face 10 learners were in favour of TransWiki while 11 preferred meeting face-to-face. Finally the fifth question asked if learners would prefer working in a group using TransWiki or without wiki or not work with a group at all; 8 learners wanted to continue work with TransWiki, 10 preferred working in a group without TransWiki and 2 preferred not to work in a group. Working in a group was attested overwhelmingly by 15 learners while 3 and 2 learners considered it a hindrance and confusing respectively.

This survey asked similar questions as our TransWiki 1 survey did, but came after learners had an opportunity to collaborate both asynchronously via TransWiki as well as synchronously face-to-face. While a majority (52%) found TransWiki helpful and collaboration productive (71%) a total of 43% of learners found it variously cumbersome, unnecessary or were indifferent. Learners

Table 2: TransWiki 2 user survey results

Question	Answers	%
Q1 (TransWiki)		
a. Cumbersome	5	24%
b. Helpful	11	52%
c. Unnecessary	3	14%
d. Whatever	1	5%
Q2 (Collaboration)		
a. Productive	15	71%
b. a hindrance	3	14%
c. confusing	2	10%
d. all the same	1	5%
Q3 (Platform)		
a. use the discussion page on Wiki	10	48%
b. chat session on MSN/Yahoo/ICQ	0	0%
c. group discussion face to face	11	52%
d. discuss by E-Mail	0	0%
e. not discuss at all	0	0%
Q4 (Privacy)		
a. Identified	18	86%
b. anonymous	3	14%
Q5 (Working mode)		
a. continue working in a group using Wiki	8	38%
b. work in a group but not use Wiki	10	48%
c. use Wiki but not work with a group	2	10%
d. not use Wiki at all	1	5%
Q6 (Disadvantages)		
a. Too slow	6	29%
b. Lack of a real-time discussion/chat page	11	52%
c. Lack of privacy	2	10%
d. All of the above	2	10%
Q7 (Advantages)		
a. Group effort, yielding better results	8	38%
b. Lack of pressure to conform/agree	6	29%
c. None of the above	3	14%
d. Others	4	19%

were about evenly divided on how to collaborate: through the wiki (48%) or in a face-to-face meeting (52%). Interestingly, none of our learners expressed a preference to chat with an instant messaging tool, which in our TransWiki 1 survey about one in five learners had expressed as a preference. In terms of modus operandi, altogether 86% of learners preferred working in a group; however, 48% of learners preferred to do so without using a wiki, and an additional 5% did not wish to use a wiki at all, regardless of the modus operandi. However, almost half the class (48%) expressed a preference for working through a wiki, and interestingly this included 10% of learners who wished to do so even when not working in a group. Slightly over half of all learners (52%) chose the lack of a synchronous chat function as a weakness of TransWiki, with a further 29% complaining that TransWiki was too slow. Compared with TransWiki 1, the lack of synchronous chat dropped somewhat in importance (from 64% to 52% of responses), but remained the main disadvantage as expressed by learners in their comments: "Sometimes, Transwiki cannot give any instant feedback after leaving any comments on the chatbox (which is totally difference from the face-to-face discussion)", and "I prefer to discuss the translation face to face or do it individually. Because using Transwiki is

very difficult to manage the time. I need to go there every hour to check did they post and comment on there, if I miss one day in Transwiki, it is very difficult for me to follow their conversation”.

Interestingly, one of the advantages of the system was identified as lack of pressure to conform/agree which went up to 29% from 12% in case of TransWiki 1 when users had not collaborated face-to-face. This seems to indicate that users did find working remotely preferable, but concerns regarding the time taken by discussions remained overwhelming.

To sum up, the main disadvantages of TransWiki at this stage were identified as it being slow and lacking a real-time discussion/chat page. The advantages on the other hand are identified as enabling peer review and absence of pressure to conform/agree as in face to face discussions.

3.1.3 TransWiki 3: Synchronous Discussion

We expected that TransWiki 2 would be received by our learners as a big improvement on the discussion function, particularly as it mimicked the popular Facebook format. Surprisingly this was not the case. Learners complained that when they were working online at the same time it was cumbersome having to manually refresh the page in order to check if there were any new comments from other group members. A method therefore had to be evolved that allowed for focused discussions, while maintaining the generally asynchronous mode of collaboration.

Our third evolution of the TransWiki system thus focused on solving these issues with the discussion page. The main improvement was to employ web 2.0-style discussions where the page automatically fetches the latest changes from the server and updates page content (implemented using AJAX, i.e. asynchronous JavaScript and XML). The other improvement was to deviate from the Facebook format by using wider columns that avoided the problem of long narrow sections of text. Finally we also added a link titled “Agree” to each discussion statement which users may click to indicate agreement with that statement (analogous to the Facebook “Like” link). As in Facebook, we chose not to include a “Disagree” link, as an absence of an Agree action can be seen as a user’s potential disagreement.

Figure 5 shows the current look of the discussion page, from the instructor’s point of view in which additional buttons appear that learners do not see (for rating and tagging discussion statements, discussed in Section 3.2 below).

We again conducted a user survey among our learners to evaluate this version of TransWiki. This time we used a newly designed survey questionnaire which grouped questions in three areas: collaborative learning, TransWiki system, and assignments (see Figure 6). We provided a Likert scale for answers, with the values Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, and an additional answer value Don’t Know for those who were unsure what to answer. Results to this survey are shown in Table 3.

The improved discussion page format was well received as evidenced in the learner feedback we received in which the previous complaints did not appear again. As seen from the results of this survey, users more or less (48%) agreed that the revamped discussion page on TransWiki facilitated discussions while 26% remained neutral and only 23% disagreed. While 56% of users still wanted a real-time chat function incorporated, the trade off (a discussion page that reflected changes instantly) was found favourable by 78%. In response to question 3, 78% of students again agreed that they felt free to agree/disagree during discussions. This suggests that while a synchronous chat function remained desirable, a higher percentage of users found collaborating in a group remotely with a discussion page that could reflect posts instantly a

Talk Page



Figure 5: TransWiki Discussion page (instructor’s view, rating and tagging functions are available to instructors only)

better option. Finally, 81% of students felt that working collaboratively improved the quality of translations (Q1), a marked increase over the responses received for TransWiki 1 and 2, and only 33% showed a preference to work individually (Q5). Interestingly, several comments pointed towards having to work with computers and typing out comments as being cumbersome. One learner commented: “Personally, I think it is a good way to do group assignment since people have different agendas. However, writing is less convenient than talking.” As the improved discussion page had become more usable, many of our learners used it for intensive discussions about their translation assignments. This required group members to frequently check for new discussion posts, which was perceived as somewhat inconvenient: “...we don’t have time to pay attention to the discussion everyday. During assignment 1, I found out that my groupmates have already discussed the whole assignment...” one learner commented, and another suggested “A mail notice to make users know that there is a new message on the discussion page would be rather useful”. This points out a future improvement we should make to TransWiki.

3.2 TransWiki for Instructors

In conventional group discussions that take place face-to-face, it is not possible for the instructor to maintain oversight of the process that leads to the final product (translation) given that there are several groups simultaneously engaged in discussion. In this scenario the only scaffolding an instructor is able to provide is quick comments/remarks on how a given group is proceeding after a fleeting observation. Starting with the earliest version of TransWiki a complete record of discussions became available to the instructor that allowed monitoring, scaffolding, and also informed classroom teaching by identifying weaknesses. While mail lists and groups could provide a similar record, they are not amenable to automated analysis and processing for the purpose of assessment by teachers. A variant of the email process would be using a web forum which may avoid long chains of quoted replies, but which still does not easily make the entire collaboration process discernible. The “History” function associated with TransWiki’s discussion and article pages provide quantitative data showing frequency and depth of each user’s contribution. Visualisations of the data developed sep-

Table 3: TransWiki 3 user survey results (n=number of answers)

	Question	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Don't Know	
		n	%	n	%	n	%	n	%	n	%	n	%
Collaborative Learning	Q1	3	11%	19	70%	4	15%	1	4%	0	0%	0	0%
	Q2	5	19%	12	44%	7	26%	2	7%	0	0%	0	0%
	Q3	4	15%	17	63%	3	11%	2	7%	0	0%	0	0%
	Q4	3	11%	14	52%	7	26%	1	4%	0	0%	1	4%
	Q5	2	7%	7	26%	8	30%	6	22%	3	11%	0	0%
TransWiki System	Q6	6	22%	9	33%	2	7%	5	19%	4	15%	0	0%
	Q7	7	26%	10	37%	3	11%	7	26%	0	0%	0	0%
	Q8	2	7%	11	41%	7	26%	5	19%	1	4%	0	0%
	Q9	5	19%	10	37%	8	30%	2	7%	0	0%	1	4%
	Q10	13	48%	8	30%	5	19%	0	0%	0	0%	0	0%
Assignments	Q11	2	7%	12	44%	6	22%	2	7%	0	0%	0	0%
	Q12	5	19%	15	56%	2	7%	0	0%	0	0%	0	0%
	Q13	3	11%	7	26%	7	26%	5	19%	0	0%	0	0%
	Q14	4	15%	16	59%	1	4%	1	4%	0	0%	0	0%

arately [2] further allowed instructors to investigate the frequency and depth of participation of each individual within a group or entire groups themselves was missing. Comparison of such data aided both evaluation and pedagogy.

Observations of past use of TransWiki also taught us that learners may well engage in the collaborative process by closely following, i.e. reading, the contributions of others, even if they only infrequently make their own contributions. When assessing a learner's involvement in the group collaboration we should take this into account, rather than simply count the number or size of edits made. However, the MediaWiki system only records a history of edits, not a history of page views. We therefore implemented a logging function that records all types of page access (view, edit) for all pages, and a logging page through which we can view and filter logs by different criteria, such as user, group, type, and date range. An example of this is shown in Figure 7.

In order to make further use of the extensive data on student collaboration available on TransWiki, current enhancements being implemented for the instructor include a method to tag posts (see Figure 5) based on a pre-defined system of coding. Visualization of this data is expected to shed light on connections (if any) between the kinds of posts and performance of a group both in terms of collaboration and output. A rating system that allows instructors to rate posts based on a pre-defined rubric is further expected to aid in evaluation and grading.

4. DISCUSSION

Cognitive perspectives on learning have resulted in a shift from the behaviourist approach to pedagogy based on the teacher-expert demonstrating skills to be learnt by learners. They placed the focus instead on the learner, probing the processes by which knowledge and skills could be understood and applied. This resulted in the view that cognitive structures that supported the learning process were constructed in the process of interpreting experiences in particular contexts [26]. Social constructivism extends this notion to emphasise the role played by others (such as peers, culture etc.) in the learning process of the individual. Early research hypothesized that groups that drew on the diverse strengths of its members could be more successful than individuals and that interaction among peers could facilitate learning more than teacher and learner interactions.

Through a series of enhancements, TransWiki attempts to facilitate such interaction while adapting to socio-cultural realities. Interestingly, it emerges from the user surveys that the majority of learners in Macao like working asynchronously, but also appreciate the speed of face-to-face discussions.

The disadvantage with remote collaboration is that discussion is mediated by the use of technology. A prerequisite for this type of collaboration would therefore be facility with the technology involved. This might involve training and ensuring that access to the mediating system is guaranteed. In case of computer supported collaborative learning, this would mean access to computers and a generally sound understanding of at least the mediating application in question. Web-based platforms on the other hand will require uninterrupted access to the internet in addition to facility with computers and the application used.

More importantly, as pointed out by some in our surveys, learners may be uncomfortable having to type their comments out instead of being able to speak them. As reported by users of early versions of TransWiki, with collaboration not being in real-time, members may not be able to respond to each other's queries forthwith. Focus and time may be lost if members wait for each other to respond.

Issues with collaborating face-to-face, on the other hand, include the amount of time learners can spend in collaboration, which would invariably be constrained by the need for all group members to be physically present. Socio-psychological factors such as conformity may also be observed where students feel uncomfortable expressing contradictory views. As research has shown, immediacy can be an important factor that impedes active participation of learners particularly in cases where learners are from cultures that prioritise harmony and avoid conflict. From the perspective of the instructor, this mode of collaboration also poses the problem of monitoring and evaluation. The instructor would have to rely on the product of collaboration for scaffolding but would not have access to the process of collaboration.

The compromise that seems to have addressed most issues in our case is the metamorphosis of our discussion page into an instantly updating conversation space that allows learners to choose to gather at an appointed time for specific problems and switching back to the asynchronous mode of collaboration at others.

TRANSWIKI USER SURVEY

(Please provide responses by placing a tick or cross in the box that most accurately reflects your opinion)

COLLABORATIVE LEARNING

- Doing assignments in a group helped improve the quality of translation
- Discussing assignments exposed me to different ways in which language is used across regions/countries
- I was able to freely express opinions/disagreement during discussions
- My group managed to arrive at consensus through discussion
- I would prefer working on assignments individually

TRANSWIKI SYSTEM

- Using a web-based platform for discussions was convenient
- TransWiki was easy to learn and access
- The discussion page facilitated discussions
- I would like a live-chat function for discussions
- I would like a discussion page that reflects changes instantly and automatically

ASSIGNMENTS

- The design of the assignments was rational (50% for discussion and 50% for translation quality)
- The objectives of the assignments were clear
- The time allowed (one week) for the assignments was sufficient
- Marking of the assignments was fair

MORE COMMENTS?
Please expand upon your assessment if you wish. We welcome any comments/suggestions not covered by the questions above.


Figure 6: TransWiki 3 user survey questionnaire

5. SUMMARY OF LEARNINGS

We identified following two main lessons learned:

- The need to approach collaborative learning differently to suit the context of East Asia in general and Macao in particular.* Much of the literature on collaborative learning is based on research in western countries and cultures. Assumptions on modes of collaboration that work there do not necessarily translate to the context of Macao and East Asian culture, where issues such as conformity, harmony and conflict avoidance are important, as mentioned before. Thus the pedagogy, and the provided scaffolding, need to take these learner characteristics into account, and the design of the collaboration platform needs to provide necessary support that can enable effective collaboration.

Access log

 This special page lists the access log. For any questions or troubleshooting, please contact @the administrator.

Log display control

Display logs per page

Filter user: access: namespace: in last: day(s)

Purge log older than day(s)

Note: Click "Filter" to apply filter settings to the log display.

Log

Previous 50 results | Next 50 results of a total 3514 results

2014-04-30 04:14:03 Roberti has viewed G1:ENGB382 2014 Class 1 BN Exercise 1 Group 1

2014-04-30 01:50:08 Janice has viewed G1:ENGB382 2014 Class 1 LT Exercise 1 Group 1

2014-04-29 16:49:57 Janice has viewed G1:ENGB382 2014 Class 1 LT Exercise 1 Group 1

2014-04-29 14:33:51 Ines has viewed G1:ENGB382 2014 Class 1 LT Exercise 1 Group 1

2014-04-29 13:52:51 Sally has viewed G1:ENGB382 2014 Class 1 LT Exercise 1 Group 1

2014-04-29 09:39:32 Kate has viewed G1:ENGB382 2014 Class 1 LT Exercise 1 Group 1

Figure 7: TransWiki access log panel showing accesses by users, filtered for group G1

For example, learners feel uncomfortable making work in progress visible to other members of the learning community. The platform could thus be extended so that learners control visibility of their translation, and only after learners make their text visible to others, will they be able to see the text of other members. From a didactical point of view such a function might be interesting because it forces the group to discuss why to keep a produced artefact and when to publish it, which enhances metacognitive skills and sustains interaction and collaboration within the learning group. From a scientific point of view such a function might be interesting because it allows more insight about learners' needs and behaviours to be gained.

- Having to balance the need for speed (synchronous mode) and facilitating discussion in aforesaid context (asynchronous mode).* As mentioned before, our third survey revealed that 78% of users found the mode of collaboration employed conducive to participating freely in discussions — this is while they continued to show a strong preference for a real-time chat function. The balance between an asynchronous mode of collaboration that reduces socio-psychological factors impeding free discussion, and a synchronous mode of collaboration that allows for instant feedback indeed seems difficult to achieve. The final customization introduced to TransWiki where the discussion page reflects posts near-instantaneously is an attempt to address this. With this function, learners are enabled to choose to join a live and synchronous chat session or respond to posts independently at another time. A longitudinal study comparing user satisfaction and learning outcomes of the three modes (synchronous, asynchronous and hybrid) would shed light on concerns and possible solutions.

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