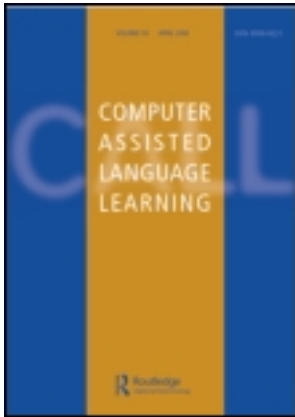


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Publisher: Routledge

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Computer Assisted Language Learning

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/ncal20>

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Version of record first published: 22 Mar 2011.

To cite this article: Yu-Fen Yang (2011): Engaging students in an online situated language learning environment, *Computer Assisted Language Learning*, 24:2, 181-198

To link to this article: <http://dx.doi.org/10.1080/09588221.2010.538700>

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Engaging students in an online situated language learning environment

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Previous studies have emphasized the relationship between students' engagement and learning performance, and yet the context in which students and the teacher interact to engage each other has been ignored. In order to engage college students who are learning English as a foreign language (EFL) in the context of a big class, this study developed a system, which is an online situated language learning environment, to support the students, the teachers, and the teaching assistants (TAs) to communicate synchronously and asynchronously in and after class. A sample of 118 undergraduate students was recruited to participate in an *E-meeting* to express their thoughts and opinions toward the drama, and *Post an Opinion* to predict subsequent scenes in the unfolding plot. Students were also required to take an *Assessment* online, after reading each episode of the drama. In this study, the behavioral, emotional, and cognitive dimensions of students' intensive and reciprocal engagement were observed and recorded in the system for students to reflect on their language usage and further improve their language learning and for the teachers and the TAs to monitor and identify their students' difficulties and provide further scaffoldings. Students' language learning progress was also revealed through a questionnaire and the pre- and post-tests. Based on the interpretation of the result, suggestions for future studies are also discussed.

Keywords: student engagement; *E-meeting*; situated learning; student–teacher interaction; (a)synchronous communication

Introduction

One of the most significant challenges facing English as a foreign language (EFL) education is how to enhance students' engagement in the target language (L2 or English) for meaningful purposes in and out of the classroom (Egbert, Paulus, & Nakamichi, 2002; Toyoda & Harrison, 2002). In Taiwan, the big class sizes of 50–60 students in college have resulted in an academic disengagement, since students have fewer opportunities in these contexts to communicate with the teacher in the L2. Student–teacher interactions, in which the teacher guides students to collaboratively engage in problem solving and knowledge-building, are particularly significant in the L2 learning process. During conversations with the teacher, students use L2 to reflect on their language usage and further improve language learning by meaning negotiation. In the related studies concerning student–teacher interactions during

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listening, speaking, reading, and writing activities, students' engagements in student–teacher interactions have been found to mediate L2 learning (Zeng & Takatsuka, 2009).

There has been a growing interest in incorporating computer-mediated communication (CMC) with language learning along with the development of computer-assisted language learning (e.g. Cañado, 2010; De Smet, Van Keer, De Wever, & Valcke, 2010; Kessler & Bikowski, 2010; Liaw & Susan, 2010; Wang & Chen, 2009). CMC, which is used to facilitate social interaction between the teacher and students as well as among students for internet-based collaborative learning, are of two types – synchronous CMC and asynchronous CMC (Peterson, 2009; Yamada, 2009). “Research has shown that CMC motivates learners to engage in meaningful communication in the target language and leads to effective language learning” (Sun, 2009, p. 88). It engages students in interactions with the teacher by providing opportunities to negotiate meanings on misunderstandings anytime and anywhere (Kessler & Bikowski, 2010). In CMC, the teacher becomes a learning facilitator with less control over how students behave in the online learning environment (Fu, Wu, & Ho, 2009). The learning outcome is dependent on students' willingness to constantly reflect on and actively engage in their learning processes (Kay & LeSage, 2009; Liu & Chu, 2010).

Students' engagement in CMC

A key element in successful language learning through CMC is to engage students in student–teacher interactions for online learning activities. Students' engagement is defined as “the extent of students' involvement and active participation in learning activities” (Cole & Chan, 1994, p. 259). It refers to the intensity and quality of students' involvement in initiating and carrying out learning activities (Gonida, Voulala, & Kiosseoglou, 2009), such as active participation in class, number of completed assignments, interactions with the teacher and peers, and students' collaborations (Altinay & Paraskevas, 2007; Kuh, 2003).

Students' engagement involves three interrelated dimensions – behavioral engagement, emotional engagement, and cognitive engagement (Fredricks, Blumenfeld, & Paris, 2004). Behavioral engagement can be observed in actions that lead to specific outcomes, such as class participation and task completion. Emotional engagement refers to students' sharing of positive and negative feelings about learning with their teachers and peers, such as optimism, confidence, anger, or anxiety (Riordan & Kreuz, 2010). Cognitive engagement refers to the amount and type of strategies that learners use to complete a task or solve a problem, which will lead to their collaborative knowledge construction and deep learning.

Synchronous and asynchronous CMC enable teachers to promote behavioral, emotional, and cognitive engagements as students are allowed to study at their own pace, chat for emotional effects, and reflect on learning processes. In CMC, behavioral engagement can be measured by retrieving data from log files (log-in and log-out times, system queries, overall usage of the communication platform); emotional engagement can be assessed through a qualitative analysis of emotions expressed by participants during the online group discussions (Barkatsas, Kasimatis, & Gialamas, 2009); cognitive engagement may be assessed through a qualitative analysis of participants' interaction in the learning process for their level of critical thinking or through quantitative analysis of the learning progress.

Related studies of language learning in CMC

Some studies have reported effective systems with CMC's use to engage students in language learning. Lan, Sung, and Chang (2007) report the contribution of a mobile-device-supported peer-assisted learning system developed for the purpose of engaging EFL students in collaborative reading activities with the support of immediate feedback. Chen and Liu (2008) present their development of the web-based synchronized multimedia lecture system that aims to fulfill language learning requirements for speaking. Their design of the synchronized multimedia tutoring successfully engaged students in communication in L2. Zeng and Takatsuka (2009) used Moodle, a course management system, to engage EFL students in synchronous text-based dialogues. Motivated by collaborative tasks, the students assisted each other in attending language forms through dialogues, which consequently improved their language use in writing. Liu and Chu (2010) report the impact of a ubiquitous game-based learning environment, the handheld English Language Learning Organization (HELLO), in an English listening and speaking course. HELLO helps students to engage in learning activities by involving them in collaborative learning and achieving better learning outcomes.

Although related studies have reported positive effects on using asynchronous or synchronous communication to engage students in language learning (e.g. De Smet, Van Keer, De Wever, & Valcke, 2010; Kessler & Bikowski, 2010; Liaw & Susan, 2010), some issues regarding the learning context remain ignored. First, few studies have discussed the cultural factors that deeply influence the process of L2 acquisition. EFL students contribute less in L2 conversations not only due to their fear of making grammatical errors but also due to the consideration of the learning tasks being unrelated to their life experience when reflecting on their background knowledge and sharing their thoughts and understanding (Koçak, 2010). Second, few studies have investigated the integration of synchronous and asynchronous communication to engage students in and after class (Kienle, 2009). In contrast to the singular focus on synchronous communication, studies show that students with a low cognitive level perform better in asynchronous communication, where they have more time to think critically and reflectively (Chen, Lambert, & Guidry, 2010). Both approaches of synchronous and asynchronous communication should be included in a CMC environment, especially for EFL students who often encounter difficulties in language learning.

Background of this study

This study aimed to develop a drama system that engaged students in student-teacher interactions for situated language learning by providing synchronous and asynchronous communication. It has been suggested that students' engagement in CMC can be facilitated when embedded in an authentic context where students develop a sense of learning community (Holley & Oliver, 2010; Yang, Yeh, & Kwong, 2010). Based on the theory of situated learning (Brown, Collins, & Duguid, 1989; Collins, Brown, & Newman, 1989), which emphasizes social interactions in learning environments, drama presenting authentic activities and contexts is incorporated in the system to connect students' life experiences with their language learning in order to ensure deep engagement of students in the content of each unit.

Drama activities enable students to work back and forward across the genres and registers and also contribute to a shift in role relationships between the teacher and students as students become more active in the interactions and appear learning responsibilities (Kramsch & Andersen, 1999). Such active participation leads to behavioral engagement. In addition, drama is interesting in generating conversations with questions or arguments, which encourage students' emotional engagement with the learning content (Hammond, 2006). Furthermore, Hardison and Sonchaeng (2005) note that the benefit of drama in situated language learning is its focus on cognitive engagement with authentic communicative events that help students experience the L2 in various situations within the context of culture. Drama pedagogy incorporating the involvement of memories and feelings from life experiences creates meaningful learning by providing students with opportunities to reflect upon the insights that have been brought into play. This involves the teacher and students in mutual engagement (Ekebergh, Lepp, & Dahlberg, 2004).

Situated language learning can be recognized especially in a CMC environment due to three reasons: (1) CMC allows the physical integration of different authentic media such as texts, audios, pictures, and films; (2) it makes adaptive collaborative learning possible more than other media since the teacher and students can meet at flexible times in places they choose; and (3) it facilitates the simulation of realistic complex relations between different objects of a learning environment (Horz, Winter, & Fries, 2009). For example, teachers could edit their teaching materials by hypermedia design in order that their students may gain access to a specific situation. Based on the research purpose, which was to engage students in situated language learning with CMC's use, two research questions were addressed in the study: (1) how do students engage in the drama system with synchronous and asynchronous communication? and (2) what is students' progress over their engagement in the online drama system?

Method

Participants

Two *Freshman English* classes, composed of 58 and 60 students each, were randomly selected from 20 *Freshman English* classes at a university of science and technology in central Taiwan by a random number generator. In these two classes, there were 69 males and 49 females, and the average age of the participants was 18. The students came from different majors: 44%, the College of Engineering; 33%, College of Management; 17%, College of Humanities and Applied Sciences; and 6%, College of Design. They took *Freshman English* as a required course at the university. The objective of the course is to foster students in L2 communication by engaging them in authentic learning environments.

These 118 EFL students were from different departments and colleges and had to meet the college requirement of passing a nationwide standardized test, such as *General English Proficiency Test (GEPT)* at intermediate level. They were required to receive an on-site *Freshman English* instruction, form discussion groups, and take an online simulated version of the GEPT test (intermediate level) to identify their English proficiency before the instruction began. The maximum score that can be attained in listening and reading on this version of the GEPT is 120; the mean score of 80 is identified as the passing score for the intermediate level. On the pre-test of the GEPT, the participants' mean score and standard deviation in the listening

section were 69.22 and 24.24, respectively, and in the reading section, 44.65 and 20.45, respectively.

Students were guided to engage in the drama-based context, which incorporates on-site instruction and online communication. In the on-site *Freshman English* instruction, the vocabulary, sentence structures, and scripts of each unit were introduced in class for two hours per week. In addition to the on-site language instruction, students were placed in groups of five to six to have online interactions and small group discussions with the teaching assistants (TAs) after class for two to three hours per week. There were three TAs assigned to the two *Freshman English* classes. The role of the TAs was to facilitate students' group discussion in synchronous communication and revise students' texts in asynchronous communication. The TAs were pre-service teachers who were taking courses at graduate school in order to obtain the teaching credential and progress needed to get a master's degree in language teaching. Before *Freshman English* classes began, the TAs had more than 100 hours of classroom observation and 53 hours of pilot teaching in L2. Introduction of the drama and the system, language skills required for the drama, and strategies to initiate discussions were directed in the teacher training for the TAs to engage in the online situated language learning environment.

System development

A system, entitled *Learning through Drama*, was developed to engage students in situated language learning. Short clips of a drama divided into 10 units were presented in the system with scripts. To activate students' background knowledge in situated language learning, the drama was composed based on the conventional culture in Taiwan. The plot described one of the traditional values in Taiwan that stipulates only a son can be the heir to a family's name, reputation, and property. Under this pressure, the mother in the story tried again and again to have a baby boy, but ended up giving birth to 10 daughters. The drama mainly focused on the interaction between the mother and the 10 daughters, who all have different personalities, and on their attitudes and reactions to this traditional value. Such a plot is expected to interest students and engage them in discussions.

The system was developed to engage students in situated language learning (Figure 1). It was embedded with CMC for students to make clarifications, pose questions, and express their comprehension of the script to their TAs and peers. Students' participation in a succession of learning activities, an expression of their feelings or thoughts, and a construction of group opinions on the drama was promoted to enhance the behavioral, emotional, and cognitive dimensions of students' engagement.

Functionalities in the drama system were developed to enhance the three dimensions of students' engagement. First, drama activities for listening, speaking, reading, and writing assessment were designed in each unit (Figure 2). Students were guided to participate in these learning activities, such as reading the script after watching a film. In terms of the script, which appeared in both L2 (English) and L1 (Chinese) for translation, new words in an exemplary sentence with audio and visual aids were presented for students to learn vocabularies in English. The conversations of actors were reproduced by native speakers of English in a slow speed in order to enhance students' listening comprehension. Language guidance was also provided as

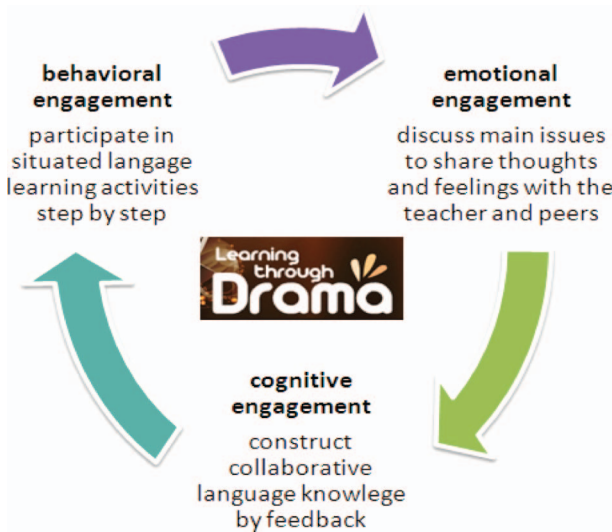


Figure 1. Students' engagement in the drama system.




Figure 2. Drama activities in the system for language learning and assessment.

a scaffold to facilitate the production of grammar and sentence structures. In order to facilitate students' behavioral engagement with the drama activities, a log file, *Student Lounge*, was built to enable students to share their learning records on aspects such as tasks completed, scores, and activities participated in (Figure 3). The

information helped the students to notice the learning activities or tasks they had ignored, thereby increasing their behavioral engagement.

Second, *E-meeting* was initiated to engage students in synchronous communication with the teacher, the TAs, and the peers. The main issues in a unit were listed for these three parties to discuss online, which in turn aimed to enhance emotional engagement of students (Figure 4). A discussion of questions aimed to check students' comprehension, while interaction with others meant to arouse their



	Listening	Reading	Vocabulary	Language Guidance	Exercise	E-meeting	Vote Opinion	Quiz	Scores
Unit 1	✓	✓	✓	✓	✓	✓	✓	✓	80
Unit 2	✓	✓	✓	✓	✓			✓	85
Unit 3	✓	✓							

Figure 3. *Student Lounge* for behavioral engagement.

LEARN THROUGH DRAMA

Discussion for E-meeting

- How would you react if your husband or mother-in-law expected you to give birth to a baby boy?
- Did the same situation happen in your family or your friends' families?
- Do you think that having a baby boy is better than having a baby girl?

Sentence Patterns that You Can Apply

- I have a friend who is ...
- In his/her family, (someone) expected her to give birth to a baby boy.
- My friend was sad/angry/fine about it because...
- My friend just accepted it, and she...
- My friend argued with her family, and she...
- I think having a baby boy is better because...
- If that happens to me/my wife, I probably will...
- There are several reasons I can think of. First,...Second,...

[Go to E-meeting!](#)

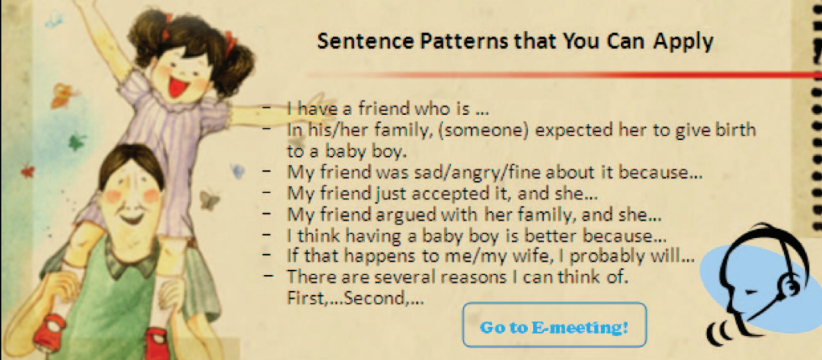


Figure 4. Issues raised in *E-meeting* for emotional engagement.

reactions toward the story. For example, questions such as “How would you react if your husband or mother-in-law expected you to give birth to a baby boy?” were asked to encourage students to express their thoughts and experiences in the target language (i.e. English). Sentence patterns for discussing an issue were also provided in *E-meeting*.

Third, *Vote Opinion* was designed to increase asynchronous communication among the teacher, students, and TAs. In each unit, a yes-or-no question would be presented to a group for problem-solving (Figure 5a,b). For example, students had to make one of two choices for the question “Do you think Aunt 3 should make an apology to Aunt 1?” If students answered yes, they had to think about a solution such as writing an apology letter or making a phone call to say sorry. If their answer was no, students had to make predictions on what followed next in the plot. Students’ essays regarding the question, posted in *Vote Opinion*, were then voted by peers to select the best solution or predictions and reviewed by a TA for revising grammatical errors. Since students’ essays are composed with peers’ feedback from other groups as well as TAs’ revisions, this improves students’ cognitive engagement when they construct collaborative knowledge for problem-solving in writing.

Procedures of data collection

In this study, learning through drama-based context incorporated on-site *Freshman English* instruction, and the online drama system lasted for 18 weeks, 21 February 2009 to 24 June 2009. Students were trained to use the online system by practicing the functionalities in *Assessment* (drama activities), *E-meeting*, and *Vote Opinion*. Along with the in-class two-hour instruction, students were encouraged to engage in *Assessment*, *E-meeting*, and *Vote Opinion* online after class, two to three hours per week. The data collected in this study included students’ pre- and post-tests, engagement in synchronous (*E-meeting*) and asynchronous communication (*Vote Opinion*), and a questionnaire. First, students’ listening and reading proficiency level was identified in the pre-test. Second, students’ engagement in synchronous communication, recorded in the online drama system, was examined. In addition, collaborative knowledge that students constructed after asynchronous communication with their TAs or peers was also investigated. Third, a post-test was conducted to investigate students’ progress in situated language learning through drama-based context. Finally, a questionnaire was conducted to examine students’ perceptions on their engagement in the instruction that used the online system.

Procedures of data analysis

Data collected in this study included students’ conversations with the TAs recorded in *E-meeting*, students’ essays posted in *Vote Opinion*, the questionnaire adapted from Carini, Kuh, and Klein (2006), and the pre- and post-tests. In order to investigate the three dimensions of student engagement (behavioral, emotional, and cognitive engagements) in the drama system, discourse analysis (Burton, 1981; Wetherell, Taylor, & Yates, 2001) was conducted on students’ synchronous and asynchronous communications. Discourse analysis is the main approach for analyzing discourses in CMC, and using it, the researcher is able to track the objectives of the discourse and the description of the process of meaning negotiation among participants (Bower & Hedberg, 2010). A mean report for the questionnaire

VOTE

Scene I - Part I
Do you think Aunt 3 would make an apology to Aunt 1?

- Yes, she would, so she wouldn't be pushed down and sat on by Aunt 1.
- No, she wouldn't, because Aunt 1 didn't say sorry to her first.

<<Press option to make your decision!!>>

(a)

VOTE

If your answer is Yes, how will Aunt 3 make an apology to Aunt 1?

- Write an apology letter
- Make a phone call to say sorry
- Buy her dinner to show her regret

Go response...

(b)

VOTE

If your answer is No, what do you think will happen next ?

- They probably won't talk to each other for the next few weeks.
- They may have another fight whenever they see one another.
- Others: _____

Go response...

Figure 5. *Vote Opinion* for cognitive engagement. (a) Solutions for the positive answer. (b) Solutions for the negative answer.

was presented to further understand students' perceptions toward their engagement and learning progress in interactions with the TAs using the system. Finally, a *t*-test was also used to examine students' progress over their engagement in learning through the drama-based context. Data interpretation driven by these research methods is further explained in the following sections.

Results

This section presents students' engagement in the synchronous and asynchronous communication, the mean report of the questionnaire regarding students' perceptions of their engagement in student–teacher interactions, and the pre- and post-tests that show students' learning progress in situated language learning.

Students' engagement in the synchronous communication

From the log file recorded in *Student Lounge*, it was found that students participated in 18 *E-meetings*, one hour for each meeting, on average. Behavioral engagement was revealed when students actively participated in *E-meeting*. In the one-hour *E-meeting*, students took turns to communicate with the TA in L2 as well as negotiate meanings with their peers. Excerpts I and II are the examples that illustrate how two of the students interacted with the TA, and how the TA initiated conversation with these two students. Their native language, Chinese, is printed in italics. The analytical results of the *E-meeting* discourses revealed how students engaged in the L2 communications with the TA who acted as a scaffold.

Excerpt I (TA = the teaching assistant; SI = student I)

TA: OK, question No. 3. **What do you think would bring you confidence?**

SI: Confidence?

TA: *What would bring you confidence?*

SI: **I think it is...maybe...I think that it is winning. If you win, you gain confidence, and if you have a very strong ability, and you'll have the confidence.**

TA: So you mean if you're a capable person? Capable, *capable*. *Are you?* OK, so a capable person. So what does capable person mean? How do you define "capable"? **How do you define a capable person? They are good at studying?**

SI: **Not really. When you face a problem, then you can solve it. You face a problem and you can solve it, then you are a capable person.**

TA: OK, So, capable people are those who can solve the difficulties they face.

SI: And, in this way, people become more confident. **When you can solve a problem, you become more confident.**

TA: Yes. you'll become more confident. Very good, Kevin, good job!

SI: Right.

TA: Very good.

Excerpt II (TA = the teaching assistant; SII = student II)

TA: What about you? **Would you give a beggar some money?**

S II: Yeah...I have...wait a minute...**I will give a beggar some money...I donate to 7-Eleven more than other places. I place my donation in 7-Eleven's donating box.**

TA: Oh, so, instead of giving a beggar money, you probably would donate some money to some charities. OK, donate, *donate*. Charity, *charity*. *Charity also means philanthropy*. OK, so you could just say "I would rather donate some money to a charity."

S II: **I would rather donate some money to the charity.**

TA: Very good.

From the texts in bold, it was found that students were engaging in expressing their opinions and thoughts when scaffolding was provided by the TA. The TA's questions "What do you think that would bring you confidence?," "How do you define capable person?," and "Would you give a beggar some money?" were asked to connect students' life experiences or background knowledge with the learning material, the drama. Student I presented his emotional engagement when he expressed his ideas and feelings toward the definition of a capable person. He did not agree with the TA that "good students" are capable; he had his own explanation of a capable person. Although students had difficulties in articulating English sentences with correct grammar, the TA tried to encourage them to speak out in English and modeled sentences for them. For instance, the TA demonstrated how to say "capable," "donate," and "charity" in L2. The students were able to repeat the L2 words in sentences or model the TA's sentences, as in "you can solve it, then you are the capable person" and "I would rather donate some money to a charity." This had motivated students to actively participate in cognitive engagement to acquire knowledge in situated language learning.

Students' engagement in the asynchronous communication

In *Vote Opinion*, each student had posted four essays regarding the main issues for problem-solving in the drama. Taking student III as an example, she voted for "She could make her daughters please her mother-in-law" on the issue "If Mother still couldn't give birth to a baby boy, how could Mother make her mother-in-law accept the fact?" The topic clearly stated her viewpoint; then she made the first argument based on her life experiences followed by three characters' description and prediction; finally, a conclusion was made to claim that the grandmother would eventually give up the thought of having a grandson (Table 1). In the text, she not only comprehended the story well (cognitive engagement) but also expressed her opinions to predict the subsequent scenes (emotional engagement). For example, she thought that "Daughter 1 always takes care of her mother. I think she could take good care of her grandmother."

In addition to cognitive and emotional engagements, student III also exhibited behavioral engagement by revising her first draft, based on the TA's corrections and suggestions, into a final draft. This improved her writing quality. For example, she revised "she might get a rich man to be her husband" into "she might marry to a rich man." In the last sentence, she not only revised "I think grandmother will get off thoughtful that giving birth to a baby boy" into "I think grandmother will eventually give up the thought of having a baby boy" based on the TA's grammatical corrections (give up the thought of having) but also engaged in critical thinking to detect a lexical error, i.e. "a baby boy" was revised into "a grandson." Puzzling over problems with word meanings, grammar, and sentence structure in L2 (English) involved student III's greater cognitive engagement, which then motivated her to rewrite her text for improvement.

Students' progress in their engagement in the drama system

According to the analysis of the questionnaire shown in Table 2, students' attitude toward their engagement in the drama system, interaction with the TA, and learning progress could be identified. In terms of behavioral engagement,

Table 1. Student III's engagement in *Vote Opinion*.

No.	Student's first draft	TA's revision	Student's final draft	Engagement
1	I think mother is too weak to reject the requirement of mother-in-law.	I think mother is too weak to reject mother-in-law's request.	I think mother is too weak to reject mother-in-law's request.	Emotional and cognitive engagement: express her opinions on the story.
2	It is a good treatment if her daughter can convince her grandmother.	It is a good treatment if her daughters can help convince her grandmother.	It is a good treatment if her daughter can convince her grandmother.	Emotional and cognitive engagement: express her opinions on the story.
3	In general, grandmother all love her grand daughter, daughter usually cheer grandmother up, even mother have the variety character girl.	In general, grandmother love all her granddaughters, Granddaughters usually cheer grandmothers up, even though all of the granddaughter charm in their special own ways.	In general, grandmother all loves her grand daughters , daughters usually cheer grandmother up, even though all of the granddaughters charm <i>in special own ways</i> .	Emotional engagement: express her opinions based on her life experiences.
4	Daughter 1 always takes of her mother, I think she could take of her grandmother, let grandmother feel that the family contribution of a girl's is more than.	Daughter 1 always takes care of her mother, so I think she could take good care of her grandmother. She may let grandmother feel that a girl's contribution to a family is much more than a boy does.	Daughter 1 always takes care of her mother , I think she could take good care of her grandmother. She may let grandmother feel that a girl's contribution to family is much more than a boy does.	Emotional and cognitive engagement: express her opinions on the story.
5	Daughter 2 is very beauty girl, she might get a rich man to be her husband, and therefore, the grandson-in-law also is filial.	Daughter 2 is a very beautiful girl; thus she might marry a rich man (to be her husband). Therefore, the grandson-in-law also is filial.	Daughter 2 is very beauty girl, thus she might marry a rich man. Therefore, the grandson-in-law also is filial.	Emotional and cognitive engagement: express her opinions on the story.
6	Daughter 5 is very smart. She is good at geometrization, physics, math, and so and on. She may become to a science professor.	Daughter 5 is very smart. She is good at geometrization, physics, math, and so on. She may become a science professor.	Daughter 5 is very smart. She is good at geometrization, physics, math, and so and on. She may become to a science professor.	Emotional and cognitive engagement: express her opinions on the story.
7	Only one of daughters would like to convince her grandmother as her special skill, I think grandmother will get off thoughtful that giving birth to a baby boy.	Only one of the daughters would like to convince her grandmother as her special skill (the meaning of this sentence is vague, could you paraphrase it?). I think grandmother will eventually give up the thought of having a baby boy.	Only one of the daughters would like to convince her grandmother as <i>her special way</i> , I think grandmother will eventually give up the thought of having a grandson.	Emotional and cognitive engagement: express her opinions on the story.

Table 2. The engagement questionnaire ($N = 118$).

Questions	SA	A	U	D	SD	Mean
Part I. Students' engagement						
A. Behavioral engagement						
The system provides appropriate amount of learning activities.	28 (24%)	72 (61%)	18 (15%)	0 (0%)	0 (0%)	4.08
The system provides appropriate feedback on the learning activities.	28 (24%)	84 (71%)	6 (5%)	0 (0%)	0 (0%)	4.19
The system presents complete learning records, such as class participation and task completion.	26 (22%)	72 (61%)	13 (11%)	7 (6%)	0 (0%)	3.99
The learning records recorded in the system encourage me to login into the system more.	26 (22%)	65 (55%)	20 (17%)	7 (6%)	0 (0%)	3.93
Mean	23%	62%	12%	3%	0%	4.04
B. Emotional engagement						
It is easier for me to understand the characters' feelings through the short clips.	20 (17%)	58 (49%)	26 (22%)	7 (6%)	7 (6%)	3.65
The learning activities enable me to share my feelings with my peers and the teacher.	13 (11%)	72 (61%)	26 (22%)	7 (6%)	0 (0%)	3.77
The topics of the drama are so interesting that they motivate me to discuss my opinions.	20 (17%)	58 (49%)	20 (17%)	13 (11%)	7 (6%)	3.60
The teacher always encourages me to express my thoughts.	39 (33%)	59 (50%)	13 (11%)	0 (0%)	7 (6%)	4.04
Mean	20%	52%	18%	6%	4%	3.77
C. Cognitive engagement						
I could freely choose the strategies for completing a learning task.	33 (28%)	72 (61%)	13 (11%)	0 (0%)	0 (0%)	4.17
I would participate in <i>E-meeting</i> to increase my listening and speaking ability.	47 (40%)	38 (32%)	13 (11%)	20 (17%)	0 (0%)	3.95
I would join "Vote Opinion" to improve my writing ability.	33 (28%)	59 (50%)	26 (22%)	0 (0%)	0 (0%)	4.06
The learning activities enhanced my deep thinking and helped me to reflect on my learning.	20 (17%)	79 (67%)	13 (11%)	6 (5%)	0 (0%)	3.96
Mean	28%	52%	14%	6%	0%	4.04
Part II. Student-teacher interactions						
The system provides good opportunities for online student-teacher interactions.	26 (22%)	92 (78%)	0 (0%)	0 (0%)	0 (0%)	4.22
The system supports active participation of the teacher and students in discussions.	26 (22%)	79 (67%)	13 (11%)	0 (0%)	0 (0%)	4.11
During student-teacher interactions, related issues for discussion could be initiated.	26 (22%)	66 (56%)	20 (17%)	6 (5%)	0 (0%)	3.95
The teacher gives instant feedback to my questions.	33 (28%)	72 (61%)	13 (11%)	0 (0%)	0 (0%)	4.17
Mean	24%	66%	9%	1%	0%	4.11
Part III. Progress						
The course content enabled me to have better understanding of English learning.	39 (33%)	59 (50%)	20 (17%)	0 (0%)	0 (0%)	4.16
The course design has effectively engaged me in language learning.	40 (34%)	45 (38%)	13 (11%)	20 (17%)	0 (0%)	3.89
The online course improved my English skills.	33 (28%)	72 (61%)	0 (0%)	13 (11%)	0 (0%)	4.06
I am satisfied with the overall instruction.	20 (17%)	92 (78%)	0 (0%)	6 (5%)	0 (0%)	4.07
Mean	28%	57%	7%	8%	0%	4.05
Overall mean						4.00

85% of students thought that the system provided learning activities, feedback, and learning records to increase their participation. In terms of emotional engagement, 72% of students agreed that they were able to share their thoughts and opinions with their peers and their teachers. In questions 5, 6, and 7, approximately 70% of students expressed their interest toward the characters, learning activities, and the topics in the drama, while in question 8, 83% of students believed that the teacher encouraged them in expressing their thoughts. This indicated a significant role of the teacher in the interactions with his students aimed at acquiring L2. In terms of cognitive engagement, 80% of students considered that they had used multiple strategies for task completion and presented deep thinking in the language learning activities. From students' reflection on their perceptions of engagement, it was found that around 80% of students had engaged in the situated language learning.

In terms of student–teacher interactions, 90% of students thought that they had good interactions with their teachers and TAs. In question 13, all of the students appreciated the system for the role it played in promoting interactions they had had with their teachers and TAs. In terms of learning progress, 85% of students believed that they had improved in their language learning. In question 20, 95% of students were satisfied with the instructions provided online. In general, most students thought that the drama system had engaged them in situated language learning and the interactions with the teacher and TAs.

Table 3 shows the mean scores and standard deviation of the pre- and post-tests related to the *Assessment* in the drama system and the listening and reading sections of the GEPT. The results indicated that the mean scores of post-tests were higher than those of the pre-tests. A paired-samples *t*-test was further used to determine whether the post-test scores were significantly higher than the pre-test ones. The analysis showed a significant difference between the pre- and post-tests for the *Assessment* in the drama system and the reading section of the GEPT test. However, no significant difference was found for the listening section of the GEPT test, although students made progress in listening. It was found that the language instruction through drama-based context had a significant influence on students' engagement and performance in *Assessment* and reading comprehension.

Table 3. Results of paired-samples *t*-test on the pre- and post-tests ($N = 118$).

Items	Mean	SD	<i>t</i>
<i>Assessment</i> in the drama			
Pre-test	49.72	14.90	0.014*
Post-test	62.72	13.65	
GEPT listening			
Pre-test	69.22	24.24	0.085
Post-test	82.61	19.52	
GEPT reading			
Pre-test	44.65	20.45	0.001*
Post-test	69.53	22.41	

Note: * $p < 0.05$, two-tailed.

Discussion

The results of this study indicate that students' engagement is enhanced during student–teacher interactions in situated language learning. In synchronous communication, the students exhibited emotional engagement in expressing their thoughts and opinions regarding the drama in the discussions with the TAs at *E-meeting*. They also exhibited cognitive engagement in acquiring knowledge of L2 vocabularies and sentences with the help of TAs' scaffolding. In asynchronous communication, the students engaged in predicting the ensuing plots and solving the problems in the drama while writing an essay for *Vote Opinion*. They also exhibited deep thinking in their evaluation of the TAs' revisions and engagement in revising their essays. From the discourse analysis of the students' conversations with the TAs, and their revised essays, based on the TAs' corrections and suggestions, it was found that the students made progress with respect to their engagement in the situated language learning. The results of the questionnaire also showed that approximately 80% of students engaged in situated language learning, 90% of students had interactions with the TAs, and 85% of students improved from the instruction through drama-based context. In addition, the *t*-test confirmed students' significant progress in the *Assessment* of the drama and reading comprehension.

Different from previous studies on the issue of students' engagement (e.g. Chen et al., 2010; Holley & Oliver, 2010; King & Robinson, 2009), which presented merely quantitative data, this study demonstrates three dimensions of students' engagement in the situated language learning during both synchronous and asynchronous interactions between students and the TAs. In face-to-face instruction, it is hard for the teacher or the TAs to observe if students are engaging in language learning. With the online drama system, students' behavioral, emotional, and cognitive engagement, which emerged in interactions with the TAs, could be observed in verbal or written forms. With the support of synchronous and asynchronous communication in the system, students were allowed to interact with the teacher or the TAs after class and engage more in their learning. This significantly improved their language learning performance.

The drama-based context developed in this study was a useful platform to promote students' engagement in situated language learning. First, the drama, which depicts the phenomenon of valuing the male child only, raised students' motivation and involvement to discuss the issues surrounding traditional culture. In discussion, student I, for example, had his own definition of a "capable person". Second, students learn how to say specific words by taking different roles in various situations. As an example, student II learned how to say "donate" and "charity" when engaged in a discussion about the beggar in the story. Finally, students' engagement was promoted by the traditional cultural issue of having a baby boy that permeated the sequence of episodes in each unit. Taking student III's text as an example, it can be observed that she believed that the grandmother would finally give up the thought of having a grandson because in Taiwanese culture granddaughters could always please the elders and keep a good relationship with their extended family.

Although students' engagement was supported by the drama-based context, there are some limitations associated with this study. First, students' interaction with their peers is not discussed in this study. Interactions with peers could positively engage students in collaborative language learning (Chesney & Marcangelo, 2010). It would be helpful to understand the different impacts caused by the teacher and their peers from

diversified departments on students' engagement. Second, there is only one drama provided in the system, and some students might not be interested in the topics. It is suggested that the system should offer more than one drama for students' engagement in various situations. Future research will be required to explore different levels of students' engagement in various situated language learning contexts.

Acknowledgments

This article was supported in part by the National Science Council in the Republic of China, Taiwan (NSC 99-2410-H-224-021).

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