The U.S.-China E-Language Project: A Study of a Gaming Approach to English Language Learning for Middle School Students
The U.S.-China E-Language Project: A Study of a Gaming Approach to English Language Learning for Middle School Students

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Zheng Dawei and Zhang Xuemei of the National Center for Education Technology facilitated the project team’s efforts in China, arranging introductions, attending initial visits, and linking the team to the staff of the Provincial Center for Education Technology (PCET) in Gansu Province. Yang Xiaojian, the director of PCET, and Cui Liang, also of PCET, facilitated all contacts with the schools, assisted in arranging data collection and site visits, and served as intermediaries between the schools and the project team. The implementation of the project would have been impossible without the help of Gang Liu of the City Center for Education Technology, who worked tirelessly to troubleshoot technological problems and provide workable solutions.

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This project would not have been possible without the support of the William and Flora Hewlett Foundation, which supported the development of *The Forgotten World*. Under the leadership of Phoenix Wang and later Barbara Chow, the ideas for this program were translated into reality. The initial grant for the development of *The Forgotten World* was made to Coastline Community College. Dan Jones was the project director; he worked with staff members Jin Fang, Michelle Nieman, Toan Tran, and Meg Yanalunas to create *The Forgotten World*. Alex Chisholm, one of the initial advisors on the project, joined the software development team along with colleagues at Learning Games Network, and he led the training and implementation in China. Sherri Wright of Learning Games Network worked with colleagues at Coastline Community College to develop the teacher manual and supporting materials. Damon Anderson the U.S. Department of State’s Beijing-based Regional English Language Officer provided advisory services.
Finally, the important contribution of Professor Zhu Yiming of East China Normal University must be acknowledged. Dr. Zhu’s partnership with RTI International in conducting the evaluation was instrumental to its success. The collaborative relationships that he established with teachers, schools, and provincial and national officials enabled the evaluation activities to proceed smoothly.
Executive Summary

Purpose and Description

In 2001, the U.S. Department of Education and the Ministry of Education in China entered into a bilateral partnership to develop a technology-driven approach to foreign language learning that integrated gaming, immersion, voice recognition, problem-based learning tasks, and other features that made it a significant research and development pilot project for study.

The purpose of this report is to describe the evaluation of a key outcome of this bilateral partnership, *The Forgotten World*. This application, which was developed by Coastline Community College and the Learning Games Network through a grant from the William and Flora Hewlett Foundation, uses the integrated approach set forth in the U.S.-China bilateral agreement. This program was implemented as a supplementary activity in middle school classrooms in western China to teach the English language and American culture to eighth-grade students.

The evaluation was conducted in five treatment schools and five comparison schools during the 2009–10 school year and included approximately 3,500 students. The ten schools were identified by provincial authorities and then randomly selected for either the treatment or comparison groups. All eighth-grade classrooms were asked to participate; in two schools all classes participated, but in the other three schools only about half of the classes participated. Thus, there may be some selection bias in the sample. However, eighth-grade students in the treatment and comparison schools on average started the school year with similar initial levels of English-language performance.

Teachers in the treatment schools attended a three-day training workshop in August 2009 to become familiar with *The Forgotten World* and with the approach to teaching and learning on which the application was based. At the end of the training, each school developed a plan for implementing the program in the school. Schools were asked to begin using the program in supplementary classes in late September 2009 and to allow students access to *The Forgotten World* in school computer labs for at least one class period each week.

Reading and listening tests were administered at the beginning and end of the year to eighth-grade students in schools participating in the study. In addition, questionnaires were completed by teachers and students in the schools participating in the study. Teachers were also asked to complete logs describing each class session in which the program was used.

Several implementation issues encountered during the study significantly reduced the amount of time students could spend on *The Forgotten World*. The expected level of implementation was not realized until halfway through the study, after information technology infrastructure improvements were made at treatment schools. Even then, only about 70 percent of students reported that they used *The Forgotten World* at least once a week. This partial implementation during one semester represents a fairly limited treatment in comparison with other education studies of this type.
Findings

Students in treatment schools with relatively low levels of initial proficiency, who scored in the bottom half of all students on the fall tests, evidenced larger gains in reading and listening than similar students in comparison schools. There were no differences in performance between treatment and comparison groups among students with higher levels of initial proficiency (those scoring in the upper half of all students on the fall test). Overall, students in treatment and comparison schools performed similarly on the proficiency tests administered at the beginning and end of the school year.

Students in the treatment group also reported higher levels of motivation to learn English than students in the comparison schools. At the end of the year, 51 percent of students in the treatment schools reported that their motivation to learn English had improved, compared with 40 percent of students in the comparison schools. Teachers in treatment schools also reported that students’ motivation improved. This is an important finding because motivation to learn a foreign language has been identified by Chinese language experts as a problem in Chinese schools and as a barrier to learning.

Almost all of the teachers in the treatment schools (95 percent) who participated in the project reported that their use of The Forgotten World changed the way they think about teaching. The approach to language teaching and learning that forms the basis for The Forgotten World is learner-centered and interactive and presents students with problem-based tasks and immediate feedback. The teachers appreciated the fact that the program provided students with fun opportunities for practicing listening and speaking skills, with exposure to native English speakers. However, some teachers expressed concern that their primary responsibility was to prepare students for the English-language portion of the high school entrance exam that students take in ninth grade and that they did not feel that use of The Forgotten World would improve student performance on the exam.

The statistically significant positive results of using The Forgotten World for the lower performing students along with the positive effects on student motivation is encouraging for an intervention that was only partially implemented. Further research could be conducted to help understand why the program produced these benefits, how to overcome implementation problems in schools lacking sophisticated computer technology, and why The Forgotten World did not produce positive benefits for the initially higher performers.
Chapter 1. Purpose and Background

1.1 Purpose

The Policy and Program Studies Service (PPSS), within the Office of Planning, Evaluation and Policy Development (OPEPD), conducted a study of the E-language Learning System\(^1\) named Open Language Learning Initiative for English (OLLI English).\(^2\) The program developed under this initiative, The Forgotten World,\(^3\) was designed to help students in middle schools in China learn English. This study was conducted in Chinese middle schools for two semesters from September 2009 to May 2010.

The original online language learning project began as a joint partnership between the U.S. Department of Education (Department) and the Ministry of Education of the People’s Republic of China to create a highly innovative research and development (R&D) product to test the effectiveness of using online technology to deliver foreign language instruction within a real-world environment, consistent with integrating emerging theories of effective language learning practices. The original design called for the Department to develop 36 online lessons to teach the English language (reading, writing, speaking, and listening) and American culture to students in the People’s Republic of China.

The Department did not complete building the online language learning system. Instead, the Department made existing materials that had been developed using Department funds, including scripts and source code, available to the public via the World Wide Web. Subsequently, the William and Flora Hewlett Foundation committed to building upon the Department’s work. In February 2007, the Hewlett Foundation awarded a grant to Coastline Community College to build a complete application to teach the English language and American culture to students in China. The application, The Forgotten World, is part of OLLI English, a program sponsored by the Hewlett Foundation to develop open education resources for English language learning.

This report presents information about the implementation of The Forgotten World program in middle schools in western China during the 2009–10 school year. The original purpose of the study was to evaluate the efficacy of the language learning approach on motivation and student language proficiency (outcomes), believing that proof of concept of the approach would be applicable to students learning a second language in the United States. Because of difficulties in implementation, the efficacy of the program could not be thoroughly evaluated. Nevertheless, the report discusses challenges to implementation and user experiences with the language approach.

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\(^1\) E-Language Learning System (ELLS) is the name of the joint project that was launched as a result of the memorandum of understanding between the U.S. and China signed in 2002.

\(^2\) The Open Language Learning Initiative (OLLI) is the name given to the William and Flora Hewlett Foundation initiative to provide open source high quality language courseware at little or no cost to language learners worldwide.

\(^3\) The Forgotten World is the name of the English language learning program designed for Chinese middle-school students that was developed by Coastline Community College and Learning Games Network with funding from the Hewlett Foundation.
1.2 Background

During President George W. Bush’s trip to Shanghai in October 2001 for the Asia-Pacific Economic Cooperation (APEC) Leader’s Meeting, the White House announced a series of e-learning initiatives. One of these initiatives involved the development of an online language learning system applying advanced Web-based language instruction technologies.

One year later, the U.S. secretary of education and the Chinese minister of education signed a bilateral memorandum of understanding for a joint research and development project, known as the U.S.-China E-Language Project. The Chinese minister noted that the project was the largest government-to-government education initiative since the normalization of relations between the two countries in 1979.

The crux of the agreement was that each country, China and the United States, would develop online language learning programs for middle school students in the other country. The project aimed to create an innovative online language learning R&D program in English and Chinese that was:

- targeted at middle school American and Chinese students;
- constructed as a joint collegial effort by top experts from China and the United States in the areas of language instruction, technology, evaluation, and dissemination;
- delivered to students in China and the United States via the Internet; and
- presented to students in an interactive gaming environment with speech recognition.

The design parameters used to guide development of the programs included a number of innovative features that made it a significant R&D pilot for evaluation. The Chinese and English programs were to:

- incorporate the research-based benefits of teaching a foreign language within a real-world context to enhance the learning and transferability of communicative language skills;
- use a model-practice-apply framework consistent with the theory of learning a foreign language by hearing it, practicing it, and using it;
- provide for extensive practice essential to developing language fluency;
- be learner-centered in that it builds systematically on prior vocabulary, word difficulty, and communicative complexity;
- encourage language learning through creating a gaming environment within a real-world context that rewards students for making language progress;
- present cultural cues as part of language instruction along with expanded opportunities to learn about particular features of the culture and way of life;
- adopt a learning management system that integrates problem-based learning tasks throughout lessons to provide the learner with continuous feedback on progress and for instruction to reinforce weaknesses; and
- include voice recognition to authenticate and provide feedback on the learner’s speech reproduction capability.
In addition to teaching language, the online language-learning systems were to promote the learning of each country’s culture, incorporating real-world illustrations that depict current lifestyles, including living habits, transportation, buildings, dress, and music.

China completed development of an online program for U.S. middle school students, named Chengo, in 2004. Access to that program can be found at www.elanguage.cn. Chengo was evaluated through a series of focus groups conducted by the Department and documented in a previous report.

The Department did not complete development of the online language-learning system. Instead, it decided to turn responsibility for development of the system over to the private sector. The Department released the following system components into the public domain by publishing them on the Department’s Web site:

- the source code for the technology platform, minus proprietary software components for voice recognition and learning management;
- thirty-six English-language scripts written by English as a second language (ESL) experts and aligned with English language learning content standards;
- a review of the system by the contractor; and
- findings from the market research request for information.

When the Department released these materials into the public domain, it indicated that it would evaluate completed systems that carried out the original vision for the system. In February 2007, the William and Flora Hewlett Foundation awarded a grant to Coastline Community College to build a completed system to teach the English language and American culture to students in China. In May 2007, the Department and the Hewlett Foundation convened a meeting of experts to discuss the development of the program as well as plans for an evaluation.

This report is focused on the study of the English language and culture program developed for Chinese middle schools, with funding from the Hewlett Foundation, and does not include information on the Chinese language program developed for U.S. middle schools.
Chapter 2. Description of the Project and Early Development

2.1 Overall Structure of the Project

One of the unique features of this study is that it is not an evaluation of a preexisting program. Rather, it is a study of the implementation of a new program that was sponsored and developed by a number of partners. Exhibit 1 presents information on the major partners involved in the overall project in the United States and China. The Department entered into the agreement with the Chinese Ministry of Education to develop and study a new language learning approach. As stated earlier, the Department released the specifications for the program and agreed to fund an evaluation of the program meeting the major design requirements. Thus, when the Hewlett Foundation awarded a grant to Coastline Community College (and, later, Learning Games Network) to develop the program, the Department contracted with RTI International (and its partner in China, East China Normal University [ECNU]), to evaluate implementation of the approach (via online technology) in China. The Chinese Ministry of Education tasked the National Center for Education Technology to facilitate the U.S. team’s work in China by identifying sites for the study.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Department of Education</td>
<td>Collaborated with the Ministry of Education on the overall design requirements of the U.S.-China E-Language Learning System. Funded contract to RTI International to study implementation.</td>
</tr>
<tr>
<td>Ministry of Education of the People’s Republic of China</td>
<td>Collaborated with the U.S. Department of Education on the overall design of U.S.-China E-Language Learning System. Assigned responsibility for facilitating the project and identifying province for implementation to the National Center for Educational Technology.</td>
</tr>
<tr>
<td>William and Flora Hewlett Foundation</td>
<td>Funded the development of The Forgotten World as part of the Open Language Learning Initiative.</td>
</tr>
<tr>
<td>Coastline Community College, Learning Games Network</td>
<td>Funded by a grant from the Hewlett Foundation, developed instructional software, The Forgotten World, using a video-gaming approach. Also responsible for teacher training and implementation in schools.</td>
</tr>
<tr>
<td>RTI International</td>
<td>Funded by the U.S. Department of Education to study use of the program in Chinese middle schools.</td>
</tr>
<tr>
<td>East China Normal University</td>
<td>Partnered with RTI to design and conduct a study of the program when implemented in Chinese middle schools (subcontractor to RTI).</td>
</tr>
<tr>
<td>National Center for Educational Technology (NCET), Provincial Center for Education Technology (PCET) and the City Center for Education Technology (CCET)</td>
<td>NCET was assigned by Ministry of Education to facilitate project activities in China and identify a province to implement The Forgotten World. PCET identified schools, served as primary contact with schools regarding participation, and was liaison with schools for arranging dates for teacher training and data collection. CCET provided hardware support and troubleshooting.</td>
</tr>
<tr>
<td>Northwest Normal University (China)</td>
<td>Partnered with Learning Games Network to provide support for initial teacher training and ongoing support for teachers throughout the year.</td>
</tr>
</tbody>
</table>

Exhibit reads: Multiple organizations and agencies in the United States and China partnered to develop, implement, and evaluate new software designed to help Chinese middle school students learn English. 

Source: The U.S.-China E-Language Project.
The software development team, led by Coastline Community College and Learning Games Network, was responsible for implementation and teacher training and support. Locally, they partnered with faculty at Northwest Normal University for teacher support and the City Center for Education Technology (CCET) for technology support. Thus references in this report to the software and implementation team refer to Coastline Community College, Learning Games Network, Northwest Normal University, and CCET, all funded by the Hewlett Foundation. References to the evaluation team refer to RTI International and ECNU. Because the Department funded only the evaluation effort, that is the primary focus of this report.

2.2 Initial Planning

An Evaluation Planning Group (EPG) meeting was held in May 2007 in Beijing as part of a larger Technical Working Group (TWG) meeting to discuss the development of the program and the design of the evaluation. Experts in English language learning, educational evaluation, and educational gaming from China and the United States attended the meeting. At the meeting, officials from the Chinese Ministry of Education stated that they would like to implement the program in the middle schools in the western provinces of China because qualified English teachers are less available in those areas than in eastern and central China. At the time of the meeting, a Modern Distance Education Project was planned that would equip 35,000 middle schools in western China with new computers and Internet access, and the software development team was encouraged to design an application that would make full use of this advanced technology.

Chinese scholars in the group expressed concern that middle schools might be reluctant to devote instructional time to experimental teaching methods like The Forgotten World program because of the importance of student performance on high-stakes entrance exams. Students in ninth grade must pass entrance exams to be accepted into high school, and English is one of the subjects included on the exam. Experts were also skeptical about the amount of time parents would allow students to use any type of gaming program at home, even if it was instructional gaming. Thus, the group consensus was that the system be designed for supplemental instruction, to be used in addition to the regular English classes. Because of the emphasis on high school entrance exams in ninth grade, the group suggested that the program be developed for seventh- or eighth-grade students and suggested that participating schools be selected from a single district to limit variation based on differing curriculum, textbooks, and length of English language instruction.

The EPG recommended that a random assignment experiment be conducted with 25–35 treatment schools and an equal number of comparison schools to answer the research question: Do students exposed to the English program demonstrate increases in proficiency when compared with students without access to the program, given the same curriculum and under conditions that allow reasonable access to The Forgotten World? The group suggested that a mix of performance measures be used, including existing assessments, performance on district assessments, and specially designed assessments, if possible. Measurement of student motivation and attitudes was also recommended. Minutes of the EPG meeting are provided in Appendix A.

2.3 Overview of The Forgotten World

The Forgotten World was developed by Coastline Community College (a major provider of higher education distance learning courses) and the Learning Games Network with funding
provided by the William and Flora Hewlett Foundation. Following the guidelines initially set forth by the Department (described in Section 1.2) and the recommendations of the TWG, the program was designed for the target population of seventh- and eighth-grade students with prior exposure to English but limited vocabulary. The initial grant funded the development of the first 12 episodes of a potential 36-episode series. The program was designed to be delivered to schools via the Internet for use in school computer labs. Students could also access the program from home computers using their assigned login credentials. A detailed description of the program can be found in Appendix B, a Quick Reference Guide to *The Forgotten World*.

One unique feature of the program is that it has been designed as an open education resource that can be freely used, adapted, and repurposed by others, if desired. The underlying software is structured so that it can be easily modified for English language learners whose native language is not Chinese. For example, the components of the program (the story and activities) remain the same, but the dictionary can be changed from English-Mandarin to English-Spanish, enabling Spanish-speaking students learning English to use the program. The combination of open source code, video gaming, and easily modifiable dictionaries has the potential for creating derivative products for a wide range of audiences.

*The Forgotten World* is presented in a Web browser. Learners are required to complete a simple registration process before becoming immersed in a comic-book adventure where the learner is one of the characters. A basic vocabulary assessment is woven into the first episode. The assessment is presented as a basic puzzle game in which the application gathers information about the learner’s proficiency of a vocabulary set drawn from approximately 500 words representing the baseline awareness expectation of the low-novice learner for whom the program has been designed. The story then continues to unfold through an interactive graphic-novel format across 12 individual episodes, including the following:

- **Comic book story panels**—Between 15 and 20 screens per episode communicate the story through full-color art, interactive dialogue bubbles, and audio clips; the story panels provide the learner with his or her first exposure to the vocabulary words and pronunciations.

- **Activities**—Clickable activities and games enable the learner to interact with specific screens to support reading and listening skills development.

- **Games**—Nested within each episode are two Flash-based games designed to support reading, listening, and speaking skills development. The games use vocabulary and simple phrases introduced in that or previous episodes as the “learning objects” to support learning goals; after a series of three to four episodes, games provide an opportunity to create formative evaluations from larger sets of content.

- **Resources**—A personal digital assistant (PDA) with scoring and progress reporting function, episode log, dictionary, and games is displayed on screen; the PDA is designed to enable the learner to break out of the linear graphic-novel presentation and access previously viewed episodes and previously played games.

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4 The American Council on the Teaching of Foreign Languages (ACTFL) has developed a set of proficiency levels that include novice, intermediate, advanced, and superior. Within the novice category, the low-novice reading level is described as “able occasionally to identify isolated words and/or major phrases when strongly supported by context” (https://www.languagetesting.com/assessments_academic.cfm#).
• **Progress Reports**—Scores are provided to the learner through the onscreen PDA interface. Teachers and parents have access to separate evaluation reports that convert the learner’s score to information about his or her achievement of specific learning goals.

The learner has the freedom to navigate the screens within each episode, moving forward and backward at his or her own pace. Within the context of the narrative, games are launched to create opportunities for the learner to rehearse and apply vocabulary he or she has been exposed to or mastered in previous episodes plus newly introduced words and phrases.

Because the level of each vocabulary word is coded within the application and presented at a specific time in an episode, the application adapts to the learner’s progress and performance. Following the learner’s completion of the preliminary evaluation, the application captures a set of variables that define the user’s starting level. From there, words and phrases that are appropriate to that level of performance as part of each episode populate the games in that episode. Depending on the learner’s achievement and scoring, the system can either raise the bar and introduce more difficult words and phrases or remediate by repopulating the games with the learning objects to reinforce the basics. The application is designed both to move the learner within a specific level across episodes so he or she can complete the application and to advance the learner’s performance through increased difficulty as he or she demonstrates proficiency and mastery of learning goals.

### 2.4 Pilot Study

**Instrument identification.** The EPG identified several potential tests that might be used in the evaluation. The list below contains the major tests reviewed for possible use:

- **The Test of English for International Communication (TOEIC) Bridge** is a product of ETS and was developed to measure emerging English language competencies among beginning and intermediate learners. The paper-and-pencil tests take approximately 60 minutes each. The tests were primarily designed for business use and contain many practical items.

- **Maculaitis Assessment of Competencies II, Test of English Language Proficiency (Touchstone Applied Science Associates), MAC II,** is used by some states to measure English language proficiency among ESL students.

- **IDEA IPT** (Ballard and Tighe) is another test used by some states to measure English language proficiency among ESL students.

- **Stanford English Language Proficiency (SELP) Test,** published by Harcourt Assessment, Inc., is another exam used by states to measure English language proficiency among ESL students.

- **Cambridge Young Learners Exam (YLE)** is a criterion-referenced exam designed for use with elementary school aged children. A member of the EPG stated that this exam is used and respected in China.
• **ACTFL Oral Proficiency Interview** (OPI). This is a new proficiency exam developed by the American Council on the Teaching of Foreign Languages (ACTFL) for administration via phone or Internet. The Internet connectivity of participating schools may be an issue for this methodology.

These assessments were reviewed to determine the level of English assessed, skill areas assessed, potential to measure growth, time required for administration, special requirements for administration, appropriateness for age group, cultural appropriateness, cost, option to adapt the instrument, and vocabulary overlap with the English textbook used in the pilot school and *The Forgotten World*.

Based on the preliminary review, the TOEIC Bridge was rejected as being inappropriate for this age group. The publishers of the SELP were unwilling to work with organizations not affiliated with school districts, and the Cambridge tests were criterion referenced and not designed to yield gain scores. The ACTFL test was considered, but because of concern about the fact the test was still in development, it was not selected for this study. The assessments that were chosen for testing in Gansu included the IPT reading, writing, and combined listening/speaking tests, and the MAC II reading, writing, and listening tests (see Appendix C for more detail).

**December advance visit.** In November 2008, the Ministry of Education identified a province, the western province of Gansu, and two pilot schools in that province willing to participate in the project. A meeting in the provincial capital was scheduled for December 9–11, 2008. Representatives from the U.S. Department of Education, Coastline Community College, Learning Games Network, RTI International, and East China Normal University met with officials from NCET, the provincial Education Bureau, PCET, and principals and teachers of the two schools that volunteered to participate.

The purpose of the visit was to explain the overall project, provide demonstrations to teachers, and gather feedback from the schools. Arrangements were also made to administer English language tests to a handful of students to provide preliminary information on the level of students’ English and the appropriateness of tests identified as potentially suitable for the study.

Upon returning to Beijing en route to the United States, the study team met at the Ministry of Education to discuss arrangements for the pilot study. The study team expressed some concern about the level of technology observed in the labs in the two schools. The director of NCET noted that funding provided by NCET to provinces and schools was not restricted to the purchase of certain types of hardware configurations. Localities could choose how to spend the money they were allocated and thus lab configurations varied across schools. And given the recent earthquake in Sichuan, monies were prioritized for the schools in the affected areas, and additional funds to upgrade computer labs for this study were unavailable.

A decision was made to conduct the pilot and main study in Gansu. The level of English instruction in the middle school was consistent with the program, and provincial officials, headmasters, and teachers were enthusiastic and willing to participate. The software development and implementation team decided that it could provide limited upgrades, such as increased memory for machines and headsets, that would enable the labs to be used for the study.

Following the visit, extensive analysis was conducted comparing the vocabulary used in the tests with the vocabulary in the textbooks used by seventh- and eighth-grade students, *Go*
In addition, the appropriateness of individual items was examined by identifying items that few students answered correctly, and examining whether the vocabulary was covered in the textbooks used, or if perhaps some element of the question was culturally inappropriate. The results of this analysis suggested that the MAC II listening test should be piloted in April, along with the IPT reading and writing tests. More information on these analyses can be found in Appendix D.

April–June pilot. The main pilot activities occurred from April through June 2009; a complete list of activities for the pilot and main study is provided in Exhibit 2. In the initial statement of work for this study, a yearlong pilot was scheduled for 2008–09. However, given delays in the development of the program, the pilot consisted of a three-month implementation of the program in two pilot schools. During the April–June pilot, *The Forgotten World* was implemented in seventh- and eighth-grade classrooms in both schools.

The purpose of the pilot data collection in April was to determine:

- whether the software was ready for a full-scale implementation in the fall,
- whether the English language reading, listening, and writing tests identified in December were appropriate for use with this population, and
- the suitability of beginning-of-year questionnaires for students and teachers.

Assessment instruments and questionnaires were tested in two pilot schools in the province in spring 2009; more than 1,800 students were tested. The IPT Reading and IPT Writing assessments were used, along with the Mac II Listening assessment. The IPT Reading assessment was used without modification; the other two assessments were adapted based on preliminary work in China in December. For the writing test, some of the picture prompts were substituted using pictures from other IPT tests that were more culturally appropriate for Chinese middle school students. The listening test directions were modified so that the directions were delivered to students in Chinese, and the answer form was modified to make it more understandable to students. All of the listening instructions were professionally recorded to ensure comparability across sites.

One of the major purposes of the pilot was to make sure that the tests were suitable for use among this population and that the modifications made to the tests did not alter the equivalency of the pre- and post-test forms. The tests were administered at two pilot schools to seventh- and eighth-grade students. Because the delays in developing the program meant that a full year pilot was impossible, end-of-year seventh-grade students were tested to represent scores that might be expected from beginning eighth-grade students. It was not possible to measure growth in proficiency for individual students.
### Exhibit 2. Schedule of Study Activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Conducted by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2008</td>
<td>Identification of potential tests</td>
<td>RTI International</td>
</tr>
<tr>
<td>December 2008</td>
<td>Meeting with provincial officials and pre-pilot testing</td>
<td>U.S. Department of Education, RTI International, East China Normal University (ECNU)</td>
</tr>
<tr>
<td>April 2009</td>
<td>1.5 days of training of teachers in pilot schools</td>
<td>Coastline Community College and Learning Games Network, Professor Zhang Lianzhong</td>
</tr>
<tr>
<td>April 2009</td>
<td>Pilot of tests and pretest questionnaires, all seventh- and eighth-grade students in pilot schools; meeting with provincial officials to outline requirements for 2009–10 study</td>
<td>RTI and ECNU train test administrators to administer pilot tests and questionnaires to seventh- and eighth-grade students in two pilot schools (30+ classrooms)</td>
</tr>
<tr>
<td>June 2009</td>
<td>Data entry and scoring</td>
<td>ECNU; RTI conducted reliability scoring</td>
</tr>
<tr>
<td>June 30–July 3, 2009</td>
<td>End-of-pilot posttest questionnaires administered in six classrooms; focus groups and interviews with subset of students, teachers, principal, support personnel, and provincial center</td>
<td>ECNU team: Professors Zhu Yiming, Wang Jiqing, and Dr. Yang Guangfu of ECNU</td>
</tr>
<tr>
<td>June 25, 2009</td>
<td>Schools selected for inclusion in 2009–10 study</td>
<td>Provincial Center for Education Technology (PCET)</td>
</tr>
<tr>
<td>August 2–5, 2009</td>
<td>2.5 days of training for teachers; computer labs at participating schools visited and computers checked</td>
<td>U.S. Department of Education, Ministry of Education (People’s Republic of China), William and Flora Hewlett Foundation, Coastline Community College, Learning Games Network, Northwest Normal University, RTI, ECNU, invited guest</td>
</tr>
<tr>
<td>August–September 2009</td>
<td>Implementation plans negotiated with schools</td>
<td>ECNU</td>
</tr>
<tr>
<td>September 24, 2009</td>
<td>Use of The Forgotten World begins in classrooms</td>
<td></td>
</tr>
<tr>
<td>September 28–October 13, 2009</td>
<td>Tests and questionnaires administered (No testing first week of October; national holiday)</td>
<td>ECNU and RTI train test administrators and administer tests in 10 schools (95 eighth-grade classrooms)</td>
</tr>
<tr>
<td>October 12–13, 2009</td>
<td>Observation of The Forgotten World classes in two schools</td>
<td>RTI</td>
</tr>
<tr>
<td>December 2009</td>
<td>Dell agrees to donate a new server for each school</td>
<td></td>
</tr>
<tr>
<td>January 2010</td>
<td>New servers delivered</td>
<td>ECNU</td>
</tr>
<tr>
<td>January 2010</td>
<td>Site visit</td>
<td></td>
</tr>
<tr>
<td>January–February, 2010</td>
<td>Schools closed</td>
<td>ECNU</td>
</tr>
<tr>
<td>March 2010</td>
<td>New servers installed and refresher training launched</td>
<td>Learning Games Network, PCET, Northwest Normal University, ECNU</td>
</tr>
<tr>
<td>June 20–26, 2010</td>
<td>End-of-year tests and questionnaires administered</td>
<td>ECNU</td>
</tr>
<tr>
<td>July 2010</td>
<td>Data entry and scoring</td>
<td>ECNU; data quality checks at RTI</td>
</tr>
</tbody>
</table>

Source: The U.S.-China E-Language Project.

Results for each of the major tests are presented in Appendix D. For both the reading and listening tests, the two forms (pretest and posttest) were roughly equivalent. There were no
statistically significant differences in the raw scores for the two reading test forms. A significant
difference was found for the mean raw scores on the two forms of the listening test; however,
conversations with the publisher and published manuals show that the equivalence between
forms is achieved through adjustments in transforming the raw scores into standard scale scores.
Also, comparing results for seventh- and eighth-grade students, eighth-grade students
consistently performed better than seventh-grade students on both the reading and listening tests,
and the differences were statistically significant. The writing test showed the weakest results. A
large number of students left the writing test blank; in focus groups, students reported that they
were unfamiliar with the test format (using picture prompts) or had little or no experience writing
English or both. Because of this, and the fact that proficiency in writing was not a goal for the
e-language approach, a decision was made to drop the writing test from the final battery.

Test results were also validated by comparing them with scores on district tests provided
by the schools. As expected, students scoring well on district exams performed well on the
proficiency assessments. The scores on school exams were more correlated with reading and
writing assessments, and less correlated with the listening assessment. This finding was
consistent with the rationale for the study; teachers and students in rural areas have little
opportunity to interact with native English speakers; consequently, their listening (and speaking)
skills are frequently weaker than their reading skills.

In June, end-of-year questionnaires for students and teachers were administered and a
series of focus groups and interviews were conducted with administrators, teachers and students
to gather feedback on their experiences with *The Forgotten World*. Results of these interviews
and focus groups indicated the following:

- Both pilot schools valued the experience and asked to continue using *The Forgotten
  World* and to be included in the full-scale evaluation.

- Participants complained about the slowness of the software. As a result, the software
  was modified and compressed by the software developers.

- Teachers stated that they needed more training. As a result, a three-day training
  workshop was developed for the full-scale evaluation. Periodic meetings and
  trainings throughout the year for participating teachers were also scheduled for
  teachers participating in the 2009–10 study.

- Teachers indicated that they would like more clarity on goals and expectations. Plans
  for the August training were modified to provide more information for teachers and
  principals, including clear expectations for the use of the program.

- Students expressed concern about the dictionary, and some were concerned that the
  speech used was too fast for some to comprehend. The software development team
  took this matter under consideration, because experts had suggested limiting the
  amount of native language available and using conversational speed consistent with
  that of native speakers.

- When asked about the writing tests, students said that they were unfamiliar with
  writing English and also unfamiliar with picture prompts. As a result, a decision was
  made to drop the writing test from the full-scale study.
Chapter 3. Study Design and Methodology

The original intent of this project was to conduct a random assignment experiment to evaluate the impact of this new approach to language learning on student proficiency in English. Numerous factors intervened to make this design unfeasible, primarily the difficulty in identifying schools that had computer labs that met the minimum requirements for the study. The research questions and study design were modified as a result and are described below.

3.1 Research Questions

In June 2009, the provincial authorities determined that there were not enough schools that met the technological requirements for participation in the project. They were able to identify 10 schools, with a combined enrollment of approximately 6,000 eighth-grade students, that met project requirements:

- schools with computer labs capable of running *The Forgotten World*;
- schools committed to allowing eighth-grade students access to the computer lab at least one hour per week;
- schools using *Go For It*, the English textbook used in the pilot schools;
- schools with teachers able to attend training in early August 2009; and
- schools willing to allow testing in September 2009 and June 2010.

While the number of schools was lower than requested, a decision was made that the study would continue and would use the 10 schools that met the requirements (A move to a different province would delay the study by one year or more.) An RTI statistician randomly assigned five schools to the treatment group and five schools to the comparison group. It was acknowledged that this design did not allow the statistical precision required of a hypothesis testing study but would be a solid foundation for a hypothesis-generating study. Using a smaller set of schools would allow more support for implementation, and retaining some schools for comparison would help provide a frame of reference for the revised research questions:

- What challenges do schools face in implementing *The Forgotten World*?
- Do findings suggest that students who use *The Forgotten World* frequently improve their English proficiency more than students who use *The Forgotten World* less frequently or not at all?
- Does *The Forgotten World* increase student motivation to learn English?
- What are students’ and teachers’ attitudes toward the use of *The Forgotten World*?

3.2 Study Design

Exhibit 3 provides information on the 10 schools that were identified by provincial officials as meeting the criteria for participation. The evaluation team discussed options for the assignment of schools and teachers with the Department. Concern about the viral nature of some gaming applications and the potential for “contamination” across classes indicated that random assignment should occur at the school level, rather than the classroom level. Thus, the schools...
were randomly divided into two groups by RTI; the schools selected to use *The Forgotten World* are highlighted. All eighth-grade classes in the highlighted schools were asked to participate, and eighth-grade English teachers were invited to attend training in early August 2009. However, not all teachers and classrooms in treatment schools participated in the study, due to the capacity of labs, scheduling issues, and the voluntary nature of the study. In two schools all eighth-grade classrooms participated, and in the remaining three about half of the eighth-grade classrooms participated; thus about 64 percent of classrooms in treatment schools participated (see Section 4.2 for more information about participating classes). Participating classrooms in the treatment schools were identified through implementation plans prepared by the schools at the end of the August training and then updated in the fall when implementation began. Classrooms were selected for inclusion by the schools based on teachers’ willingness to participate and scheduling of computer labs. Teacher logs were collected monthly from participating classes to confirm active participation, and site visits were made to observe classes. No classrooms in treatment schools dropped out of the study. All eighth-grade classrooms in comparison schools were included in the fall data collection; a random sample of all classrooms was tested at the end of the year.

**Exhibit 3. Characteristics of Participating Middle Schools**

<table>
<thead>
<tr>
<th>School type</th>
<th>Enrollment</th>
<th>Number of teachers</th>
<th>Number of classes</th>
<th>Number of computer rooms</th>
<th>Number of computers for students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>English teachers</td>
<td>Total</td>
<td>Grade 7</td>
<td>Grade 8</td>
</tr>
<tr>
<td>City</td>
<td>2,300</td>
<td>168</td>
<td>23</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>City</td>
<td>1,700</td>
<td>130</td>
<td>16</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>City</td>
<td>1,400</td>
<td>90</td>
<td>15</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>City</td>
<td>635</td>
<td>66</td>
<td>13</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Rural</td>
<td>1,300</td>
<td>126</td>
<td>17</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>Rural</td>
<td>1,300</td>
<td>36</td>
<td>8</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>Rural</td>
<td>2,701</td>
<td>117</td>
<td>19</td>
<td>36</td>
<td>13</td>
</tr>
<tr>
<td>Rural</td>
<td>2,550</td>
<td>114</td>
<td>18</td>
<td>33</td>
<td>12</td>
</tr>
<tr>
<td>Rural</td>
<td>1,990</td>
<td>94</td>
<td>16</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>Rural</td>
<td>1,203</td>
<td>52</td>
<td>10</td>
<td>18</td>
<td>8</td>
</tr>
</tbody>
</table>

Exhibit reads: Middle schools in China chosen for inclusion in the project have large enrollments and large class sizes.

Source: The U.S.-China E-Language Project.

The middle schools were located in two areas within the province. As shown in Exhibit 3, most of the middle schools selected for inclusion in the study enroll large numbers of students. The smallest school enrolled 645 students; the remaining 9 schools enrolled between 1,200 and 2,700 middle school students. All schools appeared to have the requisite computer equipment, although later it was found that in many schools the Internet connectivity was unstable and the average class size for middle school English classes exceeded the capacity of the computer labs.

Instruments tested or developed during the pilot were modified slightly for use in the 2009–10 study and included the following:

- the IPT 2004 Reading Test—Forms 1C and 1D for use at the beginning and the end of the school year (Amori, Dalton, and Tighe 2008);
Chapter 3. Study Design and Methodology

- the MAC II Listening Test—Forms A2 and B2 (Maculaitis 2001) for use at the beginning and the end of the school year (minor modifications were made to Form A2, based on pilot results);
- student and teacher questionnaires for the beginning and the end of the school year; and
- weekly teacher logs.

No speaking test was used because the logistics required to implement one-on-one testing in English would have required additional resources. Also, the final version of The Forgotten World did not incorporate speech recognition, although students using it were asked to produce and practice speech.

An effort was made to limit the amount of time required for students to complete the tests and questionnaires. The total time required in each class was just under two hours: 10 minutes to introduce the study and distribute the forms, 60 minutes for the reading test, 30 minutes for the listening test, 15 minutes for the questionnaire, and 5 minutes to collect the forms.

In addition to collecting the quantitative data, study staff made three site visits to participating schools. The first site visit, in October 2009, following the fall data collection, was made by a researcher from RTI to identify any issues with early implementation. Two interim site visits were made by staff from ECNU to observe implementation in the schools in winter and spring 2010.

Teachers were also asked to complete logs describing each class session. Research has shown that teachers are accurate reporters of classroom activities (Rowan and Correnti 2009). These logs were submitted monthly to ECNU, and feedback was provided to teachers as needed. See Appendix E for information on the revised evaluation plan.

3.3 Data Collection

Data collection was conducted in the 10 participating middle schools described in Section 3.2. Data were collected in late September 2009 and in late June 2010. Chinese test administrators (many from the local university) were trained to distribute consent forms, check the class rosters, administer the test, and collect tests and questionnaires from students and teachers (see Appendix F for the fall training manual and questionnaires and Appendix G for the end-of-year training manual and questionnaires). RTI staff were present and supervised the September data collection activities.

In both the September 2009 and June 2010 data collections, students were read a statement about the voluntary nature of the study and then were asked to complete the reading test and listening test and to fill out a paper-and-pencil student questionnaire. The listening test was administered using a tape recorder or, in a few cases, the school’s public address system. (Administration using a tape recorder is authorized by the test publisher.) All participating teachers were asked to fill out a paper-and-pencil teacher questionnaire.

All eighth-grade classrooms in treatment schools were included in the fall 2009 testing because it was unclear as to which teachers and classes would participate; all eighth-grade classes in comparison schools were also tested in the fall. The total sample size for the fall 2009 data collection was 6,073 students within 95 classrooms, including 3,102 students from five
treatment schools and 2,971 students from five comparison schools. The response rate for the fall was 98.6 percent in the treatment schools and 99.1 percent in the comparison schools. A student was considered a respondent if he or she completed at least one of the assessments.

In the June 2010 post-test, only eighth-grade classrooms that used *The Forgotten World* were tested in the treatment schools, along with an approximately equal sample of classrooms from the comparison schools. In the fall, there were 3,938 students in 62 classrooms that were re-tested at the end of the year: 1,967 students from treatment schools and 1,971 students from comparison schools. In all, 3,640 of these students completed at least one assessment at the end of the year, for an overall response rate of 92.4 percent; within the treatment schools, 93.4 percent of students in participating classes completed the spring assessment compared to 91.4 percent of students in the comparison schools).

The smaller number of students tested in June 2010 does not represent attrition; rather, a decision was made to test all students in treatment schools in fall 2009 because not all schools had provided final implementation plans, and the data collection contractor did not know exactly which classrooms would participate. The testing materials were shipped approximately one month before data collection, and at that time the participation status of some schools was unclear.

Teachers of eighth-grade English were also asked to complete questionnaires. All of the 48 teachers identified in the fall (24 each in the treatment and comparison schools) completed the questionnaires for a 100 percent response rate. In the spring, the 22 participating teachers in the treatment schools and 26 teachers in the comparison schools (including new teachers) completed questionnaires, for a 100 percent response rate.

### 3.4 Data Processing

The final dataset used for most of the analysis includes only those records that appear on both the September 2009 and June 2010 files, a total of 3,640 records. The final dataset includes test IDs, student test scores, records of the amount of time spent using *The Forgotten World* (as recorded by the software developer on U.S. servers), student questionnaire response data, and teacher questionnaire response data. RTI provided the data entry templates to ECNU to implement the initial data entry. RTI staff performed quality comparison checks to ensure the data quality.

The student test ID is a nine-digit number, which is composed of a three-digit school ID, a three-digit classroom ID, and a three-digit student ID. The teacher questionnaire ID is a six-digit number including a three-digit school ID and a three-digit teacher ID. The teacher record also includes the class IDs for the classes taught by that teacher. The IPT1 reading test has 24 questions, and the MAC II listening test has 53 questions. Data from the beginning and end-of-year questionnaires are also included in the data files for teachers and students.
3.5 Data Analysis and Statistical Methods

Data analysis was conducted using SAS. Because of the relatively small number of schools included in the study, no attempt was made to estimate complex models. Because the purpose of the study was primarily descriptive, $t$-tests were used to compare results across groups. Also, because of the clustering of students within schools, design-corrected standard errors were computed and used for significance testing, using the SAS Surveymeans procedure.

In this report, no results are statistically significant unless specifically stated.
Chapter 4. Implementation

4.1 Teacher Training

The workshop for training teachers was held August 3–6, 2009, on the campus of a local university in Gansu province. Headmasters, teachers, and school computer lab directors were invited to attend. Forty-four participants completed the training; four of the schools sent all eighth-grade English teachers, while one school sent one teacher (a supplemental training was held at this school in October). Participants from distant schools and the project team were housed in the campus conference center. Large sessions were held in the conference center, and hands-on practice sessions were held in a computer lab on campus. Sessions presented by persons from the United States were translated into Chinese.

The agenda for the training session is presented in Exhibit 4. Officials from the U.S. Department of Education and the Ministry of Education of the People’s Republic of China described the history and purpose of the U.S.-China E-Language Learning System and emphasized the importance of the schools’ participation in the project. Experts in teaching and learning were also asked to speak to the group about the program’s significance, emphasizing that the approach to learning embedded in *The Forgotten World* differed from the traditional approach typically used in middle schools.

Based on the results of the pilot study, the length of the training was extended, and teachers were given more hands-on practice with the application. Sessions also included demonstrations of how the program had been used in classes during the pilot, a review of the teacher’s guide, and planning time for teachers to develop lesson plans based on *The Forgotten World*. The Ministry of Education and the Provincial Education Bureau presented the expectations for program implementation and discussed the practical requirements of the project.

On the final day of training, teachers and headmasters were asked to meet with others from their school to develop an action plan for implementing the program at their school. When the teachers presented their school action plans, it became clear that there were challenges and that some schools might be unable to meet the program implementation requirements. One school’s representative stated that only one eighth-grade class would participate; another school’s representative said that only one teacher would implement *The Forgotten World*. These schools were reminded that the minimum requirement for participation was half of the eighth-grade classes. In two schools, the size of the average class was much larger than the size of the computer labs, and not all students would be able to use *The Forgotten World* during each class period. These issues were discussed, and a decision was made to follow up with these schools and the Ministry of Education to ensure that students had adequate exposure to *The Forgotten World*.

At the end of the training, participants were asked to complete a questionnaire about the training workshop. Forty-four questionnaires were completed. Participants were asked to rate major components of the training on a five-point scale, where 1 was “not good at all” and 5 was “very good.” Mean scores for each component are presented in Exhibit 5. In general, the training received ratings of “good” or better with one exception. Participants’ rating of their own level of independent use was rated between “average” and “good.”
## Exhibit 4. Agenda for Teacher Training

**The Forgotten World**  
**Teacher Training Workshop**  
Monday, August 3–Thursday, August 6, 2009

<table>
<thead>
<tr>
<th>Day, Date</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday, August 3</strong></td>
<td></td>
<td>Preparatory Meeting for Coastline Community College, Learning Games Network, Gansu Provincial Center for Education Technology, National Center for Educational Technology, and Northwest Normal University Teams</td>
</tr>
<tr>
<td>1:30–5:00 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tuesday, August 4</strong></td>
<td></td>
<td>Welcome and Introduction</td>
</tr>
<tr>
<td>8:30–9:30 a.m.</td>
<td></td>
<td>Demonstration of The Forgotten World</td>
</tr>
<tr>
<td>9:30 a.m.–10:00 a.m.</td>
<td></td>
<td>Practice Session 1 in Computer Lab</td>
</tr>
<tr>
<td>10:15 a.m.–12:00 p.m.</td>
<td></td>
<td>Lunch and Break</td>
</tr>
<tr>
<td>12:00–2:30 p.m.</td>
<td></td>
<td>Overview of Teacher’s Guide</td>
</tr>
<tr>
<td>2:30–3:45 p.m.</td>
<td></td>
<td>Playing Games and English Teaching: How to understand and use gaming in English teaching (Professor Zhang Lianzhong)</td>
</tr>
<tr>
<td>4:00–6:00 p.m.</td>
<td></td>
<td>Keynote and Discussion</td>
</tr>
<tr>
<td>6:00–6:30 p.m.</td>
<td></td>
<td>Wrap-Up and Questions</td>
</tr>
<tr>
<td><strong>Wednesday, August 5</strong></td>
<td></td>
<td>Day Two Welcome</td>
</tr>
<tr>
<td>8:30–8:45 a.m.</td>
<td></td>
<td>High Technology in Language Learning</td>
</tr>
<tr>
<td>8:45 a.m.–9:45 a.m.</td>
<td></td>
<td>Presentation on the value of informal, media- and technology-based applications in the teaching and learning of language (Professor Wu Heping)</td>
</tr>
<tr>
<td>9:45 a.m.–10:45 a.m.</td>
<td></td>
<td>Practice Session 2 in Computer Lab</td>
</tr>
<tr>
<td>11:00 a.m.–12:00 p.m.</td>
<td></td>
<td>Sharing the Pilot Experience</td>
</tr>
<tr>
<td>12:00–2:30 p.m.</td>
<td></td>
<td>Presentation and discussion on how the learning object was used in class and what worked in engaging students in learning (teachers from pilot schools)</td>
</tr>
<tr>
<td>2:30–3:15 p.m.</td>
<td></td>
<td>Lunch and Break</td>
</tr>
<tr>
<td>3:15–4:00 p.m.</td>
<td></td>
<td>Classroom Demonstration</td>
</tr>
<tr>
<td>4:15–5:30 p.m.</td>
<td></td>
<td>Discussion</td>
</tr>
<tr>
<td>5:30–6:30 p.m.</td>
<td></td>
<td>Developing a Lesson</td>
</tr>
<tr>
<td>6:30–8:00 p.m.</td>
<td></td>
<td>Reporting</td>
</tr>
<tr>
<td><strong>Thursday, August 6</strong></td>
<td></td>
<td>Day Three Welcome</td>
</tr>
<tr>
<td>8:00–8:15 a.m.</td>
<td></td>
<td>Monitoring and Evaluation Program</td>
</tr>
<tr>
<td>8:15–9:00 a.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00–9:30 a.m.</td>
<td></td>
<td>Experiences and Lessons From Evaluation in Pilot</td>
</tr>
<tr>
<td>9:45–11:00 a.m.</td>
<td></td>
<td>School Groups Meet to Develop Action Plan</td>
</tr>
<tr>
<td>11:00–11:30 a.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.–12:00 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00–12:30 p.m.</td>
<td></td>
<td>Conclusion</td>
</tr>
<tr>
<td><strong>Monday, August 3</strong></td>
<td></td>
<td>Closing Ceremony</td>
</tr>
</tbody>
</table>

Source: The U.S.-China E-Language Project.
On the training evaluation forms, teachers were also given the opportunity to share thoughts and concerns about using *The Forgotten World* in their classes. Three major concerns were expressed. First, teachers stated that they were worried about the condition of the computers and the Internet connection at their schools. They also asked for continued professional guidance and help, including meetings with experts and continuing opportunities for training. Finally, several participants expressed a desire to build exchanges and connections outside their schools and said they hoped to have more communication with American experts. A few stated that they would like to learn more about American middle schools. While some of these activities were beyond the scope of the project, it is clear that this project could be extended to promote exchanges between Chinese and U.S. educators.

Because the software and implementation team was interested in potentially sponsoring Web chats for the teachers, the questionnaire also includes an item asking participants how often they used the Internet. Nearly half of the teachers reported using the Internet every day, and another quarter reported using it two to three times per week, as shown in Exhibit 6. Based on these responses, an online forum was developed and Tencent QQ was used by teachers and experts to exchange information.

---

5 Tencent QQ is the most popular instant messaging and chat software in China.
Exhibit 6.  Training Participants’ Self-reported Use of the Internet

Exhibit reads: Nearly half of teachers reported using the Internet every day.
Source: The U.S.-China E-Language Project.

4.2 School and Student Participation

One of the first questions to be addressed is whether the students in treatment and comparison schools were similar in English proficiency at the start of the study. Information on the number of classes and students in participating schools is presented in Exhibit 7. The first column shows the total number of eighth-grade classes in the school. The next four columns show that all students in all classes were tested in the fall and present their mean fall scores in reading and listening. The mean reading score of all students in treatment schools was 201.17 compared to 200.08 in the comparison schools, while the mean listening scores were 176.08 and 175.91, respectively. The scores for the reading scores range from 159 to 256, and the listening scores range from 79 to 267 [data not shown in exhibit]. The differences in mean scores between treatment and comparison schools were not statistically significant.

A second question that can be answered by this table is whether students in the sample of classrooms that participated in the study were representative of all the students in their schools. Not all the classrooms in the treatment school used The Forgotten World. In two treatment schools, all eighth-grade English classes participated; in the remaining three schools, about half the eighth-grade classes participated. Teachers within the treatment schools were not randomly assigned to participate; rather, teachers volunteered to participate in the study. The final sample includes only those classrooms in treatment schools that used The Forgotten World and a random sample of classrooms selected from the comparison schools.

The columns labeled “Final sample” present the numbers of classes and students participating in the study and their mean scores on the fall test. It appears that the performance of
students in classrooms participating in the study—those that used *The Forgotten World*—is similar to the student performance in all eighth-grade classrooms: the mean reading score across all students in treatment schools was 201.17, while the mean in the participating classrooms in the treatment schools was 201.31. The mean listening scores were also approximately equal. The differences between the total eighth grade mean scores in reading and listening and the sampled eighth-grade classrooms were not statistically significant. Only in Treatment School 5 does there appear to be the possibility that higher-performing classes were selected to participate in the study and use *The Forgotten World*, but these differences were not statistically significant.

In the comparison schools, the total mean reading and listening scores of students in the sampled classrooms closely matched the mean scores of the schools.

### Exhibit 7. School and Student Participation

<table>
<thead>
<tr>
<th></th>
<th>Total 8th-grade classes</th>
<th>All Mean fall scores</th>
<th>Final sample Mean fall scores</th>
<th>Difference Mean fall scores</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Classes</td>
<td>Students</td>
<td>Reading</td>
<td>Listening</td>
<td>Classes</td>
</tr>
<tr>
<td>Treatment schools subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School 1</td>
<td>6</td>
<td>6</td>
<td>269</td>
<td>196.69</td>
<td>172.55</td>
</tr>
<tr>
<td>School 2</td>
<td>8</td>
<td>8</td>
<td>596</td>
<td>197.84</td>
<td>166.61</td>
</tr>
<tr>
<td>School 3</td>
<td>13</td>
<td>13</td>
<td>956</td>
<td>203.11</td>
<td>179.55</td>
</tr>
<tr>
<td>School 4</td>
<td>12</td>
<td>12</td>
<td>932</td>
<td>205.14</td>
<td>180.79</td>
</tr>
<tr>
<td>School 5</td>
<td>8</td>
<td>8</td>
<td>405</td>
<td>195.32</td>
<td>173.51</td>
</tr>
<tr>
<td>Total/mean score</td>
<td>47</td>
<td>47</td>
<td>3,158</td>
<td>201.17</td>
<td>176.08</td>
</tr>
<tr>
<td>Comparison schools subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School 6</td>
<td>8</td>
<td>8</td>
<td>572</td>
<td>196.64</td>
<td>162.45</td>
</tr>
<tr>
<td>School 7</td>
<td>12</td>
<td>12</td>
<td>748</td>
<td>198.56</td>
<td>172.48</td>
</tr>
<tr>
<td>School 8</td>
<td>8</td>
<td>8</td>
<td>487</td>
<td>204.76</td>
<td>187.32</td>
</tr>
<tr>
<td>School 9</td>
<td>8</td>
<td>8</td>
<td>287</td>
<td>196.64</td>
<td>170.92</td>
</tr>
<tr>
<td>School 10</td>
<td>12</td>
<td>12</td>
<td>781</td>
<td>202.38</td>
<td>183.73</td>
</tr>
<tr>
<td>Total/mean score</td>
<td>48</td>
<td>48</td>
<td>2,875</td>
<td>200.08</td>
<td>175.91</td>
</tr>
</tbody>
</table>

| Difference treatment and comparison schools | t = .45 | t = .03 | t = .10 | t = -.34 |

*Exhibit reads: Treatment and comparison schools were well matched, and students in the final sample of participating classes performed about the same on fall assessments as all the students in their schools. The possible scores for the reading scale range from 159 to 256, and the possible scores for the listening scale range from 79 to 267.

* p < .05

Source: The U.S.-China E-Language Project.

The characteristics of students and teachers in the treatment and comparison schools can be examined using data collected in the fall questionnaire. Exhibit 8 presents information on key student demographics and on the students’ experience using English. The middle schools studied had more male students (55 percent) than female students (45 percent), and most were born in 1995 or 1996, which makes them slightly older than typical eighth-grade students in the United States.

Most students (nearly 70 percent) in the treatment group reported that they began learning English in third grade. Typically, students are introduced to English in elementary school; the frequency and intensity of instruction increase when students begin middle school in seventh grade, and the majority of students, more than 80 percent, expected to attend college.
Chapter 4. Implementation

Approximately half of the students reported having computers at home, having Internet access, and playing computer games once a week or more.

Exhibit 8. Characteristics of Students

<table>
<thead>
<tr>
<th>Percentage of students who report:</th>
<th>The Forgotten World schools</th>
<th></th>
<th>Comparison schools</th>
<th></th>
<th>Difference</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>44.61</td>
<td>3,080</td>
<td>47.03</td>
<td>2,815</td>
<td>-2.42</td>
<td>-1.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,040</td>
<td>2,795</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before 1995</td>
<td>10.07</td>
<td>9.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>51.41</td>
<td>52.77</td>
<td>-1.36</td>
<td>-0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>36.94</td>
<td>36.92</td>
<td>0.02</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After 1996</td>
<td>1.58</td>
<td>1.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade began learning English</td>
<td></td>
<td>3,029</td>
<td>2,792</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before third grade</td>
<td>4.72</td>
<td>16.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third grade</td>
<td>68.67</td>
<td>59.46</td>
<td>9.21</td>
<td>1.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth through seventh grade</td>
<td>14.16</td>
<td>13.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth grade</td>
<td>12.45</td>
<td>10.96</td>
<td>1.49</td>
<td>1.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expecting to attend university</td>
<td>83.71</td>
<td>3,063</td>
<td>80.53</td>
<td>2,815</td>
<td>3.18</td>
<td>1.02</td>
</tr>
<tr>
<td>Having computer at home</td>
<td>50.65</td>
<td>3,068</td>
<td>42.93</td>
<td>2,816</td>
<td>6.42</td>
<td>-0.41</td>
</tr>
<tr>
<td>Having Internet access at home</td>
<td>43.11</td>
<td>3,055</td>
<td>49.22</td>
<td>2,812</td>
<td>-6.11</td>
<td>-0.45</td>
</tr>
<tr>
<td>Playing computer games once a week or more</td>
<td>58.15</td>
<td>3,068</td>
<td>54.38</td>
<td>2,803</td>
<td>3.81</td>
<td>.71</td>
</tr>
<tr>
<td>They have ever been tutored in English</td>
<td>90.76</td>
<td>3,075</td>
<td>88.36</td>
<td>2,819</td>
<td>2.4</td>
<td>.70</td>
</tr>
<tr>
<td>Reading English-language books, magazines, newspapers, and websites once a week or more</td>
<td>70.54</td>
<td>2,872</td>
<td>66.69</td>
<td>2,594</td>
<td>3.85</td>
<td>1.46</td>
</tr>
<tr>
<td>Using English to speak with friends/family</td>
<td>43.9</td>
<td>2,861</td>
<td>48.42</td>
<td>2,594</td>
<td>-4.52*</td>
<td>-2.12</td>
</tr>
<tr>
<td>Playing computer games with English once a week or more</td>
<td>41.33</td>
<td>3,075</td>
<td>39.52</td>
<td>2,816</td>
<td>1.81</td>
<td>.40</td>
</tr>
<tr>
<td>Watching English TV once a week or more</td>
<td>40.11</td>
<td>3,069</td>
<td>37.13</td>
<td>2,817</td>
<td>2.98</td>
<td>1.02</td>
</tr>
<tr>
<td>Chatting online in English once a week or more</td>
<td>15.34</td>
<td>3,070</td>
<td>13.55</td>
<td>2,820</td>
<td>1.79</td>
<td>.77</td>
</tr>
<tr>
<td>They have traveled to English-speaking country</td>
<td>3.45</td>
<td>2,872</td>
<td>5.74</td>
<td>2,594</td>
<td>2.29</td>
<td>-1.21</td>
</tr>
</tbody>
</table>

Exhibit reads: Characteristics of students were similar in treatment and comparison schools.

* p < .05

Source: The U.S.-China E-Language Project.

Several questions were asked of students to determine their prior experience in learning and using English outside of school. About 90 percent of students reported that they had received tutoring in English at some time, and 70 percent reported that they read books, magazines, newspapers, or websites in English. Approximately 40 percent sometimes use English to speak with family or friends, and a similar percentage play computer games with English or watch English-language television programs at least once a week. Students in treatment schools were significantly less likely than students in comparison schools to speak English with family and friends. Only a small number, 3 percent, reported having traveled to an English-speaking country.

English teachers in this study were predominantly female and have an average of 13 years’ experience teaching English, as shown in Exhibit 9. The majority (about 79 percent) have four-year degrees in English. The average age is mid-thirties. Significantly more teachers in the treatment schools were female than in the comparison schools.
Chapter 4. Implementation

Exhibit 9. Characteristics of Teachers

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>The Forgotten World schools</th>
<th>Comparison schools</th>
<th>Difference</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of teachers whose highest degree is four-year degree or above in English</td>
<td>78.95 19</td>
<td>86.36 22</td>
<td>7.42</td>
<td>t=1.04</td>
</tr>
<tr>
<td>Mean age of teachers</td>
<td>36.38 24</td>
<td>33.58 24</td>
<td>2.79</td>
<td>t=1.47</td>
</tr>
<tr>
<td>Percent female</td>
<td>91.67 24</td>
<td>70.83 24</td>
<td>20.83*</td>
<td>t=2.6</td>
</tr>
<tr>
<td>Mean years teaching English</td>
<td>13.33 24</td>
<td>10.46 24</td>
<td>2.87</td>
<td>t=1.19</td>
</tr>
</tbody>
</table>

Exhibit reads: Characteristics of teachers were similar in treatment and comparison schools.

* p < .05

Source: The U.S.-China E-Language Project.

4.3 Implementation of The Forgotten World

Early in the fall, it became apparent from teacher logs and e-mails to support staff that the Internet connections in the schools were insufficient to support large groups of students using The Forgotten World simultaneously. While the software development team had visited all the computer labs in August 2009, when school was not in session, this problem surfaced in late September 2009, when the system was used simultaneously by large numbers of students. Students would log in to the application but would often lose their connection and be forced to log in a second time. Personnel in the province worked to diagnose the issue, but the problem could not be fixed without the purchase of new servers for the schools. The budget for implementation provided by the William and Flora Hewlett Foundation did not include the purchase of equipment. In December 2009, the Dell Corporation agreed to donate servers to the schools. During fall 2009, some teachers had continued to use The Forgotten World, but system performance was frustrating to teachers and students, as documented by site visits and teaching logs.

Chinese schools typically have a long holiday to celebrate the New Year. In this province, schools closed January 18, 2010, and reopened March 1, 2010. Thus, the new servers were not used until March 2010. Because of the initial difficulties and the long break, the project team decided that the project needed a jump start, and the lead U.S. software developer traveled to China to visit schools and conduct supplementary training in early March 2010. Reports from the training were positive, and a site visit by ECNU confirmed that teachers were enthusiastic about using the application now that the Internet connections were stable and response times had improved.

Information on the frequency of use of The Forgotten World in participating classes was collected from multiple sources, as presented in Exhibit 10. Two sources of information are presented in this table: student reports of how frequently they used The Forgotten World both in and out of class and teacher reports of how frequently they used The Forgotten World in class and how they organized students to use it outside of class.
Schools participating in the study were asked to provide students with the opportunity to use *The Forgotten World* at least once each week in class. Over 70 percent of students reported that they used *The Forgotten World* once a week or more in schools, and about 20 percent reported that they used it once a week or more outside of class. About 81 percent of teachers reported that they used *The Forgotten World* once a week or more in class, and about 29 percent of teachers reported they asked students to use the program outside of class. It is not surprising that student reports of use are somewhat lower than teachers’ reports, because the size of the labs required students to share computers at times, and because students may not have participated in each session.

In June 2010, teachers from each school reported on their progress in using *The Forgotten World*. One school had completed all 12 episodes, all schools had completed at least 7 episodes, and most had completed 8–10 episodes.6

Clearly, the implementation of *The Forgotten World* was incomplete. Because of technological limitations, use during the first semester was limited. However, use during the second semester approached project goals, with nearly three-quarters of all students reporting that they used the program at least once a week.

4.4 Teachers’ Classroom Use of *The Forgotten World*

The teacher logs provide information on how *The Forgotten World* was used in classes from March through June 2010. Typically, teachers reported using *The Forgotten World* once a week with classes, for approximately 40–45 minutes. Time spent on completing one episode varied across schools and teachers: the reported range was from one to six class periods to complete one episode of *The Forgotten World*.

Before class, teachers reported spending time to get familiar with the stories and games and design questions and activities to help students learn the story, the language points, the sentence structures, and practice conversations. Teachers would also check network connections

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6 Teachers in treatment school 5 had finished teaching all 12 episodes. Treatment school 1 reached Episode 10; classes at treatment school 4 had reached Episodes 8–10; treatment school 3 was at Episodes 10–11; and treatment school 2 was at Episode 7 in Class 7; Episode 9 in Classes 1, 2, 3, and 8; and Episode 12 in Classes 4, 5, and 6.
and website log-in conditions before class. Students were reminded before the start of class that their user names should not be shared with other people.

In class, teachers typically began by demonstrating the story on the teacher’s computer projected to a large screen, while explaining the stories to the students, pointing out specific knowledge points and sentence structures, and teaching students how to play the games. After the teacher’s demonstration, students would learn the stories, mimic and practice conversations on their own, and play the games on their individual computers. At the end of class, teachers sometimes would assign homework to the students.

The teacher logs indicate that students became enthusiastic about the program after the network condition improved. Students were interested in the stories and games, and in carrying out conversations. Teachers reported that some students found games more interesting than stories. The majority of students were involved in the class, but they progressed at different rates, making classroom management difficult. Teachers sometimes asked students who went faster to form small discussion groups so students learning at a slower pace could have time to finish the story.
Chapter 5. Results

5.1 Student Results Based on the Assessments and Questionnaires

Did students in classrooms that used *The Forgotten World* improve their English reading and listening skills more than students in classrooms in comparison schools that did not have access to the program? Overall, students participating in the treatment schools did not increase their proficiency more than students in the comparison schools. However, it appears that students with relatively low levels of proficiency (those who scored below the median on the fall proficiency tests) made greater gains in the treatment schools than in the comparison schools. Exhibit 11 presents information on the student scores at the beginning and end of the year on the reading and listening assessments. This table includes all students who were in the final sample, regardless of their reported use of *The Forgotten World*. The mean gain in reading for lower-performing students was 8.5 in treatment schools compared with 5.7 in comparison schools. In listening, the lower-performing students gained 9 points in treatment schools and 5.5 points in the comparison schools. These differences were statistically significant. This finding was confirmed by use of a hierarchical linear model, presented in Appendix H.

<table>
<thead>
<tr>
<th>Exhibit 11. Mean Performance on Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall reading score</strong></td>
</tr>
<tr>
<td>Bottom half (below the median)</td>
</tr>
<tr>
<td>Top half (above the median)</td>
</tr>
<tr>
<td>Reading mean</td>
</tr>
<tr>
<td>Total n</td>
</tr>
<tr>
<td><strong>Fall listening score</strong></td>
</tr>
<tr>
<td>Bottom half (below the median)</td>
</tr>
<tr>
<td>Top half (above the median)</td>
</tr>
<tr>
<td>Listening mean</td>
</tr>
<tr>
<td>Total n</td>
</tr>
</tbody>
</table>

Exhibit reads: Students who began the year in the bottom half of the sample increased their English proficiency more in treatment schools than in comparison schools.

* p < .05

Source: The U.S.-China E-Language Project.

*Did students who reported using *The Forgotten World* more often exhibit increased English language proficiency?* Exhibit 12 examines student performance on beginning and end-of-year assessments by how frequently they reported using *The Forgotten World*. The table suggests that the students who used *The Forgotten World* more frequently may have made
slightly more gains in reading and listening proficiency than students who never used the program or used it only once or twice. While the results are in the expected direction, with this sample size, the results are not statistically significant.

### Exhibit 12. Performance on Assessments, by Use of *The Forgotten World*

<table>
<thead>
<tr>
<th>Used <em>The Forgotten World</em> . . .</th>
<th>Beginning of year</th>
<th>End of year</th>
<th>Mean gain or loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never ((n = 82))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading score</td>
<td>197.59</td>
<td>201.47</td>
<td>3.89</td>
</tr>
<tr>
<td>Listening score</td>
<td>172.63</td>
<td>172.56</td>
<td>-0.07</td>
</tr>
<tr>
<td>Once every few months ((n = 101))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading score</td>
<td>197.23</td>
<td>202.93</td>
<td>5.74</td>
</tr>
<tr>
<td>Listening score</td>
<td>171.92</td>
<td>174.86</td>
<td>3.16</td>
</tr>
<tr>
<td>Once or twice a month ((n = 221))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading score</td>
<td>198.99</td>
<td>206.69</td>
<td>7.68</td>
</tr>
<tr>
<td>Listening score</td>
<td>172.26</td>
<td>176.75</td>
<td>4.49</td>
</tr>
<tr>
<td>Once or twice a week ((n = 1283))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading score</td>
<td>202.69</td>
<td>211.22</td>
<td>8.53</td>
</tr>
<tr>
<td>Listening score</td>
<td>177.63</td>
<td>184.61</td>
<td>6.96</td>
</tr>
<tr>
<td>Three to four times a week ((n = 32))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading score</td>
<td>202.09</td>
<td>209.25</td>
<td>7.15</td>
</tr>
<tr>
<td>Listening score</td>
<td>173.06</td>
<td>184.21</td>
<td>11.16</td>
</tr>
<tr>
<td>Every day ((n = 9))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading score</td>
<td>199.66</td>
<td>206.33</td>
<td>6.67</td>
</tr>
<tr>
<td>Listening score</td>
<td>168.33</td>
<td>173.89</td>
<td>5.56</td>
</tr>
</tbody>
</table>

Exhibit reads: Relationship between frequency of use and improved performance on assessment is not statistically significant.

Source: The U.S.-China E-Language Project.

**Did using *The Forgotten World* have an effect on students’ interest in or motivation to learn English?** Language experts and teachers in China repeatedly told the study team that language learning is not popular in China, even though it is important for success in school. Research on teaching English as a foreign language has identified motivation as an important factor (see, e.g., Norris-Holt 2002), and there is a long tradition of research that links student motivation and academic achievement (Dalton 2010). Thus, one of the goals of this study was to examine whether this approach to language learning might have an effect on student interest in and motivation to learn English.

Almost all middle school students, approximately 95 percent, who participated in this study believed that studying English is somewhat or very important, as shown in Exhibit 13. However, fewer students expressed interest in learning English, and it appears that interest waned for both groups as the year progressed.
Exhibit 13. Importance of and Interest in Learning English

<table>
<thead>
<tr>
<th></th>
<th>The Forgotten World schools</th>
<th>Comparison schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beginning of year</td>
<td>End of year</td>
</tr>
<tr>
<td>Importance of learning English</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>96.44</td>
<td>1,798</td>
</tr>
<tr>
<td>Interest in learning English</td>
<td>70.47</td>
<td>1,798</td>
</tr>
</tbody>
</table>

Exhibit reads: Nearly all students reported that learning English is somewhat or very important. Source: The U.S.-China E-Language Project.

At the end of the year, students were asked about their motivation to learn English, and how much fun it was to learn English. Fifty-one percent of students in the treatment schools said that motivation to learn English had improved, compared to 40 percent of students in comparison schools, as shown in Exhibit 14. From the outset of the study, some Chinese experts suggested that increasing student motivation to learn English might be one of the most important benefits of using The Forgotten World. Given the relatively limited exposure that students had to the program, the suggestion that this might be the case is encouraging.

Exhibit 14. Percentage of Students Who Reported That Motivation to Learn English Improved and That Learning English Is Fun

Exhibit reads: A higher percentage of students in schools that used The Forgotten World reported that motivation improved compared to students in comparison schools. Source: The U.S.-China E-Language Project.

Note: Percentage motivated (.5092; SE = .01753) in treatment schools is higher than percentage motivated (.3978; SE = .0406) in comparison schools: t = 2.52 and p < .05. Difference in fun between groups is not significant.

What were student attitudes toward The Forgotten World? About 40 percent of students reported that they never used The Forgotten World outside of school, and about the same number reported that they used the program outside of school once a week or more, as shown in Exhibit 15. Students also provided mixed reports on the helpfulness of the program:
46 percent said that it was somewhat or very helpful, 42 percent said it was not helpful, and 12 percent said they didn’t know or hadn’t used it much.

Students reported that they faced a number of challenges in using *The Forgotten World*. The major challenges, reported by over half the students, involved not having enough time to engage in the episodes (64 percent) and problems with the computers at school (57 percent). Concerns about the possible negative effect of *The Forgotten World* on test scores were voiced by a small number of students, about 10 percent.

**Exhibit 15. Student Experience With *The Forgotten World***

<table>
<thead>
<tr>
<th>Use of <em>The Forgotten World</em> outside of school (Q14)</th>
<th>Percent</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>40.29</td>
<td>1,722</td>
</tr>
<tr>
<td>Twice a month or less</td>
<td>19.19</td>
<td></td>
</tr>
<tr>
<td>Once a week or more</td>
<td>40.52</td>
<td></td>
</tr>
</tbody>
</table>

How helpful was *The Forgotten World*?

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t know or didn’t use much</td>
<td>12.19</td>
<td></td>
</tr>
<tr>
<td>Not helpful</td>
<td>41.96</td>
<td></td>
</tr>
<tr>
<td>Somewhat helpful</td>
<td>37.55</td>
<td></td>
</tr>
<tr>
<td>Very helpful</td>
<td>8.30</td>
<td></td>
</tr>
</tbody>
</table>

What was biggest challenge? (multiple answers allowed)

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percent</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient time for using the program</td>
<td>64.60</td>
<td>1,723</td>
</tr>
<tr>
<td>Limited support from school</td>
<td>23.51</td>
<td>1,723</td>
</tr>
<tr>
<td>Problems with computers at the school computer lab</td>
<td>57.05</td>
<td>1,723</td>
</tr>
<tr>
<td>Concerns with negative impact on test scores</td>
<td>9.81</td>
<td>1,723</td>
</tr>
<tr>
<td>Other challenges</td>
<td>14.14</td>
<td>1,722</td>
</tr>
</tbody>
</table>

Exhibit reads: Students reported mixed opinions on whether *The Forgotten World* was helpful.
Source: The U.S.-China E-Language Project.

Students were given the opportunity to specify other challenges they faced in using the program. The challenges can be categorized into four groups, related to (1) the program content and structure, (2) lack of access to the software, (3) hardware and connectivity issues, and (4) personal issues. Challenges mentioned by more than 10 students each included the following:

**Program content and structure issues**
- Difficulty understanding sentences
- Too many unknown vocabulary words
- Insufficient Chinese translation
- Speech too fast to understand
- Dictionary slow to use, not always helpful

**Lack of access issues**
- Teachers did not always hold class
- Insufficient computers for all students in class
- Not enough time to use application
- No computer at home
Hardware and connectivity issues

- Internet speed was slow.
- Computers sometimes were automatically logged out.
- Computers sometimes froze.
- Computers sometimes failed to log in.

5.2 Teacher Attitudes and Experiences

What were teachers' attitudes toward The Forgotten World? At the start of the project, the TWG and team discussed how The Forgotten World should be delivered to students. One group felt that it was best as a standalone application that could be accessed directly by students; the other group felt that teachers’ use of the program was essential. Both groups were concerned about teachers’ receptivity to the new approach but thought that implementing this approach in classrooms would afford teachers the opportunity to think about their teaching in novel ways.

Teachers’ opinions on the helpfulness of The Forgotten World were mixed, as were student opinions. As presented in Exhibit 16, some 59 percent reported that it was somewhat helpful, and 41 percent reported that it was not very helpful. No teachers chose the more extreme options of “very helpful” or “not at all helpful.”

A majority of teachers said they were unlikely to use The Forgotten World, or any other technology approach, in the future: only 14 percent said they were likely to use The Forgotten World again, and only 18 percent reported that they were likely to use some other software. (Reasons teachers gave for these responses are presented in Exhibit 17.)

Teachers reported noticing a change in students’ motivation to learn English, with only 5 percent reporting that they noticed no change. This is consistent with the finding that students in treatment schools reported higher levels of motivation than students in comparison schools. In light of some of the comments from students about the difficulty of the program, it is interesting that more than 70 percent of teachers said that they would recommend that The Forgotten World be used for eighth-grade students, rather than seventh- or ninth-grade students.

Teachers were asked follow-up questions to two of the items reported in Exhibit 16: to explain why they were likely or not likely to use The Forgotten World in the future, and to provide suggestions about how The Forgotten World might be improved. Exhibit 17 presents some of the reasons that teachers are likely or unlikely to use the program in the future. Among those who said they were not too likely to use it again, the most common reason cited was that it represented too much additional content and vocabulary to cover, given the time available. A few also mentioned that preparing students for entrance exams was a priority. Among those teachers who said they were likely to use the program again, the major reason cited was that it generated interest and enthusiasm on the part of students.
Exhibit 16. Teacher Experience With *The Forgotten World*

<table>
<thead>
<tr>
<th>Question</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>How helpful was <em>The Forgotten World</em>? ((n = 22))</td>
<td></td>
</tr>
<tr>
<td>Not helpful at all</td>
<td>0.00</td>
</tr>
<tr>
<td>Not very helpful</td>
<td>40.91</td>
</tr>
<tr>
<td>Somewhat helpful</td>
<td>59.09</td>
</tr>
<tr>
<td>Very helpful</td>
<td>0.00</td>
</tr>
<tr>
<td>How likely to use <em>The Forgotten World</em> in future ((n = 22))</td>
<td></td>
</tr>
<tr>
<td>Not likely at all</td>
<td>0.00</td>
</tr>
<tr>
<td>Not very likely</td>
<td>59.09</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>27.27</td>
</tr>
<tr>
<td>Very likely</td>
<td>13.64</td>
</tr>
<tr>
<td>How likely to use other software ((n = 22))</td>
<td></td>
</tr>
<tr>
<td>Not likely at all</td>
<td>0.00</td>
</tr>
<tr>
<td>Not very likely</td>
<td>40.91</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>40.91</td>
</tr>
<tr>
<td>Very likely</td>
<td>18.18</td>
</tr>
<tr>
<td>Has student motivation changed since using <em>The Forgotten World</em>? ((n = 22))</td>
<td></td>
</tr>
<tr>
<td>No change</td>
<td>4.55</td>
</tr>
<tr>
<td>A little more motivated</td>
<td>81.82</td>
</tr>
<tr>
<td>Somewhat more motivated</td>
<td>13.64</td>
</tr>
<tr>
<td>A lot more motivated</td>
<td>0.00</td>
</tr>
<tr>
<td>For what grade level would you recommend <em>The Forgotten World</em>? ((n = 22))</td>
<td></td>
</tr>
<tr>
<td>Seventh grade</td>
<td>19.05</td>
</tr>
<tr>
<td>Eighth grade</td>
<td>71.43</td>
</tr>
<tr>
<td>Ninth grade</td>
<td>9.52</td>
</tr>
</tbody>
</table>

Exhibit reads: Teacher reaction to helpfulness of *The Forgotten World* was mixed, but they did report noticing that students were more motivated.

Source: The U.S.-China E-Language Project.

Specific suggestions for improving *The Forgotten World* are presented in Exhibit 18. It is clear from the comments that the quality of the schools’ computer laboratories and the connectivity to the Internet were major issues for the teachers. The size of the laboratories, relative to the number of students in class, was also problematic. Perhaps because the program was only implemented for a single semester, teachers reported that students did not have enough time to use the program. There also appear to be a number of areas in which the software application might be improved, including allowing teachers and students to adjust the speed of the speech contained in the program, provide clear and simple instructions for the games, and provide more support for the vocabulary presented in the program. A few teachers also commented on the quality of the story and episodes.
Exhibit 17. Teacher Comments About Why They Are Likely or Not Likely to Use *The Forgotten World* in the Future

<table>
<thead>
<tr>
<th>How likely are you to use <em>The Forgotten World</em> in the future, and why?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not likely</strong></td>
</tr>
<tr>
<td>Comment 1</td>
</tr>
<tr>
<td><strong>Not too likely</strong></td>
</tr>
<tr>
<td>Comment 1</td>
</tr>
<tr>
<td>Comment 2</td>
</tr>
<tr>
<td>Comment 3</td>
</tr>
<tr>
<td>Comment 4</td>
</tr>
<tr>
<td>Comment 5</td>
</tr>
<tr>
<td>Comment 6</td>
</tr>
<tr>
<td>Comment 7</td>
</tr>
<tr>
<td>Comment 8</td>
</tr>
<tr>
<td>Comment 9</td>
</tr>
<tr>
<td>Comment 10</td>
</tr>
<tr>
<td>Comment 11</td>
</tr>
<tr>
<td><strong>Somewhat likely</strong></td>
</tr>
<tr>
<td>Comment 1</td>
</tr>
<tr>
<td>Comment 2</td>
</tr>
<tr>
<td>Comment 3</td>
</tr>
<tr>
<td>Comment 4</td>
</tr>
<tr>
<td>Comment 5</td>
</tr>
<tr>
<td><strong>Very likely</strong></td>
</tr>
<tr>
<td>Comment 1</td>
</tr>
<tr>
<td>Comment 2</td>
</tr>
</tbody>
</table>

Exhibit reads: Teachers’ reasons for using or not using *The Forgotten World* in the future.

Source: The U.S.-China E-Language Project.
### Exhibit 18. Teacher Suggestions About Improving *The Forgotten World*

| Comment 1 | 1. School must provide appropriate hardware so as to guarantee every class goes smoothly. Otherwise, it will be like the current situation where a majority of students had to log in repetitively, which discouraged students; 2. In the software, the pronunciation, tone, and speed of some sentences are very difficult; 3. Teachers must communicate and cooperate; Avoid individual and separate work; 4. Teachers need to make efforts to familiarize the texts; 5. Students must have sufficient time to use computer. |
| Comment 2 | Improve outdated teaching equipment; obtain support from parents; increase opportunity and time for students to practice speaking on certain subjects out of class. |
| Comment 3 | 1. Excited students’ learning interest by explaining the stories; 2. Help students learn new vocabulary and phrases by playing games; 3. It would be better if the hardware at school was improved. |
| Comment 4 | 1. Increase time to practice and learn; 2. Design *The Forgotten World* to be actual listening and speaking curricula so as to excite students so that they will take it more seriously; 3. Provide more training and learning opportunities to teachers in order to increase teaching level and professional quality. |
| Comment 5 | 1. Ensure the network runs smoothly; 2. Make stories more exciting so students will be more interested in it; 3. Make the stories shorter; design quiz after each episode; 4. The games should be simpler so students can enjoy success. |
| Comment 6 | 1. Some episodes/stories are too long. It will be better to divide it into several shorter episodes; 2. Decrease the amount of vocabulary in games such as TRIGANGLE so that majority of the students could enjoy each class and increase their interest and confidence learning English; 3. It will be better if the stories are closer to real life and practice. |
| Comment 7 | The software design should stay closer to the textbook to be its extension, so that students can grasp the textbook contents when playing the games. The software should start from lower level. It's hard to correct eighth-grade students’ pronunciation; the conversation speed in the games is pretty fast and students have limited time to use computer, so it's hard for students to improve. |
| Comment 8 | The episodes and games should match with the textbooks, which would be beneficial to improving students’ test scores and the teachers’ rate of using the software. |
| Comment 9 | 1. The instructions for games should be more clear and specific; 2. If episodes were designed with a cartoon effect, it would be easier. |
| Comment 10 | 1. Need to have collation of English and Chinese. There should be some Chinese notes for the difficult sentences; 2. Listening speed should be adjustable from slow to fast; 3. Correct instructions should be provided for the games. |
| Comment 11 | There should be simple textbooks to help students in learning English designed to help students learn English while playing. Need to help students use computer with purpose. |
| Comment 12 | 1. The contents should stay close with actual lives and current time; 2. There should be a system of grammar; 3. The difficulty level should go from easy to hard gradually; 4. The story should be vivid and interesting; 5. It will be better to design it as a cartoon; 6. Games should combine knowledge and ease of playing to help student learn. |
| Comment 13 | 1. Need to make sure there is more time to use computer; 2. Enforce supervision and management when students use computers. |
| Comment 14 | Provide students enough time and provide teachers enough freedom and time to look into the contents. |
| Comment 15 | Students must be self-disciplined and willing to participate; there should be enough time every time to finish the task. |
| Comment 16 | Must make sure every student has a computer; There should be at least 3–4 classes every week; the electronic dictionary should provide entries that cover all the new vocabulary words students will encounter when learning the stories. |
| Comment 17 | It is better to design the game in animation, make the stories more interesting to increase student interest. |
| Comment 18 | There should be computers available in the classrooms which can be used at any time. |

See notes at end of table.
Chapter 5. Results

Exhibit 18. Teacher Suggestions About Improving *The Forgotten World*—Continued

| Comment 19 | There is a conflict between high school entrance exam and language application; the sections on grammar and vocabulary in the high school exams are very detailed, and the proportion of the score based on listening and oral communication is relatively small. *The Forgotten World* provides an opportunity for the students to practice listening skills and develop language sense. |
| Comment 20 | The interface should be more user friendly. The games should be more interesting. Need to make the software run more smoothly. The problems encountered during usage should be addressed in a timely manner. |

Exhibit reads: Teachers provided suggestions about improving *The Forgotten World*.  
Source: The U.S.-China E-Language Project.

One of the hopes of the Chinese experts who advised the project team was that *The Forgotten World* would provide with teachers an opportunity to collaborate and to rethink their approach to teaching. As shown in Exhibit 19, some 77 percent of teachers who participated in this project reported collaborating with other teachers at least once a week. Even more striking is the fact that 95 percent of participating teachers reported that it changed the way they think about teaching. Note that the fact that teachers reported that it changed the way they think about teaching may be the result of participating in a new project, and may not necessarily be due to the particular aspects of this approach.

Exhibit 19. Teacher Experience With *The Forgotten World*

<table>
<thead>
<tr>
<th>How often did you collaborate with other teachers while using <em>The Forgotten World</em>? (n=22)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never or once every few months</td>
<td>0.00</td>
</tr>
<tr>
<td>Once or twice a month</td>
<td>22.73</td>
</tr>
<tr>
<td>Once or twice a week</td>
<td>54.55</td>
</tr>
<tr>
<td>Three times a week or more</td>
<td>22.73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Has using <em>The Forgotten World</em> changed the way you think about teaching? (n=22)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>95.45</td>
</tr>
<tr>
<td>No</td>
<td>4.55</td>
</tr>
</tbody>
</table>

Exhibit reads: Nearly all teachers reported that using *The Forgotten World* changed the way they think about teaching.  
Source: The U.S.-China E-Language Project.

Teachers were asked a follow-up question to explain how using this approach changed the way they think about teaching. Exhibit 20 presents their answers. Many teachers referred to the affective impacts of the approach, using words and phrases like “spontaneous,” “happy learning experience,” “class became dynamic,” “encourages students,” “apply games and entertainment in teaching,” “nurture interest,” and “feel native English.” A secondary thread through the teacher comments emerges in the references to students’ active role in learning: “reciprocity between teachers and students,” “they learn from experience and application,” “we should return the classroom to the student.”
### Exhibit 20. Teachers’ Comments on How This Approach to Language Changed the Way They Think About Teaching

If *The Forgotten World* has changed the way you think about teaching, please explain

| Comment 1 | Innovation of teaching concepts. *The Forgotten World* combines and connects with current task-oriented teaching method to reflect the teaching process where teachers take the lead, students act as major component, and there is reciprocity between teachers and students. |
| Comment 2 | In English learning, students attempt to transition to learning spontaneously in specific language contexts. They learn from experience and application. |
| Comment 3 | *The Forgotten World* at least promotes us to change perceptions away from traditional teaching models; it’s applicable to current education reform system; it provides students a new experience. |
| Comment 4 | *The Forgotten World* provides me new teaching concepts; by letting students have a happy learning experience, the whole class became dynamic based on this new teaching concept. |
| Comment 5 | It encourages students to learn English for applying it. |
| Comment 6 | We should return the classroom to the students to let them speak more. |
| Comment 7 | Strengthen listening and speaking training. |
| Comment 8 | Infiltrate new teaching concepts to teaching practice; apply games and entertainment in teaching. |
| Comment 9 | Audio-visual characteristics in multimedia excited students’ interest in learning English. |
| Comment 10 | Improve ability in listening and speaking by imitating native English. |
| Comment 11 | If there is no knowledge atmosphere, there is no language. |
| Comment 12 | Should emphasize speaking and listening practice. |
| Comment 13 | Electronic textbooks attract students. |
| Comment 14 | Suggest promoting this software in developed cities. |
| Comment 15 | Nurture interest in remembering vocabulary, listening, and language sense. |
| Comment 16 | Do not only focus on exams, but let students feel the native English. |

Source: The U.S.-China E-Language Project.
Chapter 6. Summary and Implications

6.1 Summary of Findings

Several implementation issues encountered during the study significantly reduced the amount of time students could spend on *The Forgotten World*. The expected frequency and intensity of implementation was not realized until halfway through the study, after information technology infrastructure improvements were made at treatment schools. Even then, only about 70 percent of students reported that they used *The Forgotten World* at least once a week. This partial implementation during one semester represents a fairly limited treatment in comparison with other education studies of this type.

While overall, students in treatment and comparison schools performed similarly on the proficiency tests administered at the beginning and end of the school year, students in treatment schools with relatively low levels of initial proficiency (those who scored in the bottom half of all students on the fall tests) evidenced larger gains in reading and listening than did similar students in comparison schools. This finding was statistically significant for both reading and listening.

Students in the treatment group reported higher levels of motivation to learn English than students in the comparison schools. At the end of the year, 51 percent of students in the treatment schools reported that their motivation to learn English had improved, compared with 40 percent of students in the comparison schools. Teachers in treatment schools also reported that students’ motivation improved. This is an important finding because motivation to learn a foreign language has been identified by Chinese language experts as a problem in Chinese schools and a barrier to learning.

Almost all of the teachers in the treatment schools (95 percent) who participated in the project reported that their use of *The Forgotten World* changed the way they think about teaching. The approach to language teaching and learning that forms the basis for *The Forgotten World* is learner-centered and interactive, and it presents students with problem-based tasks and immediate feedback. The teachers appreciated the fact that the program provided students with fun opportunities for practicing listening and speaking skills, as well as exposure to native English speakers. However some teachers expressed concern that their primary responsibility was to prepare students for the English portion of the high-school entrance exam that students take in ninth grade, and they did not feel that use of *The Forgotten World* would improve student performance on the exam.

6.2 Implications for the Future

Because of the difficulty with implementation, it is difficult to judge the true efficacy of *The Forgotten World*. However, the project team was able to gather information on the issues that should be addressed before distributing the program more broadly in China, or elsewhere. The issues to be addressed fall into three major categories: hardware, teacher training and support, and program issues.

**Hardware issues.** Many times in studies such as this, the implementation of a program fails because teachers or administrators are not committed to the project. This was not the case in this study; teachers and administrators showed remarkable perseverance in using *The Forgotten World*. The teaching staff at the treatment schools were very committed to the use of the program, and they recognized the importance of using it as part of their teaching. However, some teachers expressed concern that their primary responsibility was to prepare students for the English portion of the high-school entrance exam.
World, even in the face of major challenges. Two of these—the quality of the computer labs and Internet connections, and the size of computer labs relative to average class size—must be addressed to make the implementation of this or any other technology-based approach to language learning feasible. Neither of these issues has a cheap or easy fix. Thus, for the immediate future, only a subset of schools in China can be expected to implement the program without a major investment in upgrades to their computer labs. To complicate this matter, in many eastern Chinese cities, which have stronger computing infrastructures, English instruction begins at an earlier age, and the content of The Forgotten World would be too easy for middle school students in those cities. Identifying schools that have the right constellation of conditions for implementation is an important but challenging task.

**Teacher training and support.** Implementing a new approach to teaching and learning requires training, support, and time. While teachers were satisfied with the initial training, from their logs and answers to questionnaire items it is clear that several areas of training and support could be improved. The software development and implementation team prepared a comprehensive teachers’ guide that provided teachers with sample lesson plans as well as other practical information, such as the vocabulary used in each episode. However, teachers still felt uncomfortable with some aspects of using The Forgotten World in their classrooms.

First, teachers noted in logs, site visits, and questionnaires that classroom management in the computer lab was difficult. Because of the large class sizes observed in these middle schools, up to 80 students in a single class, managing independent activity by students may be more challenging than it would be with a smaller number of students. Students had many questions for teachers, and the teachers sometimes felt they could not answer all questions. Also, teachers reported that the program was too difficult for some students and that supervising those students added to the difficulty in controlling the class. Training specifically designed to help teachers work successfully in such environments might be beneficial.

Another related area for additional teacher workshops may be the area of differentiated instruction—that is, tailoring instructional content to a diverse group of learners within a single classroom. In the United States, a considerable body of literature discusses strategies for teachers to target instruction to learners at different levels within the same classroom. There may be lessons that can be transferred from the research literature on this topic and applied to this issue. In the classes described by many teachers in this study, whole-group instruction was sometimes favored over more individualized work with small groups; again, this may be due in part to the large class size. Finally, in keeping with the teachers’ own judgments of the initial training, more time should be spent on providing teachers with hands-on experience using the software.

**Program issues.** Given the issues with Internet connectivity, it is difficult to evaluate the strengths and weaknesses of the program. However, several issues have been identified repeatedly by students and teachers as impediments to students’ progress through the episodes.

The first issue involves the talking speed of the characters speaking English in the stories and games. Teachers and students in the pilot study and full-scale study reported that it was sometimes difficult to understand stories and games because characters spoke too quickly to be understood. When asked about this after the pilot, the software development team reported that U.S. advisors had suggested that the characters speak at a speed that is typical for native English speakers. While this may be the ultimate goal, it seems that it would be prudent to incorporate a developmental approach to meeting this goal and allow students to initially select slower speeds
and then increase the speed as they progress. At a minimum, it might be beneficial to reduce the speed of speech presented in the first few episodes.

Because of the number of new vocabulary words introduced to students in *The Forgotten World*, students and teachers expressed concern about the functionality of the *dictionary* that is available to students within the application. Some students expressed concern that it was inefficient and time-consuming to look up each word of a sentence they did not understand and suggested that students should be able to access complete translations of each sentence. While teachers thought that the eighth grade was the correct target grade for the program, many stated that eighth-grade students required support in understanding the new vocabulary and suggested that more efficient access to translations of new vocabulary or phrases be provided.

The extent to which translations should be easily accessible is a source of some debate. Experts consulted by the software development team suggested that translations should be kept to a minimum so that students would not be able to rely on Chinese to work their way through the stories and games. Given the reaction of students and teachers, it might be advisable to adopt a developmental approach again and to provide complete translations of the initial few episodes so that students understand the basic story line. However, given that it appears that the lower-performing students made the largest gains, this may not be necessary.

Finally, the extent to which students and teachers could adequately track progress through the program is unclear. One of the advantages of computer applications such as this is the ability to provide feedback on student progress to both students and their teachers. Because of the difficulty in U.S. servers’ capturing information on usage, it is possible that feedback to students and teachers did not adequately portray students’ progress through the program. This problem is relatively easy to fix. Capturing this information on local servers is probably a better option if and when large-scale adoption of *The Forgotten World* is considered and evaluation data are no longer necessary.

The statistically significant positive results of using *The Forgotten World* for the lower-performing students along with the positive effects on student motivation is encouraging for an intervention that was only partially implemented. Further research could be conducted to help understand why the program produced these benefits, how to overcome implementation problems in schools lacking sophisticated computer technology, and why *The Forgotten World* did not produce positive benefits for the initially higher performers.
References


Appendix A.
Open Language Learning Initiative Evaluation
Planning Group Meeting Summary
Appendix A:
Open Language Learning Initiative Evaluation Planning Group Meeting Summary
Beijing, China
May 10-15, 2007

Participants:

U.S.A.
David Goodwin, U.S. Department of Education, Chairperson
Adriana de Kanter, U.S. Department of Education
Brian Fu, U.S. Department of Education
David J. Francis, University of Houston
Gary Cziko, University of Illinois
Yong Zhao, Michigan State University
Patricia Green, RTI International
ZhaoHong Han, Teachers College of Columbia University (attended Sunday only)
Steven Stoynoff, Minnesota State University (attended Sunday only)

China
Wang Wenjing, Beijing Normal University
Liu Dailin, China Central Radio and Television University (attended Saturday and Sunday)
Zeng Dawei, National Center for Education Technology (attended Saturday only)
Zhang Lianzhong, China National Institute of Educational Research (attended Sunday only)

The Evaluation Planning Group (EPG) met as part of a larger meeting to discuss the development and evaluation of the Open Language Learning Initiative (OLLI), English language learning software that is being developed by the Hewlett Foundation and Coastline Community College. This project continues the efforts that were initiated as part of the CHENGO project, a joint partnership between the U.S. Department of Education and the Ministry of Education of the People’s Republic of China to create a highly innovative R&D product to test the effectiveness of using online technology to deliver foreign language instruction within a real-world environment, consistent with theory of language learning. In keeping with the agreements between the two nations, the U.S. Department of Education intends to evaluate the effectiveness of the software for Chinese middle school students.

This document summarizes the key topics discussed by the EPG and presents their recommendations as well as concerns.

1. Key evaluation question
The EPG agreed that the evaluation should be designed to study the efficacy of OLLI, and that the key evaluation question is:

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7 Chengo is the name of the Chinese language learning program that was developed in China for U.S. middle school students.
Do students exposed to OLLI demonstrate increases in proficiency when compared to students without access to OLLI, given the same curriculum and under conditions that allow reasonable access to the software?

The group recommended that proficiency gains be measured over the course of a year rather than a single semester. It was also recommended that a field trial of the evaluation be conducted in the fall of 2008, with implementation of the full-scale study in 2009. The group agreed that it was likely that there will be some technical issues and other problems when the program is first introduced in the fall of 2008 and mounting the full-scale evaluation at that time would be unwise. The group concurred that it would be best to conduct a field trial of the evaluation in the fall of 2008, to ensure that the data collection protocols and assessments are consistent with the way OLLI is implemented in China.

2. Dimensions to be measured

OLLI is currently intended to focus on the improvement of students’ speaking and listening skills; thus, the measurement of speaking and listening skills should be the primary focus of the evaluation.

Reading and writing skills will also be assessed. These skills will be measured to determine whether (1) gains in speaking and listening enhance other language skills, or (2) gains in listening and speaking are made at the expense of gains in other areas. Reading and writing are emphasized in traditional classrooms, and skills in these areas are measured on local and national examinations. Thus, it is important to evaluate whether OLLI could have an unintentional detrimental impact by moving student effort away from these areas, or whether it might have a positive impact (or perhaps no impact) on reading and writing skills.

At some point, the EPG will need to have more detailed specification from the developers about the subskills of each dimension so that tests can be identified or developed that parallel the language skills emphasized by the program.

The EPG recognizes that OLLI may have an effect on student motivation to learn English, and it may also increase students’ awareness of U.S. culture. However, the EPG agreed that those constructs are secondary and will be included in study protocols as time and resources permit.

3. Research design

Given the evaluation question, a random assignment study is recommended. The EPG discussed assignment at the school level and at the classroom level. Because students are expected to sometimes work with OLLI outside of regular school hours, the possibility of contamination across classrooms appears to be high. Thus, randomization at the school level seems to be a more prudent option. One member of the evaluation group also suggested that it consider a smaller group of matched-pair schools, and work more aggressively in these schools to ensure that OLLI is fully implemented.
Textbooks and curriculum are probably major factors in students’ English proficiency. This suggests that schools be selected from only one or two districts, so that these factors can be controlled.

The EPG will need the developers to specify minimum standards in a number of areas for schools to be included in the study. The standards should include the following:

- How many hours per week do students need to have access to a computer to make meaningful progress using OLLI?
- What are the minimum requirements for computers at participating schools?
- Are there minimum requirements concerning teacher training in the use of OLLI? Do teachers need a certain level of experience with IT?

4. Assessments

The EPG discussed a number of existing assessments with members of the Language Learning and Pedagogy Working Group. Assessments that were discussed as possibilities included Cambridge University Young Learners English Test (Cambridge University), Maculaitis Assessment of Competencies II, Test of English Language Proficiency (Touchstone Applied Science Associates), and IDEA English Proficiency Test (IPT) 1 and 2 (Ballard-Tighe). Other assessments also mentioned as having unique features that might be useful included Phone Pass (Ordinate Technologies), the assessments developed for PANDA English (Beijing Normal University), Stanford English Language Proficiency Test (Harcourt Assessments), and the Woodcock Johnson Sentence Repetition subtest. (At a subsequent meeting, another test was discussed: the TOEIC Bridge). Problems were noted with each of the tests, including (1) some of the tests target TESOL standards rather than ACTFL standards, (2) some of the tests measure beginning English but content might be inappropriate because it is aimed at older or younger learners; and (3) some of the tests were developed for North American populations and may be culturally inappropriate for Chinese populations.

The group also discussed using English exams developed for the Beijing municipality, or exams used in the districts where the evaluation will be implemented. These exams would provide good measures of reading and perhaps writing proficiency. They would need to be supplemented with assessments directed at listening and speaking.

Developing specialized assessments for this project was also discussed. Some suggested that we could use the Cambridge Young Learners test as a model and adapt the subtests for the seventh- and eighth-grade students that will be targeted in the evaluation; the test is currently recommended for students from ages 7 through 12. Others mentioned developing sentence repetition tasks and perhaps a task asking students to narrate a series of pictures. The pros and cons of natural language samples were also discussed.

The group concluded that a hybrid assessment would need to be used that incorporated
- an existing assessment for use as an anchor and for providing context for the other measures;
• a speaking task that includes sentence repetition and picture narration as well as straight pronunciation;
• a vocabulary assessment that uses the words that are common to both the national curriculum and the OLLI software (Both the comparison and treatment groups would have exposure to these words.); and
• an existing assessment developed at the district level.

The group also discussed the importance of the teacher’s level of fluency in English and potential ways it could be measured. One potential way would be to record a short interview with the teacher about participation in the evaluation study.

5. Implementation of the evaluation

The EPG recommended that the evaluation take advantage of the new equipment being given to schools through the Modern Distance Education Project. As described by Zheng Dawei, this project will equip 35,000 middle schools in the western region with new computers. These computers will be set up in a computer lab with Internet access.

Twenty-five to 35 schools should be selected to be treatment schools, and the same number of schools should be selected to serve as the comparison group.

Students in the first two years of middle school will participate in the evaluation. A decision to include primarily seventh-grade students or eighth-grade students will await more detailed information on the content of OLLI and selection of districts and an examination of the English curriculum in the district.

Chinese scholars consistently expressed concern that teachers will be reluctant to devote instructional time to OLLI because of the importance of student performance on exams. They also were skeptical about the amount of time parents will allow students to use OLLI at home. One suggestion was that perhaps time in afternoon classes (devoted to IT or social practice) could be allocated to practice using OLLI. The EPG looks forward to learning more details about the teacher materials and courseware being developed for OLLI.

The EPG suggested consideration of implementing the evaluation in boarding schools, where conditions could be more carefully controlled. In the western regions of China, many of the middle schools are boarding schools so that students do not have to travel great distances daily. If these schools have computer laboratories, it might be possible to arrange for students to have greater access to computers (at both comparison and treatment schools) than would be possible at day schools.

The study will be designed to have a pretest and posttest. While the majority of the test will be administered to the whole class, individual assessments of student speaking will be necessary.
6. Roles and responsibilities

It was understood that the Ministry of Education has volunteered to be responsible for identifying appropriate schools for the evaluation of the project.

It will be necessary to identify the organization that will be responsible for providing the software to schools, along with orientation, training, and maintenance. The National Center for Education Technology may play this role.

7. Next steps

The United States will partner with an organization in China to conduct the evaluation. The Chinese partner will consult on the design of the assessment, review instruments to make sure that they are appropriate, and collect the data at the schools.

It would be useful to obtain more information about the districts, schools, and students that might be selected to participate in the evaluation project. We would like data on numbers of schools, numbers of classes in schools, and number of students within classes. It would also be useful to know when students currently begin English language instruction in these districts. Also, if data are available, it would be valuable to obtain data from recent districtwide English examinations. These data would allow us to estimate the size of the typical gain in proficiency over the course of a year and would allow us to examine the variability within and between schools and classes.
Appendix B.
*The Forgotten World* Quick Reference Guide
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GETTING STARTED

PARTS OF A COMIC PANEL (SCREEN)

This teacher aid is a reference for you, the teacher, so you can show your students the parts of The Forgotten World comic panels and their functions. This information can also be found in the Teacher’s Guide.

<table>
<thead>
<tr>
<th><strong>Log into The Forgotten World by typing in the URL</strong></th>
<th><strong>In the beginning, students will type in their Username and Password and then click the Sign In button.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong><a href="http://21xp.com/english">http://21xp.com/english</a></strong></td>
<td><img src="image" alt="Sign In Screen" /></td>
</tr>
</tbody>
</table>

Students will see the **Loader** icon when the game is loading. Tell the students that they should wait until this icon goes away and the panel loads.
Below, is a typical comic panel (screen) in *The Forgotten World*. There are many parts to the panel that students should become familiar with so they can feel confident navigating the game. These parts are highlighted in red and numbered here, but each part separately will be described separately on the next three pages.
1. The **Welcome Student** text in the upper **right-hand** corner of the panel indicates that the student is logged into The Forgotten World.

2. The **Logout** button in the upper **left-hand** corner of the panel is where students can click to log out of the game.

3. In the lower **left-hand** corner of the panel, students will see the **episode/page indicator**. This will tell them what episode and what page they are on.

4. Once every dialog bubble on the page plays, the students may move on to the next comic panel by clicking the **Next** button. Students may also go back to the previous comic panel by clicking the **Back** button.

5. When the students roll over a dialogue bubble with their mouse, they may see certain words **highlighted in green**. These green words can be found in the Dictionary.
6. When students see that a part of the screen is **outlined in blue**, that means a **game** is present. Students should click on the glowing blue area to launch the game.

![Game is outlined in blue](image)

7. In the lower right-hand corner of the screen, students will see the **PDA**. Students may click on the PDA to open the PDA menu.

![PDA](image)

Inside the PDA menu, students will see icons:
- Episodes
- Dictionary
- Game
- Help
- Credits

If students click on the **Episodes** icon on the PDA menu, they will see a list of the episodes they have already entered. They will not be able to see the episodes they have not entered. Students can go back to the episodes they have entered by clicking on an episode icon in the list.
Students may click on the **Dictionary** icon on the PDA menu to open the dictionary and search for words. They can read the definition, listen to the word aloud, and listen to the word phonetically.

Students can navigate to a particular game by clicking the **Game** icon in the PDA menu.

Students can watch a short tutorial about how to navigate The Forgotten World by clicking on the **Help** icon in the PDA menu.
TECHNICAL FAQ

FREQUENTLY ASKED QUESTIONS

1. After pressing **Next**, I get a gray Zuka image and nothing happens. What do I do?
   This may be due to a problem connecting to the front-end, and/or back-end server.
   a) Note the current page number on the bottom left of the screen (Ep X, Comic Page X)
   b) Close the browser and open a new one
   c) Navigate back to the application
   d) Log in

2. After playing a game, I get a gray Zuka image and nothing happens. What should I do?
   Please follow FAQ #1

3. I want to play a game. How do I do that?
   a) Click on the **PDA Icon** at the lower right of the screen
   b) Click on the **Games Icon**
   c) Select the desired game

4. How do I get The Forgotten World to be full-size on my screen?
   a) Press F1 (function key)

I want to play a specific game that I've already encountered. How do I do that?
   b) Click on the **PDA Icon** at the lower right of the screen
   c) Click on the **Games Icon**
   d) Select the desired game
THE FORGOTTEN WORLD STORY SUMMARYs

The complete Teacher’s Guide, scripts for each episode and student worksheets are found on the enclosed CD-ROM.

EPISODE 1: FLIGHT TO AMERICA

Story Summary: We meet Uncle Jonesy, a scientist, as he is packing up his laboratory. He and his niece, Lia, are returning to the United States of America. Lia has made friends with one of your students, and she has invited him/her to accompany her to the United States. The student has arranged to meet Lia at the airport and board the plane to Los Angeles. While boarding the plane, the student is exposed to both formal and informal greetings. During the flight, Lia invites her friend to play video games.

梗概：一场爆炸之后，我们在Jonesy叔叔收拾实验室时见到了他。Jonesy叔叔是一位科学家。Jonesy叔叔和他的侄女，Lia即将返回美国。Lia和你的一位学生交上了朋友。她已邀请他/她陪她到美国。这名学生已安排在机场去接Lia，并将飞往洛杉矶。在登机过程中，这名学生受到正式和非正式的问候。在飞行期间，Lia邀请她的朋友玩视频游戏。

EPISODE 2 AND 3: LOS ANGELES

Summary: Lia and her friend (your student) arrive at Los Angeles International Airport, but they cannot find Uncle Jonesy anywhere. They decide to go to his home, but Uncle Jonesy is not there. They call his assistants, Dave and Ray, to help them. While unpacking, Lia discovers a mysterious round ball—Zuka. When touched, it tries to communicate with them via symbols. Ultimately the players discover that Zuka wants them to go to San Francisco, but how will they get there? In Episode 3, Grace arrives and says she will drive everyone to San Francisco in her Recreational Vehicle (RV), but first they need to stop for supplies.

梗概：Lia和她的朋友（你的学生）抵达洛杉矶国际机场，但他们到处找不到Jonesy叔叔。他们决定去他家，但Jonesy叔叔不在家。他们打电话叫来他的助手Dave和Ray来帮助他们。打开行李时，利亚发现一个神秘的圆球—Zuka。当有人触动它时，它会试图通过符号与人交流。最后他们发现Zuka希望他们去旧金山，但他们怎么能到那儿呢？

在第3集中，Grace赶来了，说她会驾着她的运动休闲车（RV），带大家到洛杉矶，但首先他们需要补充给养。
EPISODE 4: SAN FRANCISCO

**Summary:** Lia, Ray, Dave, and Grace finally arrive in San Francisco. Zuka tells them to find “The Harmony Shop” and Dr. Hu. Dr. Hu gives them more history about Zuka, teaches them relaxation exercise, and then sends them on the task to collect potion bottles that will keep them safe from their enemies—the Creepers.

梗概：Lia、Ray、Dave和Grace一行最后抵达旧金山。Zuka告诉指示他们找到“和谐商店”和胡博士。胡博士给他们讲述了Zuka的由来，并教他们做放松训练，然后给他们布置了收集魔水瓶的任务，魔水瓶将保证他们免受他们的敌人——食人族的侵害。

EPISODE 5: DENVER, COLORADO

**Summary:** The group is being led by Zuka across the Rocky Mountains to Denver, Colorado. They hope that Jonesy is there waiting for them. Once there, they go to NOAA, a national weather station, and then the Creepers arrive on the scene and the gang eludes them again. The gang searches for the key.

梗概：Lia一行由Zuka带领，穿过落基山脉到达科罗拉多州丹佛市。他们希望Jonesy在那里等着他们。一到那里，他们就去国家气象台。紧接着食人族也到了那里。他们又一次成功地摆脱了食人族。他们到处在搜寻钥匙。

EPISODE 6: ROSWELL, NEW MEXICO

**Summary:** As the group heads for Roswell, New Mexico, Dave explains some of the rumors surrounding the city. After passing through security, Zuka leads everyone to a cave, where they find and release Uncle Jonesy. Before they escape, he explains about the earth’s “life force” energy and that the Creepers seek this energy.

梗概：当小分队向新墨西哥州罗兹韦尔市挺近时，Dave向他的伙伴们解释了有关这个城市的一些谣言。通过安全检查之后，Zuka把大家带到一个山洞，他们在那里找到并解救了Jonesy叔叔。在他们逃跑时，他解释有关地球的“生命力”的能源，并说食人族也在寻找这种能源。
EPISODE 7: DALLAS, TEXAS

Story Summary: The group travels to Dallas and attends a Rodeo. The Rodeo is not quite right. The weather conditions continue to be out of the ordinary. Information is gathered that the Creepers are building a water capture machine.

EPISODE 8: NEW ORLEANS, LOUISIANA

Story Summary: The group goes to New Orleans. They arrive in the middle of a Mardi Gras celebration. Jonesy tells them about strange activities by the local river. The city is full of Creepers!

EPISODE 9: DETROIT, MICHIGAN

Story Summary: The group arrives in Detroit to investigate an abandoned car factory. As they heard in New Orleans, the city is teeming with Creepers. As they investigate, they find what the Creepers are doing there.
**EPISODE 10: CHICAGO, ILLINOIS**

**Story Summary:** The group continues to chase the Creepers. Their next destination is at the Sears Tower in Chicago, Illinois (“The Windy City”). Zuka is trapped in the tower. They save Zuka, but he is very sick. They must harness the Earth’s life force to heal Zuka. This life force is at four power centers.

梗概：Lia他们一行继续追赶食人族。他们的下一个目的地是坐落在被称为“风城”的芝加哥市的希尔斯特大厦。Zuka被困在大厦里。他们救出了Zuka，但他病得很厉害。他们必须利用地球生命力来Zuka治病。地球生命力来自四个力量中心。

**EPISODE 11: WASHINGTON D.C.**

**Story Summary:** They find out that Washington D.C. has important clues and race to get there before the Creepers do. Zuka feels better after touching water which becomes one of the four power centers. As the journey continues, Lia learns more information about her family history.

梗概：他们在华盛顿特区发现重要线索，并在食人族到达之前飞速赶到那里。Zuka在摸了四个力量中心之一的水之后，感觉好多了。随着旅程的继续，Lia了解到更多有关她家族历史的情况。

**EPISODE 12: NEW YORK, NEW YORK**

**Story Summary:** The group goes into New York City to find the other three power centers. Zuka transforms into a beautiful being with more power. They go to the Statue of Liberty to synthesize the powers and defeat the incoming Creepers, saving the world!

梗概：这个小组进入纽约市去找其他三个力量中心。Zuka得到更多的力量之后，变得更加漂亮。他们到自由女神像去合成这四种力量，打败了正在侵入的食人族，并拯救世界！
THE FORGOTTEN WORLD GAME DESCRIPTIONS

Descriptions of the games that occur in the Forgotten World are listed below in alphabetical order, along with their occurrences within the episodes. These descriptions can also be found in Appendix A in the Teacher’s Guide.

**Floating Phrases Game:** The challenge for players is to construct valid sentences from a series of phrases that are floating across the screen. The players will need to understand the meaning of the words as well as the sequences in which the phases must be placed.

**Episodes:** 1, 5, 11

**Directions:** Drag the phrases to the empty spaces at the bottom of the screen. Put three phrases in the correct order to make an English sentence. When all of the spaces are filled, click the Submit button to check your work. To win the game, make five different sentences before the time runs out.

将短语拖进屏幕下方的空白处。将三个短语按照正确的顺序进行排列组合，最后组成一个英文句子，所有空白处被填满后，请点击提交按钮（Submit）检查句子是否正确。若能在规定时间内完成五个不同的句子，就能赢得本节比赛。
**Map Game:** The player’s challenge is to guide other characters in the story through a map or maze to collect items and, ultimately, to reach a final target destination. The player does this by constructing a series of directions from a set of words and receiving written and audio feedback from the character who is receiving the directions.

**Episodes:** 4, 6, 8

**Directions:** Give Grace the directions she needs to find the bottles of potion. Click on one of the tabs at the top of the screen to select the type of sentence you want to use. Then, select words from the drop-down menus to complete the sentence. Click on the green button to hear your sentence and give the instruction to Grace. Avoid the creepers or you will lose the bottles you've collected. After you collect five bottles of potion, you can help Grace find the clue or you can collect more bottles to earn more points. Find the final clue to win the game.

给Grace提供如何找到魔药瓶的指南。点击屏幕上方其中的一个图标来选择你想使用的句子类型。然后从下拉菜单中选出适合的单词来完成该句子。点击绿色按钮来听句子发音，并给Grace发出指令。尽量避开爬行者，否则将会失去你刚刚搞到手的魔药瓶。当你拥有五个魔药瓶后你就可以帮助Grace找到线索，或者可以收集更多的魔药瓶来获取加分。找到最终的线索就可以闯过此关。

**San Francisco, California Map Game (Episode 4)**
Roswell, New Mexico Map Game (Episode 6)

New Orleans, LA Map Game (Episode 8)
**Phoneme Game:** In the phoneme game, Zuka's memory banks have become scrambled. As a result, Zuka has forgotten how to pronounce certain English words. The player must restore Zuka’s memory banks and its ability to communicate by unscrambling its memory and teaching it how to pronounce a series of words.

Episodes: 9, 12

**Directions:** Arrange the sounds correctly to teach Zuka how each word is pronounced. Click on the Audio button on the left to hear the sounds. Drag the sounds to place them in the correct order for each word. Complete the sound arrangement correctly for all five words to win the game.

将语音正确排序来教Zuka每一个词的发音。点击左侧的声音（Audio）按钮听音，然后将不同音拖到正确的位置，将它们组合成单词的发音。若能正确完成五个单词的语音排列即可赢得此节
**Shopping Spree Game:** The game is designed to test listening comprehension in a simulated, real-world environment. The player's challenge is to locate a variety of items in a store by listening to audio clues, which are presented as snippets of conversations from different areas of the store.

**Episodes:** 3, 8

**Directions:** Use the arrow keys on the keyboard to locate the items on your shopping list. Listen to the clues to help figure out where each item is located. When you find an item on your list, click on it and then check off the item on your list to add it to your shopping cart. To win the game, find all five items on your list before the time runs out.

用键盘上的方向键来定位你购物清单上的所有物品，请仔细听语音提示，以便确定每个物品所处的正
确位置。请仔细收听语音提示信息，在找到任何购物单上的商品后，点击鼠标左键将其从购物单清除，
放入购物车。要在规定时间内找全所有五件商品才能赢哦！

**Shopping Spree (Episode 3)**
Shopping Spree (Episode 8)
**Story Recap Game:** Designed to test reading and writing comprehension by asking players to briefly summarize key events they have encountered throughout the story. The player listens to the dialog for each event and then places the series of events in the sequence in which they occurred in the story.

**Episodes:** 3, 6, 9, 12

**Directions:** Click on the pictures to hear what each person said during the story. Then, put the words in the correct order to match what the person said and click the **Done** button to check your work. When all five people have the correct words, drag the pictures to place them in the order that these things happened in the story.

点击图片来听故事中每个人物的谈话。然后将单词按正确的顺序排列组合，使之同故事中每个人物的谈话相吻合。最后点击完成。
**Tri Words Game** is used as the pre-assessment. The game allows players to test their understanding of a wide variety of vocabulary by matching spoken audio to written words and phrases, as well as to symbols and images.

**Episodes:** 1, 7, 11

**Directions for Pre-Assessment:** Your goal is to clear the board of all triangles by matching sets of three or more triangles that are next to each other. To create a match, click on a triangle to see its Mandarin word. Then, find the word in English as it moves across the screen and drag it to the correct triangle to create a match. Match sets of three or more adjacent triangles to clear them from the board. Clear the entire board to win the game.

本节的目标是通过把三个或三个以上相邻的三角形连在一起来清除屏幕上所有的三角形。首先你要点击一个三角形，就能看见一下其中的汉语词语。然后从在屏幕上滚动的英语单词中寻找与汉语词语匹配的英语单词，并将其拖到正确的三角形里，与相应的汉语词语匹配。完成三个或三个以上相邻的三角形的匹配即可将它们从屏幕上清除，清除屏幕上所有三角形后即可赢得本节比赛。

**Directions:** Your goal is to clear the board of all triangles by matching sets of three or more triangles that are next to each other. To create a match, click on a triangle to hear its word. Then, find a matching word or picture as it moves across the screen and drag it to the triangle. Match sets of three or more adjacent triangles to clear them from the board. Clear the entire board to win the game.

本节的目标是通过把三个或三个以上相邻的三角形连在一起清除屏幕上所有的三角形。首先点击一个三角形来听单词读音，然后屏幕上会出现该单词或者图片，把对应的词语或者图片拖进三角形里。完成三个或三个以上相邻的三角形的匹配，即可将它们从屏幕上清除，清除屏幕上所有三角形后即可赢得本节比赛。
**Zuka Symbol Puzzle Game:** The player must communicate with Zuka using symbolic icons that represent words and concepts to construct a series of English phrases. It encourages comprehension of English by “constructing” communication.

**Episodes:** 2, 4, 10
**Directions:** Click on the buttons at the left of the screen to hear each sentence. Then, drag the tiles from the top of the screen into the empty spaces to create each sentence in symbols and words. When all of the spaces are filled, click the Submit button to check your work. If any sentences are not correct, move those tiles to the correct positions and click Submit again. To win the game, use all of the tiles to complete all five sentences correctly.

点击屏幕左侧的按钮来听每一个句子。然后将屏幕上方的方砖拖至空白处，用符号和单词来造句。当 所有空白处被填满后，点击提交按钮 ！（Submit）检查句子是否正确。如句子错误，重新将方砖移到正确的位置再次提交。在贴完所有的方砖，正确完成五个句子之后，你将赢得这场游戏。
HOW TO ACCESS FILES ON THE TEACHER’S HUB

tfwteachers.com

Teachers will find the following information on the Teachers’ Hub:

- Class Progress Reports
- Individual Student Progress Reports
- The Teachers Guide
- Simplified Scripts of The Forgotten World Episodes
- Sound Clips from Episodes

To go to The Forgotten World Teachers’ Hub:

**Step 1:** Open a web browser and type in [http://www.tfwteachers.com](http://www.tfwteachers.com)

**Step 2:** Log in with your user name and password.

**Step 3:** Click on “My Class”, and view your students’ progress.
Step 4: To see only one student’s progress, click on that student name in your class list.
**Step 5:** To download copies of the Teachers Guide, scripts, sound files or other teacher content, click on Downloads in the menu.

**Step 6:** When finished, please click “Log Out”

Distributed by:

Coastline Community College  
11460 Warner Avenue  
Fountain Valley, CA 92708  
Telephone: (714) 241-6109  
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E-mail: CoastLearning@coastline.edu

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   Michelle Nieman
   Jingfang Satow
   Meg Yanalunas
   Learning Games Network Alex Chisholm
   Sherri Wright
Appendix C.
English Proficiency Tests Under Consideration, October 2008
## Categories of Information

<table>
<thead>
<tr>
<th>Maker and Website</th>
<th>ACTFL Oral Proficiency Interview OPI; OPIc; OPIc Jr.</th>
<th>IPT 2004 (IDEA Proficiency Test)</th>
<th>The MAC II (Maculaitis Assessment of Competencies II Test of English Language Proficiency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of English assessed</td>
<td>• OPI: 10 proficiency ratings from Novice Low to Superior • OPIc: 9 ratings from Novice Low to Advanced. • OPIc Jr.: 6 ratings from Novice Low to Intermediate High. (According to the ACTFL Testing Office, OPIc Jr. is designed because of the demand from the Asian market. It is currently used in Korea and the self-administered background survey that precedes the test is in Korean. A US version is still in development and its expected release is in November 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill areas assessed</td>
<td>Speaking and oral proficiency</td>
<td>1. Oral: both speaking and Listening (individual); pre-recorded examiner is not recommended because the test requires interactions. 2. Reading (group) 3. Writing (group)</td>
<td>1. Speaking (individual); examiner to rate responses immediately 2. Listening (group); audiotapes can be purchased for the Blue, Orange, Ivory, and Tan levels 3. Reading (group) 4. Writing (group)</td>
</tr>
</tbody>
</table>

Continued on next page…
### Categories of Information

<table>
<thead>
<tr>
<th>Potential to measure growth</th>
<th>ACTFL Oral Proficiency Interview OPI; OPIc; OPIc Jr.</th>
<th>IPT 2004 (IDEA Proficiency Test)</th>
<th>The MAC II (Maculaitis Assessment of Competencies II Test of English Language Proficiency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Only proficiency ratings are offered but the ACTFL Testing Office claims that OPIc is used regularly to measure pre and post semester testings</td>
<td>• Alternate test forms to ensure reliability of scores between testing (Forms E and F for oral tests and Forms C and D for reading/writing tests)</td>
<td></td>
<td>• Alternate test forms are available at the testing level for pre- and post-testing</td>
</tr>
<tr>
<td></td>
<td>• The IPT oral tests provide score levels (raw scores can be derived)</td>
<td>• The IPT reading tests generate percentiles, Normal Curve Equivalent scores, and Standard scores (raw scores can be calculated)</td>
<td>• Raw score and converted standard score can be tallied for each student and for each skill area</td>
</tr>
<tr>
<td></td>
<td>• The IPT writing tests use a four-point rubric for scoring</td>
<td>• Oral (individual): untimed, but 15-20 minutes, scored as students are being tested.</td>
<td></td>
</tr>
<tr>
<td>Time required for administration</td>
<td></td>
<td>• Reading (group): untimed, but usually 60 minutes</td>
<td>• Speaking (individual): 6 min</td>
</tr>
<tr>
<td>30-40 minutes (20-30 minutes for the test and 10 minutes for background survey and self-assessment)</td>
<td></td>
<td>• Writing (group): untimed, but usually 35 minutes</td>
<td>• Listening (group): 20-30 min</td>
</tr>
<tr>
<td>Special requirements for administration</td>
<td></td>
<td>The oral test requires a live examiner.</td>
<td>Speaking test requires a live examiner.</td>
</tr>
<tr>
<td>OPIc and OPIc Jr.: Web accessibility and high speed connection, headsets with microphones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriateness for age group</td>
<td>OPI and OPIc: General audience</td>
<td>Pre-K to 12</td>
<td>Pre-K to 12</td>
</tr>
<tr>
<td>OPIc Jr.: K-8 students</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
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</tr>
</thead>
</table>
| Cultural appropriateness  | • The Asian version of the OPIc Jr. lets the testers identify themselves in four school levels: Preschool/Kindergarten, Grades 1-3, Grades 4-6, and Middle School. The U.S. version of the OPIc Jr. is being released at the end of this year, but the school levels are Elementary, Middle, and High schools.  
• Based on the (demo) Asian version of the OPIc Jr., the background survey is geared toward the Korean audience (e.g. mention of after-school academy; activities), but the ACTFL Testing Office claims that they can make adjustments and also make the Chinese instructions available.  
• Some test questions are asked in a row. The ACTFL Testing Office explains that the test does not intend for the test-taker to be able to answer all the questions. Their proficiency is measured by the details that they can provide at any of the questions read, even when they say, "I can’t answer the rest of the questions because I did not remember what they were." Such a statement may demonstrate their oral proficiency. | Based on the sample tests, two issues were identified:  
• Store varieties: Pet store  
• Children’s activities: boy goes to the post office, eating popcorn and lying on the floor in front of TV | Based on the sample test, three issues were identified:  
• Food items: bread and milk  
• Pictures: few Asians and some everyday objects may look different in China (e.g. a school desk)  
• Person names: some Spanish names |

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### Categories of Information

<table>
<thead>
<tr>
<th>ACTFL Oral Proficiency Interview OPI; OPIc; OPIc Jr.</th>
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<th>The MAC II (Maculaitis Assessment of Competencies II Test of English Language Proficiency)</th>
</tr>
</thead>
</table>
| **Cost** | Testing, scoring, and customer support:  
  - $25 per test for OPIc Jr.; volume discount is available  
  - $50 per test for OPI | Testing:  
  - In-service training kit for IPT: $135  
  - IPT I oral test set (50 booklets): $185  
  - IPT I oral test alternate forms (50): $51  
  - IPT I oral test diagnostic answer sheets (50): $51  
  - IPT I oral test scannable answer sheets (50): $51  
  - IPT 1 reading/writing test set (50): $228  
  - IPT 1 reading/writing alternate test booklets (50): $81 for reading and $60 for writing | Testing:  
  - Classroom set for a class of 25: $180 for red/blue; $239 for higher levels  
  - Administration manual: $45  
  - Test booklets: $105 per 25 for red/blue; $138 per 25 for higher levels  
  - Pictures booklet (red/blue only): $18  
  - Answer sheets (orange, ivory, tan): $21 per 25  
  - Writing forms (orange, ivory, tan): $29 per 25  
  - Listening test audiotapes: $27  
  - Student record forms: $32 per 25 |
| **Option to adapt instrument** | OPIC Jr.  
  - The background survey determines the test questions. For the OLLI audience, a uniform background survey needs to be used.  
  - A button is available for the test takers to repeat the question once, but they cannot go back to a previous question. | According to psychometrician George Seretis of Ballard Tighe (Maker of the IPT), minor adaptation is possible as long as the test item remains in context. However, if the change is likely to change the item, it is better to simply skip it and give the student the credit. | TBD |
| **Vocabulary overlap with OLLI** | OLLI is developed based on ACTFEL Standards and ELLS E-Learning Standard (to raise speech acquisition from Novice Low and Novice High) | To be assessed | To be assessed |

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<table>
<thead>
<tr>
<th>Categories of Information</th>
<th>ACTFL Oral Proficiency Interview OPI; OPIc; OPIc Jr.</th>
<th>IPT 2004 (IDEA Proficiency Test)</th>
<th>The MAC II (Maculaitis Assessment of Competencies II Test of English Language Proficiency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary overlap with curriculum</td>
<td>? Need curriculum materials</td>
<td>To be assessed with curriculum materials</td>
<td>To be assessed with curriculum materials</td>
</tr>
<tr>
<td>Estimated effect size over one year</td>
<td>Information unavailable</td>
<td>According to psychometrician George Seretis, they did a study five years ago but no information is available on standard deviation. For the oral test, the IPT 1 (level recommended for OLLI based on preliminary assessment) has one score level gain (about 14 points in raw score). For the reading and writing tests, there is a mean of 11-point gain and three-point gain, respectively.</td>
<td>TBD</td>
</tr>
</tbody>
</table>

1 ACTFL does offer a test to assess writing proficiency, but it is intended for the general audience.
2 It’s possible to derive speaking and listening scores separately, but the norms have not been updated.
Appendix D.
Plan for Pilot Test of *The Forgotten World* in Gansu Province, April–June 2009
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I. Background and Goals for the Pilot

In the fall of 2008, the Chinese Ministry of Education informed the U.S. that schools in Gansu Province would be available to participate in the evaluation of *The Forgotten World* (*TFW*), a computer-based game designed to help middle-school students learn English. A brief trip was made to Gansu Province in December, 2008, to visit schools and assess whether these schools would provide a good base for the evaluation. Among our questions were the following:

- Are schools and teachers willing to implement the program as a supplement to regular instruction, providing access to *TFW* in the computer lab at least one hour per week?
- Do the students in seventh or eighth grade exhibit the expected level of English that is targeted by *TFW*?
- Do the schools have the requisite computing configurations to implement the program?

We found that principals and teachers were eager to implement the program, and teachers in the two pilot schools that were visited promised that students would be given access to *TFW*. They also asked for a teacher’s guide and some ideas about how they might use *TFW* in class. Students in all grades (7 – 9) were eager to participate in the pilot sessions and, based on the preliminary tests and examination to test booklets, had sufficient background in English to benefit from *TFW*. Unfortunately, the computer labs did not have the suggested hardware and software. Staff from the Provincial Center for Educational Technology (PCET) were able to develop a “work-around” for our visit that supported most program features; however, upgraded equipment will be needed for schools to fully use the program. Needed upgrades to the configurations will be made for the pilot test (two schools) but are uncertain for the full-scale (10 schools).

We are proceeding with the pilot test and planning for the full-scale evaluation. The purpose of this document is to outline our goals for the pilot test. The aim of the pilot is to ensure that all instruments and procedures are tested in advance of the full-scale evaluation. We have five primary goals for the pilot:

1. Confirm that all instruments are culturally appropriate for Chinese middle-school students and the proposed test battery can measure change over an academic year.
2. Develop and collect data to measure program implementation.
3. Assess whether teacher training is sufficient.
4. Test all data collection protocols and procedures.
5. Gather feedback from teachers and students concerning their experiences using *The Forgotten World*.

We have developed specific evaluation questions to be answered under each of these goals. Exhibit D-1 presents the evaluation questions, the method of data collection, the organization or person responsible, the timing of the data collection (April or June), and the organization that will enter the data and conduct the analysis. This document includes a section discussing each goal and related evaluation questions and plans.
### Exhibit D-1. Evaluation Questions for Gansu Pilot

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>Method/Source</th>
<th>Responsible Person</th>
<th>April Data Collection</th>
<th>June Data Collection</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gather information on assessments for design of full-scale evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate teacher training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials sufficient for startup?</td>
<td>End-of-training questionnaire</td>
<td>RTI</td>
<td>Green</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>How much teacher training is needed?</td>
<td>End-of-training questionnaire</td>
<td>RTI</td>
<td>Green</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>Feedback after pilot complete—what training would have helped?</td>
<td>Post pilot questionnaires and focus groups</td>
<td>RTI</td>
<td>Green</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>Questionnaires</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is proposed test battery able to measure change over one year? Proposed battery to</td>
<td>Assessments administered at two schools, all 7th-</td>
<td>RTI</td>
<td>Zhu</td>
<td>Additional testing</td>
<td>RTI</td>
</tr>
<tr>
<td>include IPT reading, writing; Mac II listening (adapted); use pre- and post-test</td>
<td>grade students</td>
<td></td>
<td></td>
<td>if needed</td>
<td></td>
</tr>
<tr>
<td>versions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot speaking test using Skype</td>
<td>Sample of students</td>
<td>RTI</td>
<td>Green</td>
<td>Green</td>
<td>RTI</td>
</tr>
<tr>
<td>What are students beginning and end-of-year scores on provincial tests?</td>
<td>School or province</td>
<td>ECNU</td>
<td>Zhu</td>
<td>ECNU</td>
<td></td>
</tr>
<tr>
<td>Questionnaires</td>
<td>Student and teacher questionnaires to gather</td>
<td>RTI/ECNU</td>
<td>Zhu</td>
<td>Zhu</td>
<td>ECNU</td>
</tr>
<tr>
<td>Measure implementation of program</td>
<td>System data</td>
<td>LGN</td>
<td>LGN</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>Can we track student use?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do teachers use TFW?</td>
<td>Teacher logs</td>
<td>RTI</td>
<td>Green</td>
<td>Green</td>
<td>RTI</td>
</tr>
<tr>
<td>Pace of learning - how much is covered?</td>
<td>Teacher logs and system data</td>
<td>RTI and LGN</td>
<td>Green</td>
<td>Green</td>
<td>RTI</td>
</tr>
<tr>
<td>Do teachers use Teacher Reports?</td>
<td>System data and post-pilot question</td>
<td>RTI and LGN</td>
<td>Green</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>What type of technical support was needed?</td>
<td>Structured interviews with PCET and school tech</td>
<td>RTI/ECNU</td>
<td>Zhu</td>
<td></td>
<td>ECNU</td>
</tr>
<tr>
<td>What problems did the school face in implementing TFW? What were the rewards?</td>
<td>Structured interviews with principals</td>
<td>RTI/ECNU</td>
<td>Zhu</td>
<td></td>
<td>ECNU</td>
</tr>
<tr>
<td>Confirm hardware and software configurations used at schools</td>
<td>Checklist completed by school tech personnel</td>
<td>RTI/LGN</td>
<td>Zhu</td>
<td></td>
<td>ECNU</td>
</tr>
<tr>
<td>End-of-training questionnaires and focus group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
Appendix D – Plan for Pilot Test of The Forgotten World in Gansu Province, April – June, 2009

Exhibit D-1. Evaluation Questions for Gansu Pilot (continued)

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>Method/Source</th>
<th>Responsible Person</th>
<th>April Data Collection</th>
<th>June Data Collection</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test procedures for data collection</td>
<td>Protocol to be developed by ECNU with RTI approval</td>
<td>ECNU</td>
<td>Zhu</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>How are test administrators identified? Can teachers be used?</td>
<td>Protocol to be developed by ECNU with RTI approval</td>
<td>ECNU</td>
<td>Zhu</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>What is the best method for training test administrators? How long is needed?</td>
<td>Protocol to be developed by ECNU with RTI approval</td>
<td>ECNU</td>
<td>Zhu</td>
<td></td>
<td>RTI</td>
</tr>
<tr>
<td>Do test administrators follow protocols?</td>
<td>Observations of test sessions</td>
<td>RTI/ECNU</td>
<td>Zhu</td>
<td></td>
<td>ECNU</td>
</tr>
<tr>
<td>What is the best way to handle informed consent?</td>
<td>Protocol to be developed by ECNU with RTI approval</td>
<td>RTI/ECNU</td>
<td>Zhu</td>
<td>Zhu</td>
<td>RTI</td>
</tr>
</tbody>
</table>

Gather feedback on using *The Forgotten World*

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>Method/Source</th>
<th>Responsible Person</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do students use the Forgotten World? What do they like and dislike? How does it help them learn English?</td>
<td>Questionnaires and cog interviews</td>
<td>RTI</td>
<td>Sha</td>
</tr>
<tr>
<td>What do teachers like and dislike about The Forgotten World?</td>
<td>Post-pilot questionnaires and cog interviews</td>
<td>RTI</td>
<td>Sha</td>
</tr>
</tbody>
</table>

1. Pilot test assessment instruments

Pretest results

In December, we conducted a small pretest of two instruments that were identified as promising, the Mac II (grades 2 – 3) and the IPT Level 2. The Mac II was administered to 20 seventh-grade students. We administered the IPT to 20 eighth-grade students. A summary of results are presented in exhibit D-2.

Exhibit D-2. Test scores for IPT and MAC from Gansu December Pretest

<table>
<thead>
<tr>
<th></th>
<th>IPT</th>
<th>MAC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total items</td>
<td>Range</td>
</tr>
<tr>
<td>Reading</td>
<td>53</td>
<td>30 – 45</td>
</tr>
<tr>
<td>Writing</td>
<td>6</td>
<td>2 – 6</td>
</tr>
<tr>
<td>Listening</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Speaking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Only one part of IPT Writing test was administered because of time constraints.

The MAC appears to capture the range of English competency for seventh-grade students and the IPT captures the range of competency for the eighth-grade students tested at the two schools. The

---

8 Other tests were reviewed but removed from consideration. The ACTFL proficiency tests and the TOEIC are geared for adult populations; the TOEIC Bridge was age-inappropriate; and the Cambridge Young Learners Exam does not provide scale scores (only proficiency levels). The distributor of the Stanford English Language Proficiency test was unwilling to work with the project.
only subtest that appears to have a ceiling or floor effect is the IPT writing test; however, we only administered one subtest. Since we did not administer the most difficult section, we do not believe that this would be an issue in the full administration.

We also matched the vocabulary used in TFW, the English textbooks used in the schools, and assessment items. For the assessments, we identified items that three or fewer students answered correctly. Only one item in the IPT fell into this category, and the key word in the item was “pain,” a word that is not covered until the ninth-grade textbook. The MAC contained 11 items that fell into this category: Seven of those key words could not be found in the textbooks, one was in the seventh-grade text, two in the eighth-grade text, and one in the ninth-grade text. The MAC would need substantial modification to be used in the evaluation.

We also compared the vocabulary in the Chinese texts for seventh and eighth grades with TFW vocabulary to try to determine which grade would be better “match” for TFW. The TFW was designed for students with some prior exposure to English and assumes that students have a 500-word vocabulary. We matched the list of 500 words to TFW and present the results in Exhibit D-3.

**Exhibit D-3. Prerequisite vocabulary words presented in textbooks by grade level**

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th grade</td>
<td>269</td>
</tr>
<tr>
<td>8th grade</td>
<td>71</td>
</tr>
<tr>
<td>9th grade</td>
<td>23</td>
</tr>
</tbody>
</table>

Of the 500 words, 363 could be found in the middle school textbooks, with over half (269) appearing in the seventh-grade text book. Thus, it seems unwise to assume that seventh-grade students will have the working vocabulary expected by the game designers.

Exhibit D-4 presents information on matches between the TFW vocabulary and the middle school textbooks. In addition to the 500 prerequisite words, TFW presents over 1,000 new words across the 12 episodes; about half of the words (508) are also found in the Chinese middle school textbooks, and most of these (267) are found in the seventh-grade text.

The seventh- and eighth-grade textbooks contain about 492 words each or 985 words total. This means that about 40 percent of the vocabulary ((267+145)/1000) normally taught in these two grades will be reinforced by TFW.
### Exhibit D-4. Matched Vocabulary Count by TFW Episode and Textbook Grade Levels

<table>
<thead>
<tr>
<th>TFW Episode</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>65</td>
<td>25</td>
<td>11</td>
<td>101</td>
</tr>
<tr>
<td>2</td>
<td>28</td>
<td>5</td>
<td>10</td>
<td>43</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>15</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>30</td>
<td>14</td>
<td>64</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>19</td>
<td>14</td>
<td>10</td>
<td>43</td>
</tr>
<tr>
<td>7</td>
<td>16</td>
<td>13</td>
<td>5</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td>14</td>
<td>13</td>
<td>45</td>
</tr>
<tr>
<td>9</td>
<td>31</td>
<td>6</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>11</td>
<td>27</td>
<td>8</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>8</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>267</td>
<td>145</td>
<td>96</td>
<td>508</td>
</tr>
</tbody>
</table>

### Suggestions for spring pilot

Based on our experience in Gansu with the pretest, we suggest the following:

1. We will ask eighth-grade students to participate in the evaluation. This group will have much of the prerequisite vocabulary and will have learned about one-quarter (267) of TFW new words in seventh grade. There will still be about three-quarters of the TFW vocabulary that they will have to learn through the episodes and games. Given that vocabulary is antecedent to more complex language competencies (sentence structure, grammar, etc.) we think that eighth-grade students are in the best position to benefit from TFW.

2. For reading, we will use the IPT. In the pretest the reading test seemed well-matched to student abilities—there were no students who were at the top or bottom of the test. This test also requires very little modification, if any. We will need to examine the alternate forms of this test (we need one form for the pre-test and one for the post-test) to make sure that there are no culturally inappropriate items.

3. For writing, we will use the IPT, including a second writing subtest that requires students to write a story. We will not use the subtest that measures “writing conventions” such as punctuation, since TFW does not aim to improve student competency in this area. The range of total possible scores on the writing subtest will be 0 to 9 points, although we could consider expanding the grading rubric.

4. For listening, we propose to revise the MAC listening test. For the MAC test, a tape is supplied and a native U.S. English-speaking person provides instructions and reads all the questions to students. In administering the pretest, we found the instructions to be somewhat cumbersome and the layout of the answer sheets was confusing to students. We will simplify the directions and the answer forms. Two forms will be needed; one for administration at the beginning of the year and one for administration at the end of the year.
5. RTI will explore devising a new test, assessing reading and listening skills based on items that appear in TFW that do not appear in the school textbooks. This test will be administered at the end of the school year. The structure of the listening test and items will mirror the MAC listening test and will include: eight items that ask students to select a picture that matches the word, eight items that are based on two short stories that are read to students; and eight items that require students to select an appropriate response to a conversational question. An audiotape will be professionally recorded that will be used in all classrooms. There will be 26 reading items based on TFW. The total test will have 50 items.

6. The reading, writing, and listening tests should provide us with a scale of at least 86 points (53 reading, 10 writing, and 24 listening), although we may want to consider weighting the subtests.

7. For the pretest, we propose administering a speaking test to a subsample of students—IF the voice recognition applications can be made to work on the school machines. The speaking test will be patterned on the MAC and will have three parts: students view pictures and say the word in English; students are asked personal or conversational questions about themselves; and students view a picture and are asked to tell a story about the picture. The sessions will be tape-recorded. We had hoped to administer these tests via computer but do not believe that the Internet connections will be sufficient.

8. We will ask to administer the assessments to ALL seventh and eighth grade students in the two schools participating in the pilot. This will provide us with about 1,000 students per grade or about 500 per test form. It will also allow us to estimate the growth in language during an academic year by comparing end-of-year seventh-grade students (equivalent to beginning eighth-grade students) with end-of-year eighth-grade students. Note that this will only be an approximation since we won’t have beginning and end-of-year scores for the same students. (We were unable to launch the pilot in the fall because of delays in software development).

9. The proposed test battery will require approximately two hours of testing time. Reading typically requires 60 minutes; writing 30 minutes and listening 30 minutes.

10. The IPT reading/writing test costs approximately $4 per booklet ($8,000 for the pilot).

11. Schools will be asked to provide beginning and end-of-year test scores on the district assessments for eighth-grade students participating in the pilot. Officials in Gansu agreed to this in December. We will need to collect identifying information from students (name and school, perhaps birth date or school ID) to make the match.

2. Measure implementation

One of the goals of the pilot is to make sure that conditions are such that schools and teachers can implement the program. Thus we want to confirm that TFW is fully functional, the equipment is able to support student use, any technical support that is required is given to schools, and teachers refer to TFW in the classroom and give students the opportunity to use the program. At the December meeting in Gansu, the principals stated that they would make sure that students have access to the computer lab for 40 minutes at least once a week, and the principal of school committed to a higher level, promising to incorporate TFW in English classes once each week. We will want to confirm these agreements and monitor the implementation. We also want to learn how quickly or slowly students will move through TFW so that we can time the full-scale data collection to closely follow the completion of TFW.
Exhibit D-1 provides information on the questions we want to answer in the pilot. We will need to collect data from several sources:

- We have asked Learning Games Network (LGN) to collect information on students’ use of TFW (total time and highest-level episode), teacher use of TFW (total time or number of logins and a count of times teacher reports are accessed), and “down periods” when the system is not be used at all by the school (to uncover system issues or other events preventing the use of the program). PCET will be asked to contact schools that have down periods of more than one week to see if technical assistance is needed.
- Teachers will be asked to keep brief logs of their use of TFW, both in class and when students are given access to the lab. We will develop a Chinese-language template for the log.
- Structured interviews will be conducted at the end of the pilot with PCET and school tech personnel to document the types of system support that were needed.
- Structured interviews will be conducted with principals at the end of the pilot to discuss any issues in implementation and also the perceived benefits of using TFW.
- A checklist documenting the elements of the computing infrastructure will be collected from each school.

3. Evaluate teacher training

In the pilot, we want to find out from teachers if the training they received was sufficient for their subsequent use of TFW, and to gather their suggestions for ways it might be improved. We will do this at two points in time. An initial questionnaire will be developed to be administered at the end of teacher training to assess whether teachers feel they have the knowledge they need to begin using TFW. At the end of the pilot, teachers will be asked to complete another questionnaire assessing, in retrospect, if the training was adequate. These data will be supplied to Coastline to help in creating the final teaching materials for the full-scale evaluation.

4. Field test data collection procedures

Professor Zhu, our data collection partner in China at East China Normal University (ECNU) has arranged to bring graduate students from Shanghai to administer the tests and will also hire additional administrators in Gansu province (probably from Northwest Normal University). We will arrange a training session with Professor Zhu on the administration of the tests and will help to prepare training manuals. RTI will observe the test administrator training and some test administrations. RTI will also prepare a short information form that test administrators will be asked to complete that describes salient features of the test session as well as any issues that arose during the test session.

5. Gather feedback on experiences using The Forgotten World

At the completion of the pilot in June, we will collect some information concerning students’ experience using TFW on the student questionnaire. We will also collect information from teachers on a teacher questionnaire, as well as convene a focus group of teachers to discuss the experience.
We may wish to conduct some number of cognitive interviews with students as they use the software. This needs to be discussed with LGN and Coastline, to determine whether this information will be useful to future development.

6. Pilot questionnaires

Teacher questionnaires

Teachers will be asked to complete a training evaluation, a teaching log, and a questionnaire, all of which will be prepared in Chinese. The questionnaire to be administered in June will capture information on:

- The quality of training
- Experiences using TFW
- Experience teaching English
- Education and credentials for teaching English
- Informal exposure to English, including travel
- Likelihood that they will continue using TFW
- Limited demographic items

Student questionnaires

Questionnaires will be administered to students in April and June. The questionnaires will be designed to capture:

- Experience using TFW
- Years of formal English instruction
- Informal exposure to English (TV, videos, friends or relatives, etc)
- Importance of learning English
- Expectations for future
- Limited demographic items

RTI will develop a list of items and ECNU will develop the Chinese-language questionnaires. The questionnaires will be reviewed by a native Chinese-speaking survey methodologist at RTI.

II. Plan for Full-Scale Evaluation

There are three major questions to be answered by the full-scale evaluation:

1. Do students exposed to TFW demonstrate improved English-language skills in reading, writing, and listening, compared to students who have not been exposed to TFW?

Primary measure: Score on English-language tests at beginning and end of year that are developed by the province.

Secondary measure: IPT reading and writing tests; MAC listening tests administered to treatment and comparison schools at beginning and end of the year.
2. Do students exposed to OLLI master the vocabulary and language presented by the program that is not covered by classroom texts?

Primary measure: Reading and listening test developed for end-of-year based on words unique to TFW that are not included in eighth-grade textbook. This test would need to be developed by RTI and administered to treatment schools only.

3. What implementation factors make a difference in the degree to which students benefit from TFW?

Primary measure: Primary outcome measure will be TFW-based test; may also used provincial tests or IPT or MAC II. Implementation factors to be measured include: time spent on TFW, teacher’s use of TFW in the classroom, level of English at introduction of TFW, etc.

RTI is currently planning the full-scale evaluation. On approval from ED, we will ask PCET to identify 20 volunteer schools. These schools must be willing to participate in the evaluation, use the Go For It! English textbook series, be located in reasonably accessible area, and have the requisite hardware. We will then randomly assign 10 as comparison schools and 10 as treatment schools. We will request that we randomly select four classrooms of eighth-grade English, taught by two different teachers. We were told that there are approximately 60 students per class, so this will provide over 200 students per school, or 2,000+ participants in the treatment and comparison groups.

With 20 schools, assuming an intraclass correlation coefficient of .22, we will be able to detect an effect size of approximately .65. This means that the treatment group will need to have a mean score that is two-thirds of a standard deviation higher than the comparison group to conclude that TFW is effective. Since we have no previous data on the effectiveness of TFW, it is difficult to know whether this assumption is warranted—it is an extremely high bar.

Twenty teachers will need to be trained in the use of TFW. If teachers are asked to administer the tests, we will need to provide training on test administration to 40 teachers. At this point, we do not envision providing an alternative intervention to comparison schools.

We may want to consider testing additional eighth-grade students who are not exposed to TFW at the treatment schools. If there is no contamination, these students would provide strong statistical controls. If there is contamination, it might provide documentation for the “viral” effect of gaming applications and provide us with data that we can use to examine dose-related response.

Additional power calculations will be prepared once we have the scale for the assessments. However, final power calculations cannot be estimated until we have sample assessment data. If it is clear that we cannot meet the power requirements, we may wish to reconsider the first question posed above. We may also want to increase the prominence of the qualitative data

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9 This was estimated earlier assuming 70 students per school. We expect that increasing the sample size in each school will allow us to detect a slightly lower effect size.
(teacher focus groups and student cognitive interviews) in the final design for the full-scale evaluation.

III. Summary and next steps

Once this plan is approved, a subcontract will be issued to ECNU to conduct the tasks assigned in Exhibit D-1. We will also ask outside consultants to review the plan, and proposed instruments, and provide feedback by March 22. Instruments will be submitted to ED for approval on March 30.
Appendix E.
Evaluation Plan Update, July 2009 (Revised)
Appendix E:  
Evaluation Plan Update, July 2009 (Revised)

1. Purpose of the evaluation

The purpose of this project is to evaluate the implementation and efficacy of English language learning software developed especially for middle school students in western China. Following a trip to China by the U.S. president in 2001, the U.S. and China signed a bilateral memorandum of understanding for a joint research and development project, known as the U.S.-China E-Language Project. The E-Language software—named The Forgotten World (TFW)—has been developed by Coastline Community College and Learning Games Network, with funding from the Hewlett Foundation.

The focus of the evaluation is to compare the proficiency of the students exposed to the TFW program with the proficiency of students who do not have access to TFW. We will also identify implementation factors that facilitate or impede program effectiveness. A secondary purpose will be to obtain user reaction to instructional features of the program. The major research questions to be addressed are as follows:

- **Do students exposed to TFW English demonstrate increases in proficiency when compared to students without access to TFW English, given the same curriculum and under conditions that allow reasonable access to the software?** Proficiency in two main areas and two cross-cutting areas will be measured:
  - Listening skills
  - Reading skills
- **Does TFW increase student motivation to learn English?**
- **Does the program work for students at all levels of beginning English?**
- **What implementation factors make a difference in promoting student proficiency?**

An experimental study, conducted by RTI in partnership with East China Normal University (ECNU), is being conducted to answer this question. Although the circumstances do not allow for a fully powered hypothesis-testing design, the current design will allow us to examine the impact of TFW on a large group of students and will allow us to generate hypotheses about whether the program is effective.

The design will compare eighth-grade students in five comparison and five treatment schools in Gansu province, China. The selected schools are large middle schools with approximately 2,800 eighth-grade students enrolled in the treatment schools and another 2,800 enrolled in the comparison schools. While we initially requested 20 schools (10 treatment and 10 comparison), the provincial authorities determined that there were not enough schools that met the technological and participation requirements for the project. A decision was made that we would use the 10 schools that met the requirements and divide them into two groups, a treatment group that would implement TFW and a comparison group.
Students in the second year of middle school (eighth-grade students) will participate in the evaluation. Proficiency gains will be measured over the course of a year (two semesters), and the evaluation will be conducted in the 2009-2010 academic year. A schedule is provided in the attachment.

2. Instrumentation (Task 3)

Assessment instruments and questionnaires were tested in two pilot schools in the province in the spring of 2009. The IPT Reading and IPT Writing assessments were used, along with the MAC II Listening assessment. The IPT Reading assessment was used without modification; the other two assessments were adapted based on preliminary work in China. For the writing test, some of the picture prompts were substituted using pictures from other IPT tests that were more culturally appropriate for Chinese middle school students. The listening test directions were modified so that the directions were delivered to students in Chinese, and the answer form was modified to make it more understandable to students. All of the listening instructions were professionally recorded at RTI to ensure comparability across sites.

The purpose of the pilot was to make sure that the tests were able to measure growth in English proficiency among this population and that the modifications made to the tests did not alter the equivalency of the pre- and post-test forms. The tests were administered at two pilot schools to seventh- and eighth-grade students. Since we did not have a full year for the pilot, end-of-year seventh-grade students represent scores that can be expected from beginning eighth-grade students.

Results are presented in the tables below. Exhibits E-1, E-2, and E-3 present information on each of the major tests that were used. As can be seen looking across rows, the two forms (pre-test and post-test) were roughly equivalent across the tests; the largest difference is on the writing test. Also, comparing results for seventh- and eighth-grade students, eighth-grade students consistently performed better than seventh-grade students. Again, the writing test showed the weakest result and may require some additional modification. A large number of students left the writing test blank; in focus groups, students reported that they were unfamiliar with the test format or had little or no experience writing English or both.

Exhibit E-1. IPT 2004 Reading Test Average Raw Score (Total Items = 53)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Form 1C (n = 940)</th>
<th>Form 1D (n = 907)</th>
<th>Difference between Form 1C and 1D</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th grade</td>
<td>20.07 (SD = 6.08)</td>
<td>20.58 (SD = 6.68)</td>
<td>-0.51 t = -1.27 not significant (p &gt; .05)</td>
</tr>
<tr>
<td>(n = 1,017)</td>
<td>(n = 513)</td>
<td>(n = 504)</td>
<td></td>
</tr>
<tr>
<td>8th grade</td>
<td>29.71 (SD = 9.91)</td>
<td>30.41 (SD = 9.14)</td>
<td>0.70 t = 1.06 not significant (p &gt; .05)</td>
</tr>
<tr>
<td>(n = 830)</td>
<td>(n = 427)</td>
<td>(n = 403)</td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>-9.64 t = -18.28 p &lt; .05</td>
<td>-9.83 t = -18.07 p &lt; .05</td>
<td></td>
</tr>
<tr>
<td>between 7th and 8th grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Total</td>
<td>24.45 (SD = 9.37)</td>
<td>24.95 (SD = 9.25)</td>
<td></td>
</tr>
<tr>
<td>(N = 1,847)</td>
<td>(n = 1,847)</td>
<td>(n = 1,847)</td>
<td></td>
</tr>
</tbody>
</table>
Exhibit E-2. MAC II Listening Test Average Raw Score (Total Items = 24)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Form A2</th>
<th>Form B2</th>
<th>Difference between Form A2 and Form B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 1,018)</td>
<td>12.80 (n = 513)</td>
<td>11.76 (n = 505)</td>
<td>1.04 (t = 5.49, p &lt; .05)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 821)</td>
<td>14.43 (n = 427)</td>
<td>13.60 (n = 394)</td>
<td>.83 (t = 3.4, p &lt; .05)</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>between 7th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and 8th grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1.63 (t = -7.59, p &lt; .05)</td>
<td>-1.84 (t = -8.54, p &lt; .05)</td>
<td></td>
</tr>
<tr>
<td>Average Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N = 1,839)</td>
<td>13.54 SD = 3.37</td>
<td>12.57 SD = 3.33</td>
<td></td>
</tr>
</tbody>
</table>

Exhibit E-3. IPT 2004 Writing Test Average Raw Score (Total Items = 3; Highest Possible Score = 9)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Form 1C</th>
<th>Form 1D</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 996; 354 received a score of zero)</td>
<td>1.80 (n = 498; 189 received a score of zero)</td>
<td>2.20 (n = 498; 165 received a score of zero)</td>
</tr>
<tr>
<td></td>
<td>1.94 (n = 498; 189 received a score of zero)</td>
<td>2.37 (n = 498; 165 received a score of zero)</td>
</tr>
<tr>
<td>8th grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 820; 202 received a score of zero)</td>
<td>2.44 (n = 424; 154 received a score of zero)</td>
<td>3.84 (n = 396; 48 received a score of zero)</td>
</tr>
<tr>
<td></td>
<td>2.68 (n = 424; 154 received a score of zero)</td>
<td>2.40 (n = 396; 48 received a score of zero)</td>
</tr>
<tr>
<td>Average Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N = 1,816)</td>
<td>2.09 SD = 2.33</td>
<td>2.93 SD = 2.52</td>
</tr>
</tbody>
</table>

Exhibit E-4 presents information on the combined score from the reading and listening tests. Again, the tests are able to quantify a difference between seventh- and eighth-grade students.

Exhibit E-4. Reading and Listening Tests Combined Average Raw Score (Total Items = 77)

<table>
<thead>
<tr>
<th>Grade/Form</th>
<th>Regular Form (n = 932)</th>
<th>Alternate Form (n = 873)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th grade</td>
<td>32.88 SD = 7.81 (n = 509)</td>
<td>32.40 SD = 8.62 (n = 493)</td>
</tr>
<tr>
<td>(n = 1,002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th grade</td>
<td>44.09 SD = 12.43 (n = 423)</td>
<td>43.99 SD = 11.32 (n = 380)</td>
</tr>
<tr>
<td>(n = 803)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Total</td>
<td>37.97 SD = 11.60</td>
<td>37.44 SD = 11.43</td>
</tr>
<tr>
<td>(N = 1,805)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exhibit E-5 presents the combined raw score on the reading and writing test by the students’ scores on an eighth-grade English test administered by the schools. As expected, students who score well on the eighth-grade school test tend to score well on the tests administered by the
A Study of a Gaming Approach to English Language Learning for Middle School Students

project, and students who perform poorly on the school tests tend to perform poorly on the tests we administered.

**Exhibit E-5. Reading and Listening Combined Raw Score by School Score of Eighth-Graders**

<table>
<thead>
<tr>
<th>Score on 8th-Grade School Test</th>
<th>Percent Correct</th>
<th>Pilot Reading and Listening Combined Score</th>
<th>Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-100%</td>
<td>32.2%</td>
<td>55.3%</td>
<td>10.5%</td>
</tr>
<tr>
<td>51-75%</td>
<td>11.6%</td>
<td>69.5%</td>
<td>18.1%</td>
</tr>
<tr>
<td>26-50%</td>
<td>3.8%</td>
<td>47.3%</td>
<td>45.8%</td>
</tr>
<tr>
<td>0-25%</td>
<td>4.2%</td>
<td>26.0%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>405</td>
<td>243</td>
</tr>
</tbody>
</table>

Finally, the correlation between the subtests appears to be reasonable, as presented in Exhibit E-6. The school score is not highly correlated with the listening test. This is consistent with the rationale for the study; teachers and students in rural areas have little opportunity to interact with native English speakers and consequently their listening (and speaking skills) are frequently weaker than their reading skills.

**Exhibit E-6. Correlations Between Tests**

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Listening</th>
<th>Writing</th>
<th>School Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td>0.56216653</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>0.64582232</td>
<td>0.37361175</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>School Score</td>
<td>0.47543256</td>
<td>0.30729068</td>
<td>0.498881887</td>
<td>1</td>
</tr>
</tbody>
</table>

Finally, RTI may develop one additional short test to be administered at the end of the year. This test will be focused on the vocabulary that is unique to *TFW* and the vocabulary that is shared by the school textbook and *TFW*. 
## Attachment: Schedule of Major Activities

### Schedule of Major Activities for Full-Scale Evaluation

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responsible</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of sample schools</td>
<td>PCET</td>
<td>June 30, 2009</td>
</tr>
<tr>
<td>Random assignment</td>
<td>RTI</td>
<td>July 10, 2009</td>
</tr>
<tr>
<td>Invitations to teacher training</td>
<td>PCET</td>
<td>July 15, 2009</td>
</tr>
<tr>
<td>LGN/Coastline visit selected schools</td>
<td>LGN</td>
<td>July 30 – August 3, 2009</td>
</tr>
<tr>
<td>Teacher training</td>
<td>LGN/NWN</td>
<td>August 3 – 6, 2009</td>
</tr>
<tr>
<td>Final preparation and shipping of materials for pre-test</td>
<td>RTI</td>
<td>August 15, 2009</td>
</tr>
<tr>
<td>School visits to test equipment and meet with teachers</td>
<td>LGN/NWN</td>
<td>September 14 – 18, 2009</td>
</tr>
<tr>
<td>Test administrator training</td>
<td>RTI/ECNU</td>
<td>September 28, 2009</td>
</tr>
<tr>
<td>Pre-test administration in schools</td>
<td>ECNU</td>
<td>September 29 – October 9, 2009</td>
</tr>
<tr>
<td>Quality control observations</td>
<td>RTI/ECNU</td>
<td>November 23 – 27, 2009</td>
</tr>
<tr>
<td>Final preparation and shipping of materials for post-test</td>
<td>RTI</td>
<td>April 30, 2010</td>
</tr>
<tr>
<td>Post-test administration</td>
<td>ECNU</td>
<td>June, 2010</td>
</tr>
<tr>
<td>Data entry</td>
<td>ECNU</td>
<td>June 30, 2010</td>
</tr>
<tr>
<td>Analysis and reporting</td>
<td>RTI</td>
<td>July – September 2010</td>
</tr>
</tbody>
</table>
Appendix F.
Data Collection Procedures and Materials: 2009 Pre-Test Test Administrator Manual, Attached Informed Consent Forms, and Questionnaires
Test Administrator’s Manual

Evaluation of the E-Learning System: Open-Language Learning Initiatives for English

Main Study
Lanzhou, Gansu
China
1. Background and Purpose of the Evaluation

The U.S. Department of Education [Policy and Program Studies Service (PPSS), within the Office of Planning, Evaluation, and Policy Development (OPEPD)], is sponsoring an evaluation of the E-language learning system named Open Language Learning Initiative for English (OLLI English). The computer-based game developed to help students learn English is called The Forgotten Word (TFW).

RTI International (RTI) is carrying out the evaluation which is led by Dr. Patricia Green. RTI is collaborating with East China Normal University (ECNU) for the work in China. The project director at ECNU is Professor Zhu Yiming, a professor of the ECNU Department of Education.

This evaluation has been scheduled to take place in Chinese middle schools for two semesters from September 2009 to June 2010. The Chinese Ministry of Education identified Gansu Province as a site that fit the requirements for the evaluation. The provincial authorities selected the sampled schools. The evaluation aims to answer the following key evaluation question:

Do students exposed to TFW demonstrate increases in proficiency in reading, writing, listening, and speaking skills when compared to students without access to TFW, given the same curriculum and under conditions that allow reasonable access to the software?

The role of the test administrators is to:
1. Confirm (and update if needed) the current student roster with the student tracking form.
2. Distribute consent forms to all students and read aloud the form.
3. Administer reading and listening tests.
4. Administer a questionnaire to all students participating in the survey about their thoughts and experience about learning English (attached to the listening test).
5. Administer a questionnaire to all teachers participating in the teachers’ training for the survey. The questionnaire asks about the teachers’ thoughts and experience about teaching English.

2. Verifying the Student Roster with the Student Tracking Form

2.1 Prior to Test Administration - Student Roster vs. Student Tracking Form

The first important step is to obtain a current student roster for each selected classroom at the school PRIOR to the test day (or at least 2 hours before testing is scheduled to begin). You will need to review each student name listed on the current student roster against the tracking form. A sample student tracking form is included in this manual as Attachment 1.

- If a student is missing from the student tracking form, you must add this student to the bottom of the tracking form on a line that has been assigned an ID but has no name. Please put the student’s name on the list. It is very important that we know who has been added to which
classroom and school. Please check with these students and make sure they include their TFW User ID on the questionnaire, or make a note that they do not have one assigned.

- If you notice a spelling change, please update the student tracking form with the correct spelling.
- If you have more than 3 additional students on the student list in the class NOT listed on the tracking form, you should assign new student IDs, using the same school and classroom IDs, but adding student IDs **beginning with 501**.

### 2.2 On Test Day

All test materials have been bundled by classroom. Test materials for each student will be inside individual envelopes. The outside of each envelope will list the student’s name and ID – **YOU MUST DISTRIBUTE THE ENVELOPES TO STUDENTS INDIVIDUALLY, MATCHING THE NAME ON THE OUTSIDE OF THE ENVELOPE TO THE CORRECT STUDENT.** If you have added students to the student tracking form, you must give the newly added student the corresponding student packet ID.

The students should confirm that they have received the correct envelope by verifying the name on the outside of the envelope.

During the test, or after the test, please use the student tracking form to check off which students take the test. Please make a check after the student ID on the tracking form.

### 3. Consent Forms

#### 3.1 Parent Letter

We will give the schools a letter addressed to parents of the 8th grade students who are participating in the study, and ask the schools to distribute the letters to the parents. The letter describes the purpose of the study, students’ participation, and confidentiality. Parents who do not wish to have their child participate in the study can tear off the bottom portion of the letter that says, “I do not wish to have my child participate in this research” and return it to the test administrator. This student shall then be excluded from the study. Samples of the letter are included in English as Attachments 4 and 5 (and 4a and 5a in Chinese).

#### 3.2 Student Assent Form

Before the start of the English language assessment tests and student questionnaire, the test administrator should give each student a copy of the student assent form and read it aloud to the students. The form will explain the purpose of the study, the voluntary nature of their participation, and that they are asked to complete assessment tests for reading and listening, as well as a questionnaire about their thoughts and experience with learning English. The form also assures the students that their individual test scores or responses to the questionnaire will not be shared with their teachers, their parents, China’s Ministry of Education, or the U.S. Department of Education. To ensure confidentiality, the students’ name will not be recorded on the tests but will be represented by an ID number. If a student does not wish to participate, he or she shall be excluded from the study. Copies of the forms are provided in English as Attachments 2 and 3 (and 2a and 3a in Chinese).
3.3 Teacher Consent Form for Participation

Before administering the teacher’s questionnaire, the administrator should give a consent form to each teacher. The form will explain the purpose of the study, the voluntary nature of their participation, and that they are asked to complete a questionnaire about their thoughts and experience surrounding teaching English. The form also assures the teachers that individual responses to the questionnaire will not be shared with the school, other teachers, China’s Ministry of Education, or the U.S. Department of Education. To ensure confidentiality, their name will not be recorded on the questionnaire but will be represented by an ID number. If a teacher does not wish to participate, he or she shall be excluded from the study. Copies of the forms are provided in English as Attachments 6 and 7 (and 6a and 7a-Chinese). A copy of the Teacher Questionnaire is provided as Attachment 8 and 8a.

4. Assessment Tests and Questionnaires

As mentioned previously, you will be administering the reading test, the listening test and the student questionnaire to all students sampled for this study. It is very important that you follow the scripts for each test – each student must hear the same information and **you must read/play the entire script for each test.**

4.1 Reading Test

The reading test is also called the ‘IPT’ test and all items are in one booklet. Test administrators distribute the envelopes (that contain both tests and questionnaires) before beginning to read the directions for the reading test. After the envelopes are distributed, instruct students to take out the reading test booklet.

When all students have the reading test on their desk, instruct them to open the booklet and begin reading the script with the instructions for the first section.

The reading test has five sections and you will need to provide instructions (from the script) before each section.

A copy of the script (in Chinese and English) is provided in Attachment 9. This script must be practiced in advance of administering the test.

A copy of the reading test is provided as Appendix A.

4.2 Listening Test

Directions for the listening test must be played for the students using a cassette tape recorder. Before beginning the tape, ask students to take the listening test from the envelope and instruct them to open the booklet to the first page. Test administrators should explain to students how the bubbles should be marked and then play the standardized recording for the test. Make sure that all students understand what to do before the recording is played. As part of the test instructions, the recording will cover the function of the bubbles again. The test instructions can be replayed, but the actual English prompts should only be played once.
A copy of the booklet containing the listening test and questionnaire is in Appendix B.

### 4.3 Student Questionnaire

The student questionnaire is the same booklet as the listening test. This part of the assessment asks the student how they feel about learning English. Some students may be getting tired of the test at this point, so you should encourage students to complete it and do their best. A copy of the student questionnaire is provided in Attachment 9.

### 4.4 Teacher Questionnaire

The teacher questionnaires will be distributed to eighth-grade English teachers on arrival to school and collected before departing from the school. A copy of the teacher questionnaire is provided in Attachment 8.

### 5. Collecting the Test Booklets

When students have completed the test and questionnaires, collect all booklets from students. The tests SHOULD NOT be put back into the envelopes. Please leave the envelopes in the classroom or in a trash container at the school.

Thank the students and teacher for their participation before leaving the classroom.

Before leaving the school, please check off each booklet, including the teacher questionnaire, on the Student Tracking Form.

Please bundle books from each class together and place in mailing box (do not use boxes that were sent from U.S. as they may be damaged).

DO NOT include the student tracking form in the box with the tests. If for any reason a box would be lost or stolen, it is important that a person looking at the tests would be unable to link a test with a student name. Please give the tracking forms to Dr. Zhu or Liu Lu.

Thank you for your time and effort in this important China and U.S. evaluation!

### 6. CHECKLIST

Before going to school, check that you have:

- Copy of the Student Tracking Form for each class that you will be testing.
- Envelopes with booklets for all students on Tracking Form(s).
- Copies of Student Assent Forms.
- Script with instructions for reading test.
- Tape and tape recorder for listening test.
In the classroom:

1. Introduce yourself to the class and explain purpose of the study
2. Give the consent forms to all students.
3. Distribute the envelopes with test booklets by calling student names.
4. Read aloud the consent form.
5. Instruct students to take the reading booklet from the envelope and read instructions for the first section of the test. When students have finished first section, read instructions for next section. There are 5 sections in the test.
6. Instruct students to take the listening test booklet from the envelope. Give instructions for filling out “bubbles” and begin playing tape recorded instructions.
7. When students have finished listening test, tell them to turn the page and complete the questionnaire.
8. When students have finished, collect all booklets. Leave envelopes at school.

After the test session:

- Complete the Student Tracking Form by checking off the IDs of all completed booklets.
- If any unusual circumstances arose during the test, attach an explanatory note to the Student Tracking Form.
### Attachment 1. Student Tracking Form

<table>
<thead>
<tr>
<th>School in English</th>
<th>School in Chinese</th>
<th>School ID</th>
<th>Class#</th>
<th>Serial Number</th>
<th>Student Name</th>
<th>School test ID</th>
<th>Class test ID</th>
<th>Student test ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td>1</td>
<td>1</td>
<td>910</td>
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<td></td>
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</tr>
</tbody>
</table>
Attachment 2. Assent Form – Student - TFW

Dear Student:

Thank you for volunteering to participate in this study. This study is an Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning software on students’ English proficiency. We are interested in how students listen and read in English. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask you to fill out a questionnaire about your experience and thoughts with learning English. You are one of about 6,000 middle school students participating in this study.

Your participation is voluntary. You may change your mind and not participate at any point. If you decide not to participate, there is no penalty. You may choose not to answer any question. There are no specific risks to you from taking part in the study.

There are no other direct benefits to you from participating, but you will be helping us understand the effectiveness of English language learning software on students’ English proficiency. Your name will not be recorded on the tests or the questionnaire and you are only represented by an ID. We are required to keep all information confidential and what you say or do on these tests will not affect your grades at school. Only authorized researchers at RTI and ECNU will know your test scores and your responses to the questionnaire. No one else will know, not your school, your teachers, the U.S. Department of Education, China’s Ministry of Education, or your parents.

If you have any questions about this study or your participation, please feel free to ask the test administrator.

We thank you in advance for your help!

Patricia J. Green
Project Director
RTI International
Attachment 3. Assent Form – Comparison Students – no TFW

Dear Student:

Thank you for volunteering to participate in this study. This is a study of the Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning. We are interested in how students listen and read in English. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask you to fill out a questionnaire about your experience and thoughts with learning English. You are one of about 6,000 middle school students participating in this study.

Your participation is voluntary. You may change your mind and not participate at any point. If you decide not to participate, there is no penalty. You may choose not to answer any question. There are no specific risks to you from taking part in the study. There are no other direct benefits to you from participating, but you will be helping us understand the effectiveness of English language learning. Your name will not be recorded on the tests or the questionnaire and you are only represented by an ID. We are required to keep all information confidential and what you say or do on these tests will not affect your grades at school. Only authorized researchers at RTI and ECNU will know your test scores and your responses to the questionnaire. No one else will know, not your school, your teachers, the U.S. Department of Education, China’s Ministry of Education, or your parents.

If you have any questions about this study or your participation, please feel free to ask the test administrator.

We thank you in advance for your help!

Patricia J. Green
Project Director
RTI International
Attachment 4. Parent Letter – Treatment Schools -TFW Parents

Dear Parent or Guardian:

We are pleased to inform you that your child’s school has been selected to participate in an important study called the Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning software on students’ English proficiency. We would like to measure students’ English language proficiency in listening and reading. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask your child to fill out a questionnaire about his or her experience and thoughts with learning English. Your child will be one of about 6,000 middle school students participating in this study. Your child’s participation is voluntary. You or your child may withdraw from the study at any point.

There is no penalty if you or your child decides not to participate. Your child may choose not to answer any question. There are no specific risks to your child from taking part in the study but he or she might feel slightly uncomfortable with the test administrator because your child might not have met him or her before. There are no other direct benefits to your child from participating, but he or she will be helping us understand the effectiveness of English language learning software on students’ English proficiency. Your child’s name will not be recorded on the tests or the questionnaire but will only be represented by an ID. We are required to keep all information confidential and your child’s performance on these tests will not affect his or her grades at school. Only authorized researchers at RTI and ECNU will know your child’s test scores and responses to the questionnaire. They will not be shared with the school, the teachers, the U.S. Department of Education, China’s Ministry of Education, or with you.

If you do not wish to have your child participate, please tear off the bottom portion of this letter and have your child give it to the test administrator. If you have any questions about this study or your child’s participation, please feel free to ask the test administrator that will be at your child’s school. We thank you in advance for your cooperation in this important study.

Sincerely,
Patricia J. Green
Project Director
RTI International

I do not wish to have my child participate in this research.
Attachment 5. Parent Letter – Comparison Schools - Non TFW Parents

Dear Parent or Guardian:

We are pleased to inform you that your child’s school has been selected to participate in an important study called the Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning. We would like to measure students’ English language proficiency in listening and reading. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask your child to fill out a questionnaire about his or her experience and thoughts with learning English. Your child will be one of about 6,000 middle school students participating in this study. Your child’s participation is voluntary. You or your child may withdraw from the study at any point.

There is no penalty if you or your child decides not to participate. Your child may choose not to answer any question. There are no specific risks to your child from taking part in the study. There are no other direct benefits to your child from participating, but he or she will be helping us understand the effectiveness of English language learning in China. Your child’s name will not be recorded on the tests or the questionnaire but will only be represented by an ID. We are required to keep all information confidential and your child’s performance on these tests will not affect his or her grades at school. Only authorized researchers at RTI and ECNU will know your child’s test scores and responses to the questionnaire. They will not be shared with the school, the teachers, the U.S. Department of Education, China’s Ministry of Education, or with you.

If you do not wish to have your child participate, please tear off the bottom portion of this letter and have your child give it to the test administrator. If you have any questions about this study or your child’s participation, please feel free to ask the test administrator that will be at your child’s school. We thank you in advance for your cooperation in this important study.

Sincerely,

Patricia J. Green
Project Director
RTI International

I do not wish to have my child participate in this research.
Attachment 6. Consent Form for Participation in the Teacher Questionnaire - TFW

Dear Teacher:

Thank you for volunteering to participate in this study. This study is an Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English-language learning software on students’ English proficiency. We would like to measure students’ English language proficiency in listening and reading. At this time, we are asking you to fill out a questionnaire about your experience and thoughts with teaching English. It will take about 10 minutes to complete. You will be one of about 90 middle school teachers participating in this study.

Your participation is voluntary. You may withdraw from the study at any point. There is no penalty if you decide not to participate. You may choose not to answer any question. There are no specific risks to you from taking part in the study. There are no other direct benefits to you from participating, but you will be helping us understand teachers’ experiences in teaching English. Your name will not be recorded on the questionnaire, but will be represented by an ID. We are required to keep all information confidential and your responses in the questionnaire will not affect your status at school. Only authorized researchers at RTI and ECNU will know your responses to the questionnaire. They will not be shared with the school, others teachers, the U.S. Department of Education, China’s Ministry of Education, or with your students.

If you have any questions about this study or your participation, please feel free to ask the questionnaire administrator.

We thank you in advance for your help!

Sincerely,

Patricia J. Green
Project Director
RTI International
Attachment 7. Consent Form for Participation in the Teacher Questionnaire – NO TFW

Dear Teacher:

Thank you for volunteering to participate in this study. This study is an Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English-language learning. We would like to measure students’ English language proficiency in listening and reading. At this time, we are asking you to fill out a questionnaire about your experience and thoughts with teaching English. It will take about 10 minutes to complete. You will be one of about 90 middle school teachers participating in this study.

Your participation is voluntary. You may withdraw from the study at any point. There is no penalty if you decide not to participate. You may choose not to answer any question. There are no specific risks to you from taking part in the study. There are no other direct benefits to you from participating, but you will be helping us understand experiences and thoughts about teaching English. Your name will not be recorded on the questionnaire, but will be represented by an ID. We are required to keep all information confidential and your responses in the questionnaire will not affect your status at school. Only authorized researchers at RTI and ECNU will know your responses to the questionnaire. They will not be shared with the school, others teachers, the U.S. Department of Education, China’s Ministry of Education, or with your students.

If you have any questions about this study or your participation, please feel free to ask the questionnaire administrator.

We thank you in advance for your help!

Sincerely,

Patricia J. Green
Project Director
RTI International
Atachment 2a. Assent Form- Student TFW

亲爱的同学：

谢谢你自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English) 所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。

这项研究是为了要了解英语学习软件是否有助于学生的英文程度。我们希望了解学生们在英文上的听、读的能力。研究办法是通过让学生完成一些大约需要1.5小时完成的测试。我们也会请你填写一份问卷以便了解你在学习英文的经验和想法。你是约6000个参加研究的中学学生之一。

你的参与是属于完全自愿的。你在任何时候都可以改变主意并决定停止参与，如果你决定不要参与并不会受任何处分。你也可以决定不回答任何一个测验中的问题。你参与本项研究不会遭受风险。

你参与本项研究也不会享受到任何直接利益，但是会帮助我们了解英语学习软件在提高学生英语熟练程度上的有效性。你的名字并不会被纪录在测验卷或问卷上，你的名字会用代码代替。我们被规定必须将所有资料加以保密，你在进行测验时所说的或做的一切，都不会影响你在学校的成绩。唯有被授权的RTI和华东师范大学的研究员才会知道你的测试结果和问卷回答。其它任何人，包括你的学校、老师、美国教育部、中国教育部或你的父母都不会知道。

管理这次英文测验的长辈可以回答你有的任何问题，不管是关于此项研究或你的参与，如果你有疑问请尽量发问。

在此先谢谢你的参与。

RTI International研究项目主管

Patricia J. Green

Patricia Green
亲爱的同学：

谢谢你自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English) 所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。这项研究是为了要了解英语语言学习的有效性。我们希望了解学生们在英文上的听、读的能力。研究办法是通过让学生完成一些大约需要1.5小时完成的测试。我们也会请你填写一份问卷以便了解你在学习英文的经验和想法。你是约6000个参加研究的中学学生之一。

你的参与是属于完全自愿的。你在任何时候都可以改变主意并决定停止参与，如果你决定不要参与并不会受任何处分。你也可以决定不回答任何一个测验中的问题。你参与本项研究不会遭受风险。

你参与本项研究也不会享受到任何直接利益，但是会帮助我们了解英语语言学习的有效性。你的名字并不会被纪录在测验卷或问卷上，你的名字会用代码代替。我们被规定必须将所有资料加以保密，你在进行测验时所说的或做的一切，都不会影响你在学校的成绩。唯有被授权的RTI和华东师范大学的研究员才会知道你的测试结果和问卷回答。其它任何人，包括你的学校、老师、美国教育部、中国教育部或你的父母都不会知道。

管理这次英文测验的长辈可以回答你有的任何问题，不管是关于此项研究或你的参与，如果你有疑问请尽量发问。

在此先谢谢你的参与。

RTI International研究项目主管

Patricia Green
Attachment 4a. Parent Letter – TFW Parents

敬爱的父母或监护人：

我们很高兴通知您，您的孩子的学校已被选择参与一个非常重要的研究项目，叫 Open-Language Learning Initiative for English (OLLI English)。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织 RTI International进行实施。我们也请了华东师范大学一起合作。

此项研究是要了解英语学习软件是否有助于学生的英文程度。我们会测量学生在英文上的听、读的能力。研究办法是通过让学生完成一些大约需要1.5小时完成的测试。此外，我们也会请你的孩子填写一份问卷以便了解他在学习英文的经验和想法。您的孩子是大约6000个自愿参加此项研究的中学生之一。您的孩子参与是纯属自愿的，您或您的孩子在任何时候都可以改变主意并决定停止参与。

如果您或您的孩子决定不要参与，将不会受到任何处分。您的孩子可以决定不回答任何测试中的问题。您的孩子参与本项研究不会遭受风险，但他可能会觉得有些不习惯因为他不一定会认识管理这次英文测验和问卷的研究员。您的孩子参与本项研究也不会享受到任何直接利益，但是会帮助我们了解英语学习软件在提高学生英语熟练程度上的有效性。您的孩子的名字并不会被纪录在测验卷或问卷上，他的名字会用代码代替。我们被规定必须将所有资料加以保密，您的孩子在测验上的表现不会影响他在学校的成绩。唯有被授权的RTI和华东师范大学的研究员才会知道您的孩子在测试中的表现和问卷回答。其它任何人，包括学校、老师、美国教育部、中国教育部或您都不会被告知。

如果您不希望您的孩子参与这次的研究项目，请撕下这封信下角，让您的孩子带回给管理这次英文测验的研究员。如果您对此项研究或您的孩子参与有任何问题，请洽询在您的孩子学校管理这次英文测验的研究员。感谢您配合这项重要的研究。

RTI International研究项目主管

Patricia Green 敬上

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我不希望我的孩子参与这次的研究项目。
Attachment 5a. Parent Letter – Non TFW Parents

Dear parents or guardians,

We are pleased to inform you that your child’s school has been selected to participate in a very important research project, called Open-Language Learning Initiative for English (OLLI English). This study is co-hosted by the U.S. Department of Education and the Chinese Ministry of Education, and is implemented by the non-profit organization RTI International. We also collaborated with Fudan University.

The research is aimed at understanding the effectiveness of English language learning. We will measure students’ listening and reading abilities. The research method is through students completing a test that takes approximately 1.5 hours. In addition, we will also ask your child to fill out a questionnaire to understand his experiences and thoughts in learning English. Your child is one of about 6000 middle school students who have volunteered to participate in this study. Your child’s participation is purely voluntary, and you or your child can change your mind and decide to stop participating at any time.

If you or your child decide not to participate, you will not receive any punishment. Your child can decide not to answer any question on the test. Your child’s participation in this research will not result in any risks, but he may feel uncomfortable because he may not recognize the researchers who manage this English test and questionnaire. Your child’s participation in this study will not bring any direct benefits, but will help us understand the effectiveness of Chinese English language learning. Your child’s name will not be recorded on the test or questionnaire, but will be replaced by a code. We are required to keep all data confidential, and your child’s test results and questionnaire answers will only be known to authorized researchers at RTI and Fudan University. Other people, including schools, teachers, the U.S. Department of Education, the Chinese Ministry of Education, or anyone else, will not be informed.

If you do not want your child to participate in this research project, please cut off this letter and give it back to the researcher managing this English test. If you have any questions about this research or your child’s participation, please contact the researcher managing this English test in your child’s school. Thank you for your cooperation on this important study.

Patricia Green, Research Project Manager

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I do not want my child to participate in this research project.
Attachment 6a. Consent Form for Participation in the Teacher Questionnaire – TFW

敬爱的老师：
谢谢您自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English)所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。
此项研究是要了解英语学习软件是否有助于学生的英文程度。我们会测量学生在英文上的听、读的能力。目前我们会请您填写一份问卷以便了解你在英语教学的经验和想法。问卷大约花10分钟即可完成。您是约90位参加研究的中学老师之一。
您的参与是属于完全自愿的。您在任何时候都可以改变主意并决定停止参与，如果您决定不要参与并不会受任何处分。您也可以决定不回答任何一个测验中的问题。您参与本项研究不会遭受风险。您参与本项研究也不会享受到任何直接利益，但是会帮助我们了解教师在英语教学中的经验。您的名字并不会被纪录在问卷上。我们被规定必须将所有资料加以保密，您在问卷上的答案不会影响您在学校的身份或待遇。唯有被授权的RTI和华东师范大学研究员才会知道您的问卷回答。其它任何人，包括您的学校、在学校的同事、美国教育部、中国教育部或您的学生都不会知道。
管理这次问卷的研究员可以回答您有的任何问题，不管是关于此项研究或你的参与，如果您有疑问请尽量发问。

在此先谢谢你的参与。

RTI International研究项目主管
Patricia Green敬上
Attachment 7a. Consent Form for Participation in the Teacher Questionnaire – NO TFW

敬爱的老师：
谢谢您自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English)所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。
此项研究是要了解英语语言学习的有效性。我们会测量学生在英文上的听、读的能力。目前我们会请您填写一份问卷以便了解你在英语教学的经验和想法。问卷大约花10分钟即可完成。您是约90位参加研究的中学老师之一。
您的参与是属于完全自愿的。您在任何时候都可以改变主意并决定停止参与，如果您决定不要参与并不会受任何处分。您也可以决定不回答任何一个测验中的问题。您参与本项研究不会遭受风险。您参与本项研究也不会享受到任何直接利益，但是会帮助我们了解教师在英语教学中的经验。您的名字并不会被纪录在问卷上。我们被规定必须将所有资料加以保密，您在问卷上的答案不会影响您在学校的身份或待遇。唯有被授权的RTI和华东师范大学研究员才会知道您的问卷回答。其它任何人，包括您的学校、在学校的同事、美国教育部、中国教育部或您的学生都不会知道。
管理这次问卷的研究员可以回答您有的任何问题，不管是关于此项研究或你的参与，如果您有疑问请尽量发问。
在此先谢谢你的参与。

RTI International研究项目主管

Patricia Green敬上
Attachment 8. Teacher Questionnaire

The following questions are about your experience and thoughts. There are no right or wrong answers. Please read all questions thoroughly and provide a response to the best of your ability. Directions are provided at each question. Please mark the box next to your answer choice, like this: √ For some questions, you will be asked to write your responses using words or numbers.

1. Are you male or female? □ Male □ Female
2. What year were you born? [___|___|___|___]
3. How many years have you taught English? [___|___] years
4. The following questions are about your English classes this semester.
   a. How many classroom hours of English classes do you teach on a weekly basis? [___|___]
   b. How many English classes do you teach? [___] classes
   c. What are the grade levels? □ 7th grade □ 8th grade □ 9th grade
5. Do you have a degree in English? □ No □ Yes
6. The following questions are about the highest degree you have completed. Using the list on the bottom, please fill in the corresponding number.
   a. What is the highest level of degree you have completed? [___]
   b. What is the highest level of degree in English you have completed? [___] (Write 0 if you do not have a degree in English)

   List of Highest Degree Completed
   (1) Less than High School
   (2) High School Diploma
   (3) 3-Year Normal High School Diploma
   (4) Associate Degree, including 5-Year Normal College
   (5) 4-Year University
   (6) Advanced Degree

7. During this semester, have you participated in teachers’ training related to English teaching that was organized by your school? (Mark one answer)
   □ No
   □ Yes → How many days in total? [___|___] days

A Study of a Gaming Approach to English Language Learning for Middle School Students
8. **During this semester**, have you participated in teachers’ training related to English teaching that was organized by an entity other than your school? (Mark one answer)
   - No
   - Yes → How many days in total? |___|___| days

9. Currently, how experienced are you with using instructional technology to improve classroom instruction for English? (Mark one answer)
   - Not experienced at all
   - Less experienced
   - Somewhat experienced
   - Very experienced

10. Have you used computer software for teaching 8th grade English classes? (Mark one answer)
    - No
    - Yes → What kind of software? Please specify: __________________________

11. What are some teaching methods that you frequently use for teaching 8th grade English classes? (Mark all that apply)
    - Give lectures according to textbook chapters
    - Incorporate supporting materials for classroom instruction
    - Design English language games and activities
    - Focus on test-taking skills
    - Something else → What are they? Please specify: __________________________

12. In general, what percentage of time do you use Chinese (including lecture, oral questioning, dialogues, etc.) to teach 8th grade English classes?
    - Less than 20%
    - 20% - 50%
    - 50% - 80%
    - More than 80%

13. Do you have a computer at home?
    - Yes
    - No

14. Do you have access to the internet at home?
    - Yes
    - No
15. **What is your username for the Forgotten World?**

16. **Being as objective as you can, how motivated are your 8th grade students in terms of learning English?**
   - [ ] Not motivated at all
   - [ ] Less motivated
   - [ ] Somewhat motivated
   - [ ] Very motivated

17. **Currently, which of the following apply to you? (Mark all that apply)**
   - [ ] I have traveled to English-speaking countries
   - [ ] I use English to speak with relatives, family, or friends
   - [ ] I read English language books and magazines, newspapers, and Web sites

18. **How often do you watch English language TV programs for at least 15 minutes in a sitting? (Mark one answer)**
   - [ ] Never
   - [ ] Once every few months
   - [ ] Once or twice a month
   - [ ] Once or twice a week
   - [ ] Three or four times a week
   - [ ] Everyday

19. **How often do you use English to have online chat with people or write e-mails?**
   - [ ] Never
   - [ ] Once every few months
   - [ ] Once or twice a month
   - [ ] Once or twice a week
   - [ ] Three or four times a week
   - [ ] Everyday

20. **How important do you feel that learning English is to middle school students in this area? (Mark one answer)**
   - [ ] Not important at all
   - [ ] Less important
   - [ ] Somewhat important
   - [ ] Very important

   **Thank you for completing this questionnaire!**
   **We will keep your responses confidential.**
Attachment 8a. Teacher Questionnaire (Chinese)

本问卷主要是为了了解您在英语教学方面的经历和想法。任何回答都没有对错之分。希望您能够认真阅读题目，并选择最合适的回答。请根据题目指示，在方框内打勾，如√。有些题目会请您以文字或数字写出您的回答。

1. 您的性别是： □ 男； □ 女
2. 您的出生年份是： [_] _9_ _年
3. 您从事英语教学有多少年了？ [_] _年
4. 请回答下列关于您在本学期担任英语教学方面的问题。
   a. 您每周担任英语教学的课时数是： [_] 个
   d. 您担任英语教学的班级数是： [_] 个班级
   e. 有哪些年级？ □ 7 年级； □ 8 年级； □ 9 年级

5. 您是不是英语专业毕业？ □ 不是； □ 是
6. 下列问题有关于您的最高学历。请用题目下方的最高学历表，填入相关号码。
   a. 您所取得的最高学历是： [_] 个
   b. 您在英语专业方面取得的最高学历是： [_] 个（若不是英语专业毕业，填 0）

最高学历表
(1) 高中以下
(2) 高中学历
(3) 3年制中师或中专学历
(4) 大学专科学历（含5年中师）
(5) 大学本科毕业
(6) 大学研究生毕业

7. 本学年您是否还参与过由本校组织，英语教学方面的教师培训活动？（单项选择）
   □ 没参与
   □ 有参与 总合计时间大约为： [_] _天
8. 本学年您是否还参与过由其它方面组织（不包括本校），英语教学方面的教师培训活动？（单项选择）
   □ 有参与 → 总合计时间为：[______] 天

9. 目前，您在使用教育技术开展英语课堂教学方面的能力如何？（单项选择）
   □ 完全不会
   □ 比较强
   □ 强

10. 请问，您有没有在8年级的英语教学中使用过计算机软件？（单项选择）
    □ 没用过
    □ 有用过 → 是什么样的计算机软件？请写出：__________________________

11. 您在8年级的英语教学中常用的教学方法有哪些？（多项选择）
    □ 按照教材内容教师讲解为主
    □ 找一些辅助材料用于课堂教学
    □ 设计一些英语游戏活动
    □ 以围绕应付考试为主而教学
    □ 其他 → 是什么样的方式？请写出：____________________________________

12. 一般来来，您在8年级的英语课堂中运用中文（包括讲解、提问、对话等）的时间比例是多少？（单项选择）
    □ 20%以内
    □ 20% 到50%
    □ 50% 到80%
    □ 80% 以上

13. 你在家里有电脑吗？（单项选择）
    □ 有
    □ 没有
14. 你在家里面上网吗？（单项选择）
   - 能
   - 不能

15. 你的《被遗忘的世界》的用户名是什么？__________。

16. 请客观地评价目前你所任教的8年级学生学习英语的积极性情况？（单项选择）
   - 非常低
   - 比较低
   - 比较高
   - 非常高

17. 目前，下列哪种情况适合于您？（多项选择）
   - 我曾经到英语国家旅游过
   - 我平时会用英语与亲戚、家人或者朋友对话
   - 我平时会阅读英文书刊、报纸或者上英文网站阅读

18. 您多久收看有英语对话的电视节目，且每次至少看15分钟？（单项选择）
   - 从来不看
   - 几个月看1次
   - 每月看1到2次
   - 每周看1到2次
   - 每周看3到4次
   - 每天看
19. 您多久会在网络上用英文与人聊天或写邮件？（单项选择）
   - □ 从来不会
   - □ 几个月 1次
   - □ 每月1到2次
   - □ 每周1到2次
   - □ 每周3到4次
   - □ 每天

20. 您认为，本地初中学生学习英语的重要性程度如何？（单项选择）
   - □ 非常不重要
   - □ 比较不重要
   - □ 比较重要
   - □ 非常重要

非常感谢您认真回答了本问卷！我们将保密您的回答。
Attachment 9. Student Questionnaire

The following questions are about your experience and thoughts in learning English. There are no right or wrong answers. Please read all questions thoroughly and provide a response to the best of your ability. Directions are provided at each question. Please mark the box next to your answer choice, like this: check mark. For some questions, you will be asked to write your response.

1. Are you a boy or a girl?  □ Boy  □ Girl

2. What year were you born?  1999

3. In what grade did you first start learning English at school?  grade

4. Currently, how important is learning English to you? (Mark one answer)
   - □ Not important at all
   - □ Not too important
   - □ Somewhat important
   - □ Very important

5. Currently, which of the following apply to you? (Mark all that apply)
   - □ I have traveled to English-speaking countries
   - □ I would use English to speak with relatives, family, or friends
   - □ I would read English language books and magazines, newspapers, and Web sites

6. How often do you watch English language TV programs for at least 15 minutes in a week? (Mark one answer)
   - □ Never
   - □ Once every few months
   - □ Once or twice a month
   - □ Once or twice a week
   - □ Three or four times a week
   - □ Everyday

7. How often do you use English to have online chat with people or write e-mails? (Mark one answer)
   - □ Never
   - □ Once every few months
   - □ Once or twice a month
   - □ Once or twice a week
   - □ Three or four times a week
   - □ Everyday
8. **How often do you play computer games that have vocabulary in English?**  
(Mark one answer)

- Never
- Once every few months
- Once or twice a month
- Once or twice a week
- Three or four times a week
- Everyday

9. **Do you go to an English tutoring class outside of school?** (Mark one answer)

- Never
- I have, but not anymore
- I do, but have not before
- I always have

10. **Currently, how interested are you in learning English?** (Mark one answer)

- Not interested
- Less interested
- More interested
- Very interested

11. **Students in general may experience difficulty when they are learning English. Currently, how difficult are the following areas to you?** (Mark one answer per row)

<table>
<thead>
<tr>
<th>Content</th>
<th>Level of Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Difficult At All</td>
</tr>
<tr>
<td>a. Vocabulary</td>
<td>□</td>
</tr>
<tr>
<td>b. Grammar</td>
<td>□</td>
</tr>
<tr>
<td>c. Listening</td>
<td>□</td>
</tr>
<tr>
<td>d. Reading</td>
<td>□</td>
</tr>
<tr>
<td>e. Writing</td>
<td>□</td>
</tr>
<tr>
<td>f. Speaking</td>
<td>□</td>
</tr>
</tbody>
</table>

12. **Realistically, do you expect to attend university some day?** (Mark one answer)

- No
- Yes
- Unsure
13. Do you have a computer at home?
   ■ Yes
   ■ No

14. Do you have access to the internet at home?
   ■ Yes
   ■ No

15. How often do you play computer or video games?
   ■ Never
   ■ Once every few months
   ■ Once or twice a month
   ■ Once or twice a week
   ■ Three or four times a week
   ■ Everyday

16. What is your username for the Forgotten World? ____________.

Thank you for completing this questionnaire!
We will keep your responses confidential.
Attachment 9a. Student Questionnaire

本问卷主要是为了了解你在学习英文方面的经历和想法。任何回答都没有对错之分。希望你能够认真阅读题目，并选择最适合的回答。请根据题目指示，在方框内打勾，如 √。有些题目会指示你写出你的回答。

1. 你的性别是：[ ] 男孩；[ ] 女孩
2. 你的出生年份是：[1] [9] [9] [____]
3. 你在学校中开始学习英语的年级是：[____] 年级
4. 目前，你认为学习英语重要吗？（单项选择）
   - [ ] 完全不重要
   - [ ] 不太重要
   - [ ] 有些重要
   - [ ] 非常重要

5. 目前，下列哪种情况适合你？（多项选择）
   - [ ] 我曾经到英语国家旅游过
   - [ ] 我平时会用英语与亲戚、家人或者朋友对话
   - [ ] 我平时会阅读英文书刊、报纸或者上英文网站阅读

6. 你多久收看有英语对话的电视节目，且每次至少看15分钟？（单项选择）
   - [ ] 从来不看
   - [ ] 几个月看 1次
   - [ ] 每月看1到2次
   - [ ] 每周看1到2次
   - [ ] 每周看3到5次
   - [ ] 每天看
7. 你多久会在网络上用英文与人聊天或写邮件？（单项选择）
   □ 从来不会
   □ 几个月 1次
   □ 每月1到2次
   □ 每周1到2次
   □ 每周3到5次
   □ 每天

8. 你多久在计算机上玩有英语单词的电子游戏？（单项选择）
   □ 从来不玩
   □ 几个月玩1次
   □ 每月玩1到2次
   □ 每周玩1到2次
   □ 每周玩3到4次
   □ 每天玩

9. 你有没有参加校外英语辅导班？（单项选择）
   □ 从来没有过
   □ 以前有，现在没有
   □ 以前没有，现在有
   □ 一直参加校外班

10. 目前，你学习英语的兴趣程度如何？（单项选择）
   □ 没有
   □ 较小
   □ 较大
   □ 很大
11. 一般学生在英语学习中有时会遇到困难。目前，下列方面对你来说有多大困难？（请在合适的方框内打勾，每行只能选一个）

<table>
<thead>
<tr>
<th>内容</th>
<th>困难程度</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>没有困难</td>
</tr>
<tr>
<td>a. 单词</td>
<td>□</td>
</tr>
<tr>
<td>b. 语法</td>
<td>□</td>
</tr>
<tr>
<td>c. 听力</td>
<td>□</td>
</tr>
<tr>
<td>d. 阅读</td>
<td>□</td>
</tr>
<tr>
<td>e. 写作</td>
<td>□</td>
</tr>
<tr>
<td>f. 口语</td>
<td>□</td>
</tr>
</tbody>
</table>

12. 从实际出发，你期望将来能够进大学吗？（单项选择）

□ 不期望
□ 有期望
□ 不知道

13. 你在家里有电脑吗？（单项选择）

□ 有
□ 没有

14. 你在家里能上网吗？（单项选择）

□ 能
□ 不能
15. 你多久玩电脑游戏或其他电子游戏？（单项选择）

☐ 从来不玩
☐ 几个月玩 1次
☐ 每月玩 1到2次
☐ 每周玩 1到2次
☐ 每周玩 3到4次
☐ 每天玩

16. 你的《被遗忘的世界》的用户名是什么？__________________。

感谢你认真完成了本问卷！
我们将对你的回答保密。
Appendix G.
Test Administrator’s Manual

Evaluation of the E-Learning System: Open-Language Learning Initiatives for English

Main Study
Lanzhou, Gansu
China
1. **Background and Purpose of the Evaluation**

   The U.S. Department of Education [Policy and Program Studies Service (PPSS), within the Office of Planning, Evaluation, and Policy Development (OPEPD)], is sponsoring an evaluation of the E-language learning system named Open Language Learning Initiative for English, (OLLI English). The computer-based game developed to help students learn English is called *The Forgotten Word (TFW)*.

   RTI International (RTI) is carrying out the evaluation which is led by Dr. Patricia Green. RTI is collaborating with East China Normal University (ECNU) for the work in China. The project director at ECNU is Professor Zhu Yiming, a professor of the ECNU Department of Education.

   This evaluation has been scheduled to take place in Chinese middle schools for two semesters from September 2009 to June 2010. The Chinese Ministry of Education identified Gansu Province as a site that fit the requirements for the evaluation. The provincial authorities selected the sampled schools. The evaluation aims to answer the following key evaluation question:

   *Do students exposed to TFW demonstrate increases in proficiency in reading, writing, listening, and speaking skills when compared to students without access to TFW, given the same curriculum and under conditions that allow reasonable access to the software?*

   **The role of the test administrators is to:**
   1. Confirm (and update if needed) the current student roster with the student tracking form.
   2. Distribute consent forms to all students and read aloud the form.
   3. Administer reading and listening tests.
   4. Administer a questionnaire to all students participating in the survey about their thoughts and experience about learning English (attached to the listening test).
   5. Administer a questionnaire to teachers participating in the program study. The questionnaire asks about the teachers’ thoughts and experience about teaching English. There are two versions of the questionnaire: one for teachers in the “treatment” schools that are using *The Forgotten World* and one for teachers in “comparison” schools.

2. **Verifying the student roster with the Student Tracking Form**

   **2.1 Prior to Test Administration - Student Roster vs. Student Tracking Form**

   The first important step is to obtain a current student roster for each selected classroom at the school PRIOR to the test day (or at least 2 hours before testing is scheduled to begin). You will need to review each student name listed on the current student roster against the tracking form. A sample student tracking form is included in this manual as Attachment 1.
If a student is missing from the student tracking form, you must add this student to the bottom of the tracking form on a line that has been assigned an ID but has no name. Please put the student’s name on the list. It is very important that we know who has been added to which classroom and school. Please check with these students and make sure they include their TFW User ID on the questionnaire, or make a note that they do not have one assigned.

- If you notice a spelling change, please update the student tracking form with the correct spelling.

- If you have more than 3 additional students on the student list in the class NOT listed on the tracking form, you should assign new student IDs, using the same school and classroom IDs, but adding student IDs beginning with 601.

2.2 On Test Day

All test materials have been bundled by classroom. Test materials for each student will be inside individual envelopes. The outside of each envelope will list the student’s name and ID – YOU MUST DISTRIBUTE THE ENVELOPES TO STUDENTS INDIVIDUALLY, MATCHING THE NAME ON THE OUTSIDE OF THE ENVELOPE TO THE CORRECT STUDENT. If you have added students to the student tracking form, you must give the newly added student the corresponding student packet ID.

The students should confirm that they have received the correct envelope by verifying the name on the outside of the envelope.

During the test, or after the test, please use the student tracking form to check off which students take the test. Please make a check after the student ID on the tracking form.

3. Consent Forms

3.1 Parent Letter

We will give the schools a letter addressed to parents of the 8th grade students who are participating in the study, and ask the schools to distribute the letters to the parents. The letter describes the purpose of the study, students’ participation, and confidentiality. Parents who do not wish to have their child participate in the study can tear off the bottom portion of the letter that says, “I do not wish to have my child participate in this research” and return it to the test administrator. This student shall then be excluded from the study. Samples of the letter are included in English as Attachments 4 and 5 (and 4a and 5a in Chinese).

3.2 Student Assent Form

Before the start of the English language assessment tests and student questionnaire, the test administrator should give each student a copy of the student assent form and read it aloud to the students. The form will explain the purpose of the study, the voluntary nature of their participation, and that they are asked to complete assessment tests for reading and listening, as well as a questionnaire about their thoughts and experience with learning English. The form also assures the students that their individual test scores or responses to the questionnaire will not be shared with their teachers, their parents, China’s Ministry of Education, or the U.S. Department of Education. To ensure confidentiality, the students’ name will not be recorded on the tests but
Informed Consent Forms, and Questionnaires

will be represented by an ID number. If a student does not wish to participate, he or she shall be excluded from the study. Copies of the forms are provided in English as Attachments 2 and 3 (and 2a and 3a in Chinese).

3.3 Teacher Consent Form for Participation

Before administering the teacher’s questionnaire, the administrator should give a consent form to each teacher. The form will explain the purpose of the study, the voluntary nature of their participation, and that they are asked to complete a questionnaire about their thoughts and experience surrounding teaching English. The form also assures the teachers that individual responses to the questionnaire will not be shared with the school, other teachers, China’s Ministry of Education, or the U.S. Department of Education. If a teacher does not wish to participate, he or she shall be excluded from the study. Copies of the forms are provided in English as Attachments 6 and 7 (and 6a and 7a-Chinese). A copy of the Teacher Questionnaire for treatment schools is provided as Attachment 8 and 8a. The Teacher Questionnaire for comparison schools is provided as Attachment 9 and 9a.

4. Assessment Tests and Questionnaires

As mentioned previously, you will be administering the reading test, the listening test and the student questionnaire to all students sampled for this study. It is very important that you follow the scripts for each test – each student must hear the same information and you must read/play the entire script for each test.

4.1 Reading Test

The reading test is also called the ‘IPT’ test and all items are in one booklet. Test administrators distribute the envelopes (that contain both tests and questionnaires) before beginning to read the directions for the reading test. After the envelopes are distributed, instruct students to take out the reading test booklet.

When all students have the reading test on their desk, instruct them to open the booklet and begin reading the script with the instructions for the first section.

The reading test has five sections and you will need to provide instructions (from the script) before each section.

A copy of the script (in Chinese and English) is provided in Attachment 10. This script must be practiced in advance of administering the test.

A copy of the reading test is provided as Appendix A.

4.2 Listening Test

Directions for the listening test must be played for the students using a cassette tape recorder. Before beginning the tape, ask students to take the listening test from the envelope and instruct them to open the booklet to the first page. Test administrators should explain to students how the bubbles should be marked and then play the standardized recording for the test. Make
sure that all students understand what to do before the recording is played. As part of the test instructions, the recording will cover the function of the bubbles again. The test instructions can be replayed, but the actual English prompts should only be played once.

A copy of the booklet containing the listening test and questionnaire is in Appendix B.

4.3 Student Questionnaire

The student questionnaire is the same booklet as the listening test. This part of the assessment asks the student how they feel about learning English. Some students may be getting tired of the test at this point, so you should encourage students to complete it and do their best.

4.4 Teacher Questionnaire

The teacher questionnaires will be distributed to eighth-grade English teachers on arrival to school and collected before departing from the school. A copy of the teacher questionnaire for treatment schools is provided in Attachment 8 and for comparison schools in Attachment 9.

5. Collecting the Test Booklets

When students have completed the test and questionnaires, collect all booklets from students. The tests SHOULD NOT be put back into the envelopes. Please leave the envelopes in the classroom or in a trash container at the school.

Thank the students and teacher for their participation before leaving the classroom.

Before leaving the school, please check off each booklet, including the teacher questionnaire, on the Student Tracking Form.

Please bundle books from each class together and place in mailing box (do not use boxes that were sent from U.S. as they may be damaged).

DO NOT include the student tracking form in the box with the tests. If for any reason a box would be lost or stolen, it is important that a person looking at the tests would be unable to link a test with a student name. Please give the tracking forms to Dr. Zhu.

Thank you for your time and effort in this important China and U.S. evaluation!

6. Test Procedures

Before going to school, check that you have:

- Copy of the Student Tracking Form for each class that you will be testing.
- Envelopes with booklets for all students on Tracking Form(s).
- Copies of Student Assent Forms.
- Script with instructions for reading test.
- Tape and tape recorder for listening test.

In the classroom:
Step 1: Before distribute test booklets to the students
- Introduce yourself to the class and explain purpose of the study.
- Give the consent forms to all students.
- Read aloud the consent form statement to the students.

Step 2: Distribute test booklets
- Distribute the envelopes with test booklets by calling student names one by one. Test administrators MUST distribute the tests on their own. Do NOT ask teachers and students to help. Tell students that they should NOT open the envelope until everyone is ready.
- Instruct students to take the reading booklet from the envelope together. Tell students NOT to write down their names on the test booklets. Give a brief introduction on the test booklets. Reading test is in a separate booklet. Listening test and student questionnaire are in one test booklet together.
- Ask students to check if the 9 digit number on the envelope matches with the numbers on the two test booklets. If there are any errors, make a note of the ones which don’t match, and make changes on the test booklets and rosters accordingly.
- Tell students that the whole test takes one and a half hours. The order of the tests is reading first (60 minutes), listening second (20 minutes) and student questionnaire last (10 minutes).

Step 3: Start reading test
- Start reading test first. Tell students that they don’t need to answer questions on page 16.
- Test administrators must read the instructions by following test administrator manual on page 35 (attachment 10). The instructions must be read VERBATIM and no sentence should be skipped. Test administrator MUST read the instruction on their own. After the first part instruction, test administrators need to wait to start the next part till all the students are done with first part of the questions. Ask the students who answer the questions faster to wait to start the next section. There are 5 sections in the test.
- Ask students to cover their answers by using the yellow envelope. Emphasize to the students that they must NOT look at other people’s answers. If they don’t know the answer, they may leave it blank, but NO copying from other students. Test administrators will need to REPETITIVELY remind the students through the whole test.
- The time distribution of the reading test is described as follows:
  - Part 1: Vocabulary               5-10 minutes
  - Part 2: Vocabulary in context       5-10 minutes
  - Part 3: Reading for understanding  15-30 minutes
  - Part 4: Reading for life skills       8-15 minutes
  - Part 5: Language usage           4-9 minutes
- When students finish reading test, ask them to put the test booklets on the left corner of the table and start the listening test.

Step 4: Start listening test and student questionnaire
- All schools should use tape player or broadcast system for listening test.
- If broadcast system is being used in the listening test, all the classes must start the listening test TOGETHER after reading test.
- Instruct students to take the listening test booklet from the envelope. Give instructions for filling out “bubbles” and begin playing tape recorded instructions.
When students have finished listening test, tell them to turn the page and complete the questionnaire. Remind the students to read the instruction on the questionnaire before start answering questions.

When students work on the questionnaire, test administrators can rewind the tape for the next use.

**Step 5: Collect test booklets**

- Before you collect the test booklets, tell students they do NOT need to put the finished test booklets into the envelope. Tell students to keep the student consent forms and envelope.
- Ask the students to put the finished test booklets on the corner of the table. Test administrators must collect the test booklets one for one and check the two booklets. After all the test booklets are collected, test administrators thank students for participating and ask students to dismiss.

**Step 6: After the test session:**

- Complete the Student Tracking Form by checking off the IDs of all completed booklets.
- If any unusual circumstances arose during the test, attach an explanatory note to the Student Tracking Form.
## Attachment 1. Student Tracking Form

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<tr>
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<th>School in Chinese</th>
<th>School ID</th>
<th>Class#</th>
<th>Serial Number</th>
<th>Student Name</th>
<th>School test ID</th>
<th>Class test ID</th>
<th>Student test ID</th>
</tr>
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Attachment 2. Assent Form – Student - TFW

Dear Student:

Thank you for volunteering to participate in this study. This study is an Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning software on students’ English proficiency. We are interested in how students listen and read in English. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask you to fill out a questionnaire about your experience and thoughts with learning English and using The Forgotten World software. You are one of about 6,000 middle school students participating in this study.

Your participation is voluntary. You may change your mind and not participate at any point. If you decide not to participate, there is no penalty. You may choose not to answer any question. There are no specific risks to you from taking part in the study.

There are no other direct benefits to you from participating, but you will be helping us understand the effectiveness of English language learning software on students’ English proficiency. Your name will not be recorded on the tests or the questionnaire and you are only represented by an ID. We are required to keep all information confidential and what you say or do on these tests will not affect your grades at school. Only authorized researchers at RTI and ECNU will know your test scores and your responses to the questionnaire. No one else will know, not your school, your teachers, the U.S. Department of Education, China’s Ministry of Education, or your parents.

If you have any questions about this study or your participation, please feel free to ask the test administrator.

We thank you in advance for your help!

Patricia J. Green
Project Director
RTI International
Attachment 3. Assent Form – Comparison Students – no TFW

Dear Student:

Thank you for volunteering to participate in this study. This is a study of the Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning. We are interested in how students listen and read in English. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask you to fill out a questionnaire about your experience and thoughts with learning English. You are one of about 6,000 middle school students participating in this study.

Your participation is voluntary. You may change your mind and not participate at any point. If you decide not to participate, there is no penalty. You may choose not to answer any question. There are no specific risks to you from taking part in the study. There are no other direct benefits to you from participating, but you will be helping us understand the effectiveness of English language learning. Your name will not be recorded on the tests or the questionnaire and you are only represented by an ID. We are required to keep all information confidential and what you say or do on these tests will not affect your grades at school. Only authorized researchers at RTI and ECNU will know your test scores and your responses to the questionnaire. No one else will know, not your school, your teachers, the U.S. Department of Education, China’s Ministry of Education, or your parents.

If you have any questions about this study or your participation, please feel free to ask the test administrator.

We thank you in advance for your help!

Patricia J. Green
Project Director
RTI International
Attachment 4. Parent Letter – Treatment Schools -TFW Parents

Dear Parent or Guardian:

We are pleased to inform you that your child’s school has been selected to participate in an important study called the Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning software on students’ English proficiency. We would like to measure students’ English language proficiency in listening and reading. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask your child to fill out a questionnaire about his or her experience and thoughts with learning English and using The Forgotten World software. Your child will be one of about 6,000 middle school students participating in this study. Your child’s participation is voluntary. You or your child may withdraw from the study at any point.

There is no penalty if you or your child decides not to participate. Your child may choose not to answer any question. There are no specific risks to your child from taking part in the study but he or she might feel slightly uncomfortable with the test administrator because your child might not have met him or her before. There are no other direct benefits to your child from participating, but he or she will be helping us understand the effectiveness of English language learning software on students’ English proficiency. Your child’s name will not be recorded on the tests or the questionnaire but will only be represented by an ID. We are required to keep all information confidential and your child’s performance on these tests will not affect his or her grades at school. Only authorized researchers at RTI and ECNU will know your child’s test scores and responses to the questionnaire. They will not be shared with the school, the teachers, the U.S. Department of Education, China’s Ministry of Education, or with you.

If you do not wish to have your child participate, please tear off the bottom portion of this letter and have your child give it to the test administrator. If you have any questions about this study or your child’s participation, please feel free to ask the test administrator that will be at your child’s school. We thank you in advance for your cooperation in this important study.

Sincerely,

Patricia J. Green
Project Director
RTI International

I do not wish to have my child participate in this research.
Attachment 5. Parent Letter – Comparison Schools - Non TFW Parents

Dear Parent or Guardian:

We are pleased to inform you that your child’s school has been selected to participate in an important study called the Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English language learning. We would like to measure students’ English language proficiency in listening and reading. To do this, we will give the students some tests that will take about 1.5 hours to complete. In addition, we will ask your child to fill out a questionnaire about his or her experience and thoughts with learning English. Your child will be one of about 6,000 middle school students participating in this study. Your child’s participation is voluntary. You or your child may withdraw from the study at any point.

There is no penalty if you or your child decides not to participate. Your child may choose not to answer any question. There are no specific risks to your child from taking part in the study. There are no other direct benefits to your child from participating, but he or she will be helping us understand the effectiveness of English language learning in China. Your child’s name will not be recorded on the tests or the questionnaire but will only be represented by an ID. We are required to keep all information confidential and your child’s performance on these tests will not affect his or her grades at school. Only authorized researchers at RTI and ECNU will know your child’s test scores and responses to the questionnaire. They will not be shared with the school, the teachers, the U.S. Department of Education, China’s Ministry of Education, or with you.

If you do not wish to have your child participate, please tear off the bottom portion of this letter and have your child give it to the test administrator. If you have any questions about this study or your child’s participation, please feel free to ask the test administrator that will be at your child’s school. We thank you in advance for your cooperation in this important study.

Sincerely,

Patricia J. Green  
Project Director  
RTI International

I do not wish to have my child participate in this research.
Attachment 6. Consent Form for Participation in the Teacher Questionnaire - TFW

Dear Teacher:

Thank you for volunteering to participate in this study. This study is an Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English-language learning software on students' English proficiency. We would like to measure students’ English language proficiency in listening and reading. At this time, we are asking you to fill out a questionnaire about your experience and thoughts with teaching English and using The Forgotten World software. It will take about 10 minutes to complete. You will be one of about 90 middle school teachers participating in this study.

Your participation is voluntary. You may withdraw from the study at any point. There is no penalty if you decide not to participate. You may choose not to answer any question. There are no specific risks to you from taking part in the study. There are no other direct benefits to you from participating, but you will be helping us understand teachers’ experiences in teaching English. Your name will not be recorded on the questionnaire, but will be represented by an ID. We are required to keep all information confidential and your responses in the questionnaire will not affect your status at school. Only authorized researchers at RTI and ECNU will know your responses to the questionnaire. They will not be shared with the school, others teachers, the U.S. Department of Education, China’s Ministry of Education, or with your students.

If you have any questions about this study or your participation, please feel free to ask the questionnaire administrator.

We thank you in advance for your help!

Sincerely,

Patricia J. Green
Project Director
RTI International
Attachment 7. Consent Form for Participation in the Teacher Questionnaire – NO TFW

Dear Teacher:

Thank you for volunteering to participate in this study. This study is an Evaluation of the Open-Language Learning Initiative for English (OLLI English). It is sponsored by the U.S. Department of Education, as part of a collaboration project with China’s Ministry of Education. RTI International, a US-based non-profit research organization, is conducting this study. We have also asked East China Normal University (ECNU) to help us.

The purpose of the study is to examine the effectiveness of English-language learning. We would like to measure students’ English language proficiency in listening and reading. At this time, we are asking you to fill out a questionnaire about your experience and thoughts with teaching English. It will take about 10 minutes to complete. You will be one of about 90 middle school teachers participating in this study.

Your participation is voluntary. You may withdraw from the study at any point. There is no penalty if you decide not to participate. You may choose not to answer any question. There are no specific risks to you from taking part in the study. There are no other direct benefits to you from participating, but you will be helping us understand experiences and thoughts about teaching English. Your name will not be recorded on the questionnaire, but will be represented by an ID. We are required to keep all information confidential and your responses in the questionnaire will not affect your status at school. Only authorized researchers at RTI and ECNU will know your responses to the questionnaire. They will not be shared with the school, others teachers, the U.S. Department of Education, China’s Ministry of Education, or with your students.

If you have any questions about this study or your participation, please feel free to ask the questionnaire administrator.

We thank you in advance for your help!

Sincerely,

Patricia J. Green
Project Director
RTI International
亲爱的同学：
谢谢你自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English)所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。
这项研究是为了要了解英语学习软件是否有助于学生的英文程度。我们希望了解学生们在英文上的听、读的能力。研究办法是通过让学生完成一些大约需要1.5小时完成的测试。我们也会请你填写一份问卷以便了解你在学习英文和使用《被遗忘的世界》软件的经验和想法。你是约6000个参加研究的中学学生之一。
你的参与是属于完全自愿的。你任何时候都可以改变主意并决定停止参与，如果你决定不要参与并不会受任何处分。你也可以决定不回答任何一个测验中的问题。你参与本项研究不会遭受风险。
你参与本项研究也不会享受到任何直接利益，但是会帮助我们了解英语学习软件在提高学生英语熟练程度的有效性。你的名字并不会被纪录在测验卷或问卷上，你的名字会用代码代替。我们被规定必须将所有资料加以保密，你在进行测验时所说的或做的一切，都不会影响你在学校的成绩。唯有被授权的RTI和华东师范大学的研究员才会知道你的测试结果和问卷回答。其它任何人，包括你的学校、老师、美国教育部、中国教育部或你的父母都不会知道。
管理这次英文测验的长辈可以回答你有的任何问题，不管是关于此项研究或你的参与，如果你有疑问请尽量发问。
在此先谢谢你的参与。
RTI International研究项目主管
Patricia J. Green
Attachment 3a. Assent Form- Comparison Students – No TFW

亲爱的同学：

谢谢你自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English) 所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。

这项研究是为了要了解英语语言学习的有效性。我们希望了解学生们在英文上的听、读的能力。研究办法是通过让学生完成一些大约需要1.5小时完成的测试。我们也会请你填写一份问卷以便了解你在学习英文的经验和想法。你是约6000个参加研究的中学学生之一。

你的参与是属于完全自愿的。你在任何时候都可以改变主意并决定停止参与，如果你决定不要参与并不会受任何处分。你也可以决定不回答任何一个测验中的问题。你参与本项研究不会遭受风险。

你参与本项研究也不会享受到任何直接利益，但是会帮助我们了解英语语言学习的有效性。你的名字并不会被纪录在测验卷或问卷上，你的名字会用代码代替。我们被规定必须将所有资料加以保密，你在进行测验时所说的或做的一切，都不会影响你在学校的成绩。唯有被授权的RTI和华东师范大学的研究员才会知道你的测试结果和问卷回答。其它任何人，包括你的学校、老师、美国教育部、中国教育部或你的父母都不会知道。

管理这次英文测验的长辈可以回答你有的任何问题，不管是关于此项研究或你的参与，如果你有疑问请尽量发问。

在此先谢谢你的参与。

RTI International研究项目主管

Patricia Green
Attachment 4a. Parent Letter – TFW Parents

Dear parents or guardians:

We are delighted to inform you that your child’s school has been chosen to participate in a very important research project, called Open-Language Learning Initiative for English (OLLI English). This research is co-hosted by the US Department of Education and the Chinese Ministry of Education, and implemented by the non-profit organization RTI International. We also invited East China Normal University to cooperate.

This research aims to understand how English learning software can help students improve their English skills. We will measure students’ proficiency in listening and reading. The research method involves students completing tests that take approximately 1.5 hours to complete. Besides, we will also ask your child to fill out a questionnaire to understand their experiences and thoughts about learning English and using the “The Forgotten World” software. Your child is one of about 6000 volunteers participating in this research. Your child’s participation is entirely voluntary, and you or your child can stop participating at any time.

If you or your child decide not to participate, there will be no consequences. Your child can choose not to answer any questions on the test. Your child’s participation will not pose any risk. However, your child may find it somewhat unfamiliar because they may not know the test administrator and questionnaire researcher. Your child’s participation will not bring any direct benefits, but it will help us understand the effectiveness of English learning software in improving students’ English proficiency. Your child’s name will not be recorded on the test or questionnaire, and will be replaced by a code. We are required by law to keep all data confidential. Your child’s performance on the test will not affect their school grades. Only authorized RTI and East China Normal University researchers will know your child’s test results and questionnaire answers. No one else, including schools, teachers, the US Department of Education, the Chinese Ministry of Education, or you, will be informed.

If you do not wish your child to participate in this research project, please tear off this letter and give it to the researcher managing this English test. If you have any questions about this research or your child’s participation, please contact the researcher at your child’s school. Thank you for your cooperation on this important research.

RTI International Research Project Director
Patricia Green

I do not want my child to participate in this research project.
Attachment 5a. Parent Letter – Non TFW Parents

敬爱的父母或监护人：

我们很高兴通知您，您的孩子已入选一个非常重要的研究项目，名为Open-Language Learning Initiative for English (OLLI English)。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。

此项研究是要了解英语语言学习的有效性。我们会测量学生在英文上的听、读的能力。研究办法是通过让学生完成一些大约需要1.5小时完成的测试。此外，我们也会请您的孩子填写一份问卷以便了解他在学习英文的经验和想法。您的孩子是大约6000个自愿参加此项研究的中学生之一。您的孩子是纯属自愿的，您或您的孩子在任何时候都可以改变主意并决定停止参与。

如果您或您的孩子决定不要参与，将不会受到任何处分。您的孩子可以决定不回答任何测试中的问题。您的孩子参与本项研究不会遭受风险，但他可能会觉得有些不习惯因为他不一定会认识管理这次英文测验和问卷的研究员。您的孩子参与本项研究也不会享受到任何直接利益，但是会帮助我们了解中国英语语言学习的有效性。您的孩子的名字并不会被记录在测验卷或问卷上，他的名字会用代码代替。我们被规定必须将所有资料加以保密，您的孩子在测验上的表现不会影响他在学校的成就。唯有被授权的RTI和华东师范大学的研究员才会知道您的孩子在测验中的表现和在问卷中的回答。其它任何人，包括学校、老师、美国教育部、中国教育部或您都不会被告知。

如果您不希望您的孩子参与这次的研究项目，请撕下这封信下角，让您的孩子带回给管理这次英文测验的研究员。如果您对此项研究或您的孩子在测验有任何问题，请洽询在您的孩子学校的管理这次英文测验的研究员。感谢您配合这项重要的研究。

RTI International研究项目主管

Patricia Green 敬上

我不希望我的孩子参与这次的研究项目。
Attachment 6a. Consent Form for Participation in the teacher Questionnaire – TFW

敬爱的老师：

谢谢您自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English)所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。

此项研究是要了解英语学习软件是否有助于学生的英文程度。我们会测量学生在英文上的听、读的能力。目前我们会请您填写一份问卷以便了解你在英语教学和使用《被遗忘的世界》软件的经验和想法。问卷大约花10分钟即可完成。您是约90位参加研究的中学老师之一。

您的参与是属于完全自愿的。您在任何时候都可以改变主意并决定停止参与，如果您决定不要参与并不会受任何处分。您也可以决定不回答任何一个测验中的问题。您参与本项研究不会遭受风险。您参与本项研究也不会享受到任何直接利益，但是会帮助我们了解教师在英语教学中的经验。您的名字并不会被纪录在问卷上。我们被规定必须将所有资料加以保密，您在问卷上的答案不会影响您在学校的身份或待遇。唯有被授权的RTI和华东师范大学研究员才会知道您的问卷回答。其它任何人，包括您的学校、在学校的同事、美国教育部、中国教育部或您的学生都不会知道。

管理这次问卷的研究员可以回答您有的任何问题，不管是关于此项研究或你的参与，如果您有疑问请尽量发问。

在此先谢谢你的参与。

RTI International研究项目主管

Patricia Green敬上
Attachment 7a. Consent Form for Participation in the Teacher Questionnaire – NO TFW

敬爱的老师：
谢谢您自愿参与本项研究。这是对Open-Language Learning Initiative for English (OLLI English) 所做的一项评估。这项研究是由美国教育部及中国教育部共同主办，而由在美国的非营利组织RTI International进行实施。我们也请了华东师范大学一起合作。
此项研究是要了解英语语言学习的有效性。我们会测量学生在英文上的听、读的能力。目前我们会请您填写一份问卷以便了解你在英语教学的经验和想法。问卷大约花10分钟即可完成。您是约90位参加研究的中学老师之一。
您的参与是属于完全自愿的。您在任何时候都可以改变主意并决定停止参与，如果您决定不要参与并不会受任何处分。您也可以决定不回答任何一个测验中的问题。您参与本项研究不会遭受风险。您参与本项研究也不会享受到任何直接利益，但是会帮助我们了解教师在英语教学中的经验。您的名字并不会被纪录在问卷上。我们被规定必须将所有资料加以保密，您在问卷上的答案不会影响您在学校的身份或待遇。唯有被授权的RTI和华东师范大学研究员才会知道您的问卷回答。其它任何人，包括您的学校、在学校的同事、美国教育部、中国教育部或您的学生都不会知道。
管理这次问卷的研究员可以回答您有的任何问题，不管是关于此项研究或你的参与，如果您有疑问请尽量发问。
在此先谢谢你的参与。

RTI International研究项目主管
Patricia Green敬上

Patricia Green敬上
Attachment 8. Teacher Questionnaire (Treatment Schools)

Teacher ID:
The following questions are about your experience and thoughts. There are no right or wrong answers. Please read all questions thoroughly and provide a response to the best of your ability. Directions are provided at each question. Please mark the box next to your answer choice, like this: [ ] For some questions, you will be asked to write your response using words or numbers.

1. What year were you born? |1| |9| |___| |___|

2. We would like to know if the training you received on using The Forgotten World was helpful. How helpful was the training to you? (Mark one answer)
   - [ ] Not helpful at all
   - [ ] Not so helpful
   - [ ] Somewhat helpful
   - [ ] Very helpful

3. How often did you use The Forgotten World in class? (Mark one answer)
   - [ ] Never
   - [ ] Once every few months
   - [ ] Once or twice a month
   - [ ] Once or twice a week
   - [ ] Three to four times a week
   - [ ] Everyday

4. How often did you organize students to use The Forgotten World outside of class at school? (Mark one answer)
   - [ ] Never
   - [ ] Once every few months
   - [ ] Once or twice a month
   - [ ] Once or twice a week
   - [ ] Three to four times a week
   - [ ] Everyday

5. Now that you have used The Forgotten World, realistically, how likely do you think you will use it as part of the curriculum in the future? (Mark one answer)
   - [ ] Not likely at all
   - [ ] Not too likely
   - [ ] Somewhat likely
   - [ ] Very likely
6. Could you tell us more about your answer in Question 5?

____________________________________________________________________________________

7. Realistically, how likely do you think you will use some other computer software as part of the curriculum in the future? (Mark one answer)

☐ Not likely at all  
☐ Not too likely  
☐ Somewhat likely  
☐ Very likely

8. In general, how helpful do you think *The Forgotten World* is to students’ English learning? (Mark one answer)

☐ Not helpful at all  
☐ Not so helpful  
☐ Somewhat helpful  
☐ Very helpful

9. In what area do you think that *The Forgotten World* can be helpful to students’ English learning? (Mark one answer per row)

<table>
<thead>
<tr>
<th>Area</th>
<th>Level of Helpfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not helpful at all</td>
</tr>
<tr>
<td>a. Vocabulary</td>
<td>☐</td>
</tr>
<tr>
<td>b. Sentence</td>
<td>☐</td>
</tr>
<tr>
<td>c. Listening</td>
<td>☐</td>
</tr>
<tr>
<td>d. Reading</td>
<td>☐</td>
</tr>
<tr>
<td>e. Writing</td>
<td>☐</td>
</tr>
<tr>
<td>f. Speaking</td>
<td>☐</td>
</tr>
<tr>
<td>g. Test-taking</td>
<td>☐</td>
</tr>
</tbody>
</table>

10. Compared to the past, has student’s motivation for learning English changed since using *The Forgotten World*? (Mark one answer)

☐ No change at all  
☐ A little more motivated  
☐ Somewhat more motivated  
☐ A lot more motivated
11. What were the two biggest challenges that you encountered while using The Forgotten World? (Mark two answers)

☐ Insufficient time for using the software
☐ Limited support from the school
☐ Problems with computers at the school computer laboratory
☐ Concerns with negative impact on test scores
☐ Other challenges -> Please specify: _____________________________

12. In your opinion, what are some important procedures that need to be implemented so that The Forgotten World could be used to improve English instruction and students’ English proficiency?

_________________________________________________________________
_________________________________________________________________

13. For which grade level would The Forgotten World be most helpful to the students? (Mark one answer)

☐ 7th grade
☐ 8th grade
☐ 9th grade

14. How often did you collaborate or communicate with other teachers in using The Forgotten World?

☐ Never
☐ Once every few months
☐ Once or twice a month
☐ Once or twice a week
☐ Three to four times a week
☐ Everyday

15. Has using The Forgotten World changed the way you think about teaching?

☐ Yes
☐ No

If yes, please explain.________________________________________________

16. Which 8th grade classes are you teaching? __________________________

17. Please list ALL the TFW usernames you have been using and in which classroom.
TFW username: ______________________ , used in classroom ____________________

TFW username: ______________________ , used in classroom ____________________
TFW username: ______________________, used in classroom ______________________

If you have TFW usernames for other use besides classroom teaching, please specify.

_____________________________________________________________________

_____________________________________________________________________

Thank you for completing this questionnaire!
We will keep your responses confidential.
Attachment 8a. 教师问卷 （实验学校）

教师代码和姓名:

本问卷主要是为了了解您在英语教学方面的经历和想法。任何回答都没有对错之分。希望你能够认真阅读题目，并选择最适合的回答。请根据题目指示，在方框内打勾，如√。有些题目会请您以文字或数字写出你的回答。

1. 您的出生年份是:  

2. 您参与了The Forgotten World软件使用培训，请问，这个培训对您开展实际教学有多大的帮助？（单项选择）
   - □ 没有帮助
   - □ 帮助较小
   - □ 帮助较大
   - □ 帮助很大

3. 您在课堂中多久使用The Forgotten World这个学习材料的？（单项选择）
   - □ 从不使用
   - □ 几个月使用1次
   - □ 每月使用1到2次
   - □ 每周使用1到2次
   - □ 每周使用3到4次
   - □ 每天使用

4. 您在课外又是多久组织学生在学校使用The Forgotten World这个学习材料的？（单项选择）
   - □ 从不使用
   - □ 几个月使用1次
   - □ 每月使用1到2次
   - □ 每周使用1到2次
   - □ 每周使用3到4次
   - □ 每天使用
5. 经过前段时间的使用，从实际出发，您现在认为把*The Forgotten World* 作为以后课程教学的一部分，可能性有多大？（单项选择）

- □ 完全没有可能
- □ 可能性不大
- □ 有较大可能
- □ 非常有可能

6. 请说明在第5题中您所勾选该答案的原因：

________________________________________________________________________
________________________________________________________________________

7. 用其它计算机软件作为以后课程教学的一部分，可能性有多大？（单项选择）

- □ 完全没有可能
- □ 可能性不大
- □ 有较大可能
- □ 非常有可能

8. 总的来说，您认为*The Forgotten World* 这个学习软件对于学生学习英语的帮助有多大？（单项选择）

- □ 没有帮助
- □ 帮助较小
- □ 帮助较大
- □ 帮助很大
9. 您认为《The Forgotten World》这个学习软件在哪些方面有助于促进学生学习英语？（请在合适的方框内打勾，每行只能选一个）

<table>
<thead>
<tr>
<th>内容</th>
<th>帮助程度</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>没有帮助</td>
</tr>
<tr>
<td>a. 单词</td>
<td></td>
</tr>
<tr>
<td>b. 语法</td>
<td></td>
</tr>
<tr>
<td>c. 听力</td>
<td></td>
</tr>
<tr>
<td>d. 阅读</td>
<td></td>
</tr>
<tr>
<td>e. 写作</td>
<td></td>
</tr>
<tr>
<td>f. 口语</td>
<td></td>
</tr>
<tr>
<td>g. 考试</td>
<td></td>
</tr>
</tbody>
</table>

10. 请您评价经过使用《The Forgotten World》这个学习材料，总体上班级学生在学习英语的积极性与以往相比，有没有变化？（单项选择）

- □ 没有变化
- □ 有少许提高
- □ 有较大提高
- □ 有很大提高
11. 您在使用The Forgotten World 开展教学时，遇到了最大的2项困难是什么？

（可选2项）

- □ 没有可以更多的使用时间
- □ 学校对这项工作的重视不够
- □ 学校计算机教室设备有问题
- □ 担心影响学生的考试成绩
- □ 其他困难 → 请写出：

12. 您认为，如果要使用The Forgotten World学习软件来改进英语教学和提高学生的英语水平，需要采取哪些措施？

请简要说明：

13. 您认为The Forgotten World这个学习软件对于那个年级的学生学习英语的帮助最大？（单项选择）

- □ 7 年级
- □ 8 年级
- □ 9 年级

14. 您在使用The Forgotten World 学习软件时，多久与其他教师进行合作或交流？

- □ 从不合作或交流
- □ 几个月合作或交流 1次
- □ 每月合作或交流1到2次
- □ 每周合作或交流1到2次
- □ 每周合作或交流3到4次
- □ 每天合作或交流
15. 使用The Forgotten World学习软件有没有改变你对于英文教学的想法？

☐ 有
☐ 没有
如果有改变，请具体说明。____________________________________________________

16. 您现在教8年级的哪些班级？__________________________________________

17. 请列出您所使用的所有The Forgotten World用户名以及在哪个班级教学中使用。

TFW 用户名_________________________, 在哪个班级使用________________________

TFW 用户名_________________________, 在哪个班级使用________________________

TFW 用户名_________________________, 在哪个班级使用________________________

如果您将The Forgotten World用户名用于课堂教学以外的其他活动，请具体说明。

_________________________________________________________________________
_________________________________________________________________________

谢谢您认真回答本问卷！
我们将保密您的回答。

_________________________________________________________________________

_________________________________________________________________________

G-32  A Study of a Gaming Approach to English Language Learning for Middle School Students
Attachment 9. Teacher Questionnaire (Comparison Schools)

Teacher ID:

The following questions are about your experience and thoughts. There are no right or wrong answers. Please read all questions thoroughly and provide a response to the best of your ability. Directions are provided at each question. Please mark the box next to your answer choice, like this: [ ] For some questions, you will be asked to write your responses using words or numbers.

1. Are you male or female? □ Male □ Female

2. What year were you born? _1_ _9_ _8_ _7_

3. How many years have you taught English? _4_ _5_ _6_ _7_ years

4. The following questions are about your English classes this semester.
   a. How many classroom hours of English classes do you teach on a weekly basis? _8_ _9_ _0_ _1_
   f. How many English classes do you teach? _6_ _7_ _8_ _9_ classes
   g. What are the grade levels? □ 7th grade □ 8th grade □ 9th grade

5. Do you have a degree in English? □ No □ Yes

6. The following questions are about the highest degree you have completed. Using the list on the bottom, please fill in the corresponding number.
   a. What is the highest level of degree you have completed? _1_
   b. What is the highest level of degree in English you have completed? _1_ (Write 0 if you do not have a degree in English)

   List of Highest Degree Completed
   (1) Less than High School
   (2) High School Diploma
   (3) 3-Year Normal High School Diploma
   (4) Associate Degree, including 5-Year Normal College
   (5) 4-Year University
   (6) Advanced Degree

7. During this semester, have you participated in teachers’ training related to English teaching that was organized by your school? (Mark one answer)
   □ No
   □ Yes → How many days in total? _8_ _9_ _0_ _1_ days
8. During this semester, have you participated in teachers’ training related to English teaching that was organized by an entity other than your school? (Mark one answer)
   □ No
   □ Yes → How many days in total? [___] days

9. Currently, how experienced are you with using instructional technology to improve classroom instruction for English? (Mark one answer)
   □ Not experienced at all
   □ Less experienced
   □ Somewhat experienced
   □ Very experienced

10. Have you used computer software for teaching 8th grade English classes? (Mark one answer)
    □ No
    □ Yes → What kind of software? Please specify: __________________________

11. What are some teaching methods that you frequently use for teaching 8th grade English classes? (Mark all that apply)
    □ Give lectures according to textbook chapters
    □ Incorporate supporting materials for classroom instruction
    □ Design English language games and activities
    □ Focus on test-taking skills
    □ Something else → What are they? Please specify: __________________________

12. In general, what percentage of time do you use Chinese (including lecture, oral questioning, dialogues, etc.) to teach 8th grade English classes?
    □ Less than 20%
    □ 20% - 50%
    □ 50% - 80%
    □ More than 80%

13. Do you have a computer at home?
    Yes
    No

14. Do you have access to the internet at home?
    Yes
    No
15. **Being as objective as you can, how motivated are your 8th grade students in terms of learning English?**

- [ ] Not motivated at all
- [ ] Less motivated
- [ ] Somewhat motivated
- [ ] Very motivated

16. **Currently, which of the following apply to you? (Mark all that apply)**

- [ ] I have traveled to English-speaking countries
- [ ] I use English to speak with relatives, family, or friends
- [ ] I read English language books and magazines, newspapers, and Web sites

17. **How often do you watch English language TV programs for at least 15 minutes in a sitting? (Mark one answer)**

- [ ] Never
- [ ] Once every few months
- [ ] Once or twice a month
- [ ] Once or twice a week
- [ ] Three or four times a week
- [ ] Everyday

18. **How often do you use English to have online chat with people or write e-mails?**

- [ ] Never
- [ ] Once every few months
- [ ] Once or twice a month
- [ ] Once or twice a week
- [ ] Three or four times a week
- [ ] Everyday

19. **How important do you feel that learning English is to middle school students in this area? (Mark one answer)**

- [ ] Not important at all
- [ ] Less important
- [ ] Somewhat important
- [ ] Very important

---

**Thank you for completing this questionnaire!**

**We will keep your responses confidential.**
Attachment 9a. 教师问卷（对照学校）

教师代码及姓名：

本问卷主要是为了了解您在英语教学方面的经历和想法。任何回答都没有对错之分。希望您能够认真阅读题目，并选择最适合的回答。请根据题目指示，在方框内打勾，如√。有些题目请您以文字或数字写出您的回答。

1. 您的性别是： □ 男； □ 女
2. 您的出生年份是： ___ ___ 9 ___ ___
3. 您从事英语教学有多少年了？ ___ ___ 年
4. 请回答下列关于您在本学期担任英语教学方面的问题。
   a. 您每周担任英语教学的课时数是： ___ ___
   h. 您担任英语教学的班级数是： ___ 个班级
   i. 有哪些年级？ □ 7 年级； □ 8 年级； □ 9 年级

5. 您是不是英语专业毕业？ □ 不是； □ 是
6. 下列问题有关于您的最高学历。请用题目下方的最高学历表，填入相关号码。
   a. 您所取得的最高学历是： ___
   b. 您在英语专业方面取得的最高学历是： ___（若不是英语专业毕业，填 0）

最高学历表
(1) 高中以下
(2) 高中学历
(3) 3年制中师或中专学历
(4) 大学专科学历（含5年中师）
(5) 大学本科毕业
(6) 大学研究生毕业
7. 本学年您是否还参与过由本校组织，英语教学方面的教师培训活动？（单项选择）
   □ 没参与
   □ 有参与 → 总合计时间大约为：[___] 天
8. 本学年您是否还参与过由其它方面组织（不包括本校），英语教学方面的教师培训活动？（单项选择）
   □ 没参与
   □ 有参与 → 总合计时间大约为：[___] 天
9. 目前，您在使用教育技术开展英语课堂教学方面的能力如何？（单项选择）
   □ 完全不会
   □ 比较弱
   □ 比较强
   □ 很强
10. 请问，您有没有在8年级的英语教学中使用过计算机软件？（单项选择）
    □ 没用过
    □ 有用过 → 是什么样的计算机软件？请写出：____________________________________
11. 您在8年级的英语教学中常用的教学方法有哪些？（多项选择）
    □ 按照教材内容教师讲解为主
    □ 找一些辅助材料用于课堂教学
    □ 设计一些英语游戏活动
    □ 以围绕应付考试为主而教学
    □ 其他 → 是什么样的方式？请写出：____________________________________
12. 一般来说，您在8年级的英语课堂中运用中文（包括讲解、提问、对话等）的时间比例是多少？（单项选择）
    □ 20%以内
    □ 20% 到50%
    □ 50% 到80%
    □ 80% 以上
13. 你在家里有电脑吗？（单项选择）
   □ 有
   □ 没有

14. 你在家里能上网吗？（单项选择）
   □ 能
   □ 不能

15. 请客观地评价目前您所任教的8年級学生学习英语的积极性情况？（单项选择）
   □ 非常低
   □ 比较低
   □ 比较高
   □ 非常高

16. 目前，下列哪种情况适合于您？（多项选择）
   □ 我曾经到英语国家旅游过
   □ 我平时会用英语与亲戚、家人或者朋友对话
   □ 我平时会阅读英文书刊、报纸或者上英文网站阅读

17. 您多久收看有英语对话的电视节目，且每次至少看15分钟？（单项选择）
   □ 从来不看
   □ 几个月看1次
   □ 每月看1到2次
   □ 每周看1到2次
   □ 每周看3到4次
   □ 每天看
18. 您多久会用英文在网络与人聊天或写邮件？（单项选择）
- □ 从来不会
- □ 几个月 1次
- □ 每月 1到2次
- □ 每周 1到2次
- □ 每周 3到4次
- □ 每天

19. 您认为，本地初中学生学习英语的重要性程度如何？（单项选择）
- □ 非常不重要
- □ 比较不重要
- □ 比较重要
- □ 非常重要

非常感谢您认真回答了本问卷！我们将保密您的回答。
Attachment 10. Student Questionnaire

The following questions are about your experience and thoughts. There are no right or wrong answers. Please read all questions thoroughly and provide a response to the best of your ability. Directions are provided at each question. Please mark the box next to your answer choice, like this: □ For some questions, you will be asked to write your response.

1. Are you a boy or a girl? □ Boy □ Girl

2. Currently, how important is learning English to you? (Mark one answer)
   □ Not important at all
   □ Not too important
   □ Somewhat important
   □ Very important

3. Currently, how interested are you in learning English? (Mark one answer)
   □ Not interested
   □ Less interested
   □ More interested
   □ Very interested

4. Currently, which of the following apply to you? (Mark all that apply)
   □ I have traveled to English-speaking countries
   □ I would use English to speak with relatives, family, or friends
   □ I would read English language books and magazines, newspapers, and Web sites

5. How often do you watch English language TV programs for at least 15 minutes in a sitting? (Mark one answer)
   □ Never
   □ Once every few months
   □ Once or twice a month
   □ Once or twice a week
   □ Three or four times a week
   □ Everyday

6. How often do you use English to have online chat with people or write e-mails? (Mark one answer)
   □ Never
   □ Once every few months
   □ Once or twice a month
   □ Once or twice a week
   □ Three or four times a week
7. **How often do you play computer games that have vocabulary in English?** (Mark one answer) *Do not include the time spent on The Forgotten World.*
   - Never
   - Once every few months
   - Once or twice a month
   - Once or twice a week
   - Three or four times a week
   - Everyday

8. **Do you go to an English tutoring class outside of school?** (Mark one answer)
   - Never
   - I have, but not anymore
   - I do, but have not before
   - I always have

9. **Compared to when you were in 7th grade, has your motivation to learn English in 8th grade:** (Mark one answer)
   - Lowered a lot
   - Lowered a little
   - Stayed about the same
   - Improved a little
   - Improved a lot

10. **How much fun is learning English in school?** (Mark one answer)
    - No fun
    - A little fun
    - Some fun
    - A lot of fun
11. **Students in general may experience difficulty when they are learning English. Currently, how difficult are the following areas to you? (Mark one answer per row)**

<table>
<thead>
<tr>
<th>Content</th>
<th>Level of Difficulty</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Vocabulary</td>
<td>Not Difficult At All</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Sentence</td>
<td>A Little Difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Listening</td>
<td>Somewhat Difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Reading</td>
<td>Very Difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Writing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Speaking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. **Realistically, do you expect to attend university some day? (Mark one answer)**

- [ ] No
- [ ] Yes
- [ ] Unsure

**Instruction:** Students who have used *The Forgotten World*, please continue answering question 13-17 below. Students who have never used *The Forgotten World* do NOT need to answer the questions below.

13. **How often did you use *The Forgotten World* at school? (Mark one answer)**

- [ ] Never
- [ ] Once every few months
- [ ] Once or twice a month
- [ ] Once or twice a week
- [ ] Three to four times a week
- [ ] Everyday

14. **How often did you use *The Forgotten World* outside of school? (Mark one answer)**

- [ ] Never
- [ ] Once every few months
- [ ] Once or twice a month
- [ ] Once or twice a week
- [ ] Three to four times a week
- [ ] Everyday
15. In general, how helpful do you think *The Forgotten World* is to your English learning? (Mark one answer)
   - Don’t know (Didn’t use much or at all)
   - Not helpful at all
   - Not so helpful
   - Somewhat helpful
   - Very helpful

16. What were the two biggest challenges that you encountered while using *The Forgotten World*? (Mark two answers)
   - Insufficient time for using the software
   - Limited support from the school
   - Problems with computers at the school computer laboratory
   - Concerns with negative impact on test scores
   - Other challenges -> Please specify: ________________________________

17. What is your username for the Forgotten World? __________.

Thank you for completing this questionnaire!
We will keep your responses confidential.
Attachment 10a. Student Questionnaire

本问卷主要是为了了解你在学习英文方面的经历和想法。任何回答都没有对错之分。希望你能够认真阅读题目，并选择最适合的回答。请根据题目指示，在方框内打勾，如 √。有些题目会指示你写出你的回答。

1. 你的性别是：  □ 男孩；  □ 女孩

2. 目前，你认为学习英语重要吗？（单项选择）
   □ 完全不重要
   □ 不太重要
   □ 有些重要
   □ 非常重要

3. 目前，你学习英语的兴趣程度如何？（单项选择）
   □ 没有
   □ 较小
   □ 较大
   □ 很大

4. 目前，下列哪种情况适合于你？（多项选择）
   □ 我曾经到英语国家旅游过
   □ 我平时会用英语与亲戚、家人或者朋友对话
   □ 我平时会阅读英文书刊、报纸或者上英文网站阅读
5. 你多久收看有英语对话的电视节目，且每次至少看15分钟？（单项选择）
- 从来不看
- 几个月看 1次
- 每月看1到2次
- 每周看1到2次
- 每周看3到4次
- 每天看

6. 你多久会在网络上用英文与人聊天或写邮件？（单项选择）
- 从来不会
- 几个月1次
- 每月1到2次
- 每周1到2次
- 每周3到4次
- 每天

7. 你多久在计算机上玩有英语单词的电子游戏？（单项选择）
   请不要包括使用The Forgotten World 的时间。
- 从来不玩
- 几个月玩 1次
- 每月玩1到2次
- 每周玩1到2次
- 每周玩3到4次
- 每天玩

8. 你有没有参加校外英语辅导班？（单项选择）
- 从来没有过
- 以前有，现在没有
- 以前没有，现在有
- 一直参加校外班

9. 和你在7年级的时候相比，你在8年级时学习英语的积极性是：（单项选择）
- 下降较大
- 下降较小
10. 你在学校学习英语时有多大的乐趣？（单项选择）

- [ ] 没有乐趣
- [ ] 较小乐趣
- [ ] 较大乐趣
- [ ] 很大乐趣
11. 一般学生在英语学习中有时会遇到困难。目前，下列方面对你来说有多大困难？（请在合适的方框内打勾，每行只能选一个）

<table>
<thead>
<tr>
<th>内容</th>
<th>困难程度</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>没有困难</td>
</tr>
<tr>
<td>a. 单词</td>
<td>□</td>
</tr>
<tr>
<td>b. 语法</td>
<td>□</td>
</tr>
<tr>
<td>c. 听力</td>
<td>□</td>
</tr>
<tr>
<td>d. 阅读</td>
<td>□</td>
</tr>
<tr>
<td>e. 写作</td>
<td>□</td>
</tr>
<tr>
<td>f. 口语</td>
<td>□</td>
</tr>
</tbody>
</table>

12. 从实际出发，你期望将来能够进大学吗？（单项选择）

- □ 不期望
- □ 有期望
- □ 不知道

填表说明：请使用过《The Forgotten World》学习软件的同学，继续回答下面的13题至17题。没有使用过的同学，不需要再回答了。
13. 你在学校中多久使用The Forgotten World学习软件？（单项选择）
   - 从不使用
   - 几个月使用1次
   - 每月使用1到2次
   - 每周使用1到2次
   - 每周使用3到4次
   - 每天使用

14. 你在学校之外又是多久使用The Forgotten World学习软件？（单项选择）
   - 从不使用
   - 几个月使用1次
   - 每月使用1到2次
   - 每周使用1到2次
   - 每周使用3到4次
   - 每天使用

15. 总的来说，你认为The Forgotten World这个学习软件对于你学习英语的帮助多大？（单项选择）
   - 不知道（很少使用或从未使用）
   - 没有帮助
   - 帮助较小
   - 帮助较大
   - 帮助很大

16. 你在使用The Forgotten World学习英语时，遇到了最大的2项困难是什么？（可选2项）
   - 没有可以更多的使用时间
   - 学校对这项工作的重视不够
   - 学校计算机教室设备有问题
   - 担心影响考试成绩
   - 其他困难，请写出：_________________________________________________

17. 你目前所使用的The Forgotten World的用户名是什么？______________
感谢你认真完成了本问卷。我们将保密你的回答！
Appendix H.
Supplementary Tables
## Table H-1. Hierarchical Linear Models to Confirm Significant Findings for Test Score Gains Among Low-performing Students and Improved Motivation

<table>
<thead>
<tr>
<th></th>
<th>Reading score change</th>
<th>Listening score change</th>
<th>Spring motivation</th>
<th>Spring fun</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Intercept</td>
<td>6.61</td>
<td>6.64</td>
<td>5.01</td>
<td>4.59</td>
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<tr>
<td></td>
<td>(1.05)</td>
<td>(1.24)</td>
<td>(0.41)</td>
<td>(0.63)</td>
</tr>
<tr>
<td>Treatment</td>
<td>1.52</td>
<td>0.47</td>
<td>1.12</td>
<td>-0.83</td>
</tr>
<tr>
<td></td>
<td>(1.22)</td>
<td>(1.47)</td>
<td>(1.31)</td>
<td>(1.37)</td>
</tr>
<tr>
<td>Treatment*</td>
<td>0.213</td>
<td>0.752</td>
<td>0.391</td>
<td>0.547</td>
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<tr>
<td>Below median on</td>
<td>0.04</td>
<td></td>
<td>0.82</td>
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<tr>
<td>fall test</td>
<td>(0.60)</td>
<td>(1.04)</td>
<td>(0.429)</td>
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</tr>
<tr>
<td>Treatment* Below</td>
<td>2.24</td>
<td></td>
<td>4.14</td>
<td></td>
</tr>
<tr>
<td>median</td>
<td>(1.03)</td>
<td>(1.32)</td>
<td>(0.002)</td>
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</tr>
</tbody>
</table>

Note: Coefficients reported in top line. Standard errors in parentheses. P-values (significance) in third line. Significant findings (p<0.05) are bolded and italicized. N=3586 students, 62 classrooms, and 10 schools.

Results are based on hierarchical linear models of change in reading or listening test score, predicted by enrollment in a treatment school and, where noted, membership in the lower half of the fall test score distribution. These are random-intercept models: the average test score change varies by class and school, but the effect of treatment assignment is fixed across all cases. For the index of motivation or fun, results are based on hierarchical nonlinear (logistic) models.
Table H-2. Mean and Design-corrected Standard Errors for Motivation, for Treatment and Comparison Groups

Data Summary
Number of Clusters 10 (Schools)
Number of Observations 3640

Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>of Mean</th>
<th>95% CL for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPRING_Q9_MOTIVATION</td>
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<td>0.453602</td>
<td>0.028563</td>
<td>0.38898782 0.51821711</td>
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</tbody>
</table>

Domain Analysis: EXP

<table>
<thead>
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<th>EXP</th>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>of Mean</th>
<th>95% CL for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>TREATMENT</td>
<td>SPRING_Q9_MOTIVATION</td>
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<td>0.4695646 0.54890224</td>
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<td>COMPARISON</td>
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<td>0.397753</td>
<td>0.040592</td>
<td>0.30592670 0.48957892</td>
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</tbody>
</table>
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