



Conversation Quest in MEGA World (Multiplayer Educational Game for All)

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Abstract. The research team has developed a web-based massively multiplayer educational game platform named MEGA World. It allows teachers to create their own virtual worlds and to design a series of learning and assessment activities (i.e., quests and quest chain in a commercial game) for their students. The platform is also a multilingual platform that supports any languages and makes teachers capable of accessing external resources (e.g., multimedia, materials, online meetings, etc.). Students can learn and reach the predefined learning goals by taking and solving the quests while playing. Seven types of quests have been provided for teachers, including greeting, item collection and delivery, sorting, treasure hunting and digging, calculation, fill-in-the-blank, and short answer quest types. The research team is further design and develop conversation quest activities for Foreign English Learners (EFLs) to practice their speaking skills. While people believe that learners' communicating skills can be improved by using a language to interact with native speakers, in many cases to have a native speaker practicing with the learners is not an available or an affordable option for them. This paper mainly focuses on how the teachers can build a place that provide simulated conversation scenarios within a no-pressure environment via the creation of conversation quests and the use of MEGA World.

Keywords: educational game, multiplayer, language learning, English, stealth assessment

1 Introduction

Speaking is considered the riskiest one that may cause embarrassment or humiliation for language learners [3]. Some learners may not realize how difficult speaking is until they need to use the language in the real world situations. For reasons make learners anxious while speaking in real world: (1) the reaction time is too short to prepare and plan what you want to say; (2) you cannot change or "rewrite" the words you have said; (3) you don't have time to "google" or search for phrase or words that are more closely to what you want to say; and, (4), you don't have time to organize your thoughts. It would be always better if the opportunity of speaking a foreign language to native speakers or speakers who are at advanced level of the particular lan-

guage. However such option sometimes may not easy to find or afford by every learners.

In the most of multiplayer or massively multiplayer online games, it is very common to see players to “talk” to other players for arranging tasks and communicating tactics. These games increase the opportunity for learners speaking to other players whose first language is English and practicing their speaking skill. However, this type of random conversations may have some drawbacks; for instances, (1) the learners may speak to players whose first language is also not English and may learn the language not so correctly; (2) the terminologies used in the communications happened in the games may not really useful in the real world situations; and (3) misunderstanding the real usage of certain words or phrases, and overuse the abbreviations.

Taking a common term used in the games, “GG”, as example. For native English speakers, “GG” is for “Good Game,” which is what people always say just right after a basketball game or a competitive event to show good sportsmanship. In Taiwan, the meaning of “GG” has been treated as “game over” since people always see it at the end of a competition or match in a game. That makes people start to say, “I am GG!” when they actually want to express their feeling of “I am doomed!”

In order to avoid the above-mentioned drawbacks while still giving learners opportunities to practice their speaking skill in a no-pressure environment (i.e., a game), the research team proposes and develops a new “Conversation” quest type and adds it into MEGA World [2][4].

The paper is organized in the following way. Section 2 first briefly introduces MEGA World. Sections 3 and 4 use cases and screenshots to explain how teachers can add a conversation quest to the game world for their learners to take and practice. Section 5 makes conclusion and talks about the evaluation plan.

2 MEGA World (Multiplayer Educational Game for All)

Both of Role Playing Games (RPGs) and Computer Assisted Language Learning (CALL) use tasks with specific goals as a key element to engage players and learners working on the game-play and learning process. This key element is called Quest-Based Contextualization Process (QBCP) in RPGs and it is called Task-Based Learning (TBL) in CALL [5].

The research team has designed a multiplayer online role-play game (MORPG), called MEGA World (MEGA stood for Multiplayer Educational Game for Assessment in v1.0 back to 2010 and now stands for Multiplayer Educational Game for All), which uses quests to assess students’ knowledge of programming languages learned from the courses [1]. The game world is chessboard like, and students can travel in the world from one cell to another. Some cells on the chessboard are villages. Students can go into the villages to buy foods, meet other players and Non-Player Characters (NPCs).

As Fig. 1 shows, a student appears at a cell (annotated as #1 in Fig. 1) after he or she signs in. The surrounding eight cells (annotated as #2 in Fig. 1) of the current location are the positions that he or she might move to. The student can click on one of the surrounding cells to move to it. Each move will cost his or her energy as anno-

tated #3 in Fig. 1, and he or her needs to consume foods to gain more energy. When he or she goes into a village (annotated as #4 in Fig. 1), he or she can visit a food store to buy foods to stock (annotated as #5 in Fig. 1). Some NPCs can be found in the houses and work areas and they sometimes have quests for students to pick-up.

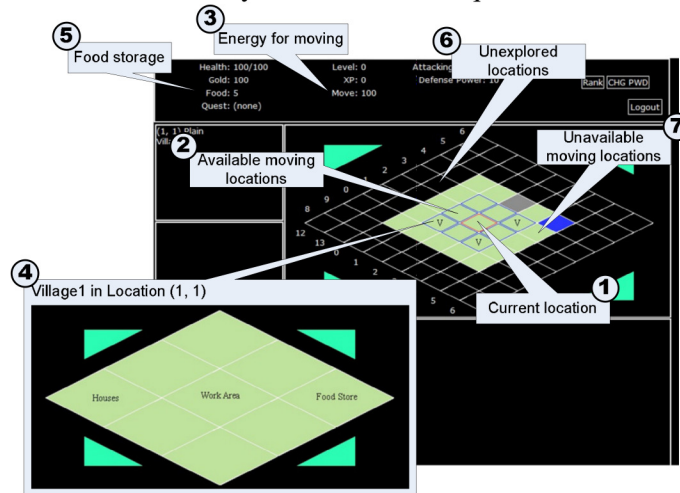


Fig. 1 The original MEGA World (v1.0) in 2010.

The current version of MEGA World¹ (Multiplayer Educational Game for All) is v2.1 and supports seven quest types for teachers to create: greeting, item collection and delivery, sorting, treasure hunting and digging, calculation, fill-in-the-blank, and short answer quest type [4]. In this version of the game, students can have their own avatars and see others visually. MEGA World aims to offer students a game that they can learn and be assessed while playing (see Fig. 2).



Fig. 2 MEGA World v2.1.

¹ <http://megaworld.gameresearch.ca>

3 Conversation Quest Creation

For having a practical and meaningful conversation, the research team works with professional English instructors and provides them a conversation tree editor so they can easily (co-)create conversations for various topics like Restaurant, Lodging, and Transportation. Fig. shows an example of the conversation tree related to book a room at hotel. More details for the conversation tree editor can be found in [2].

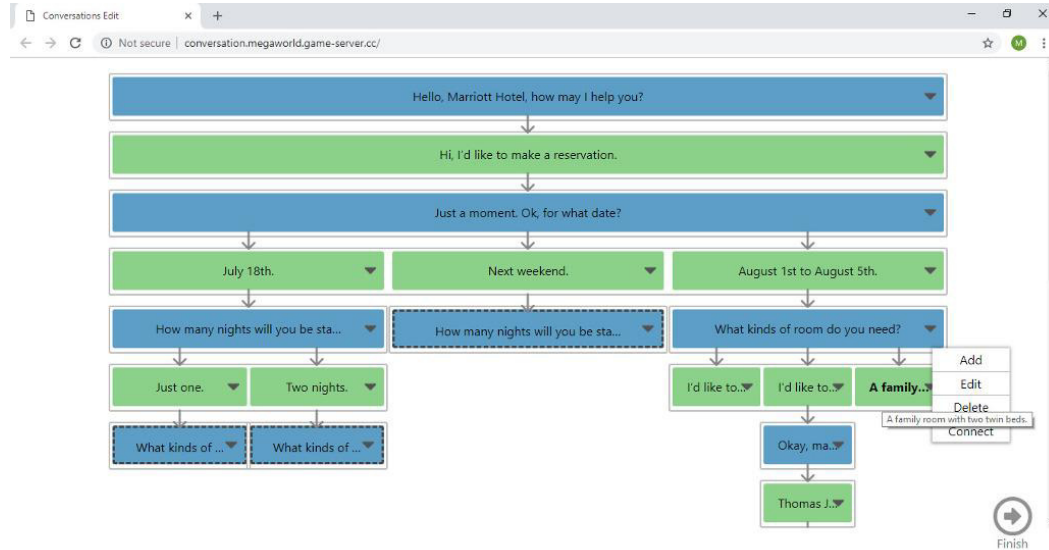


Fig. 3 Conversation Tree Example for Booking a Room at Hotel.

As soon as the conversation trees are pre-defined and designed by teachers, teachers can use the management system to create a conversation quest and associate it to a conversation tree like Fig. 4 shows.

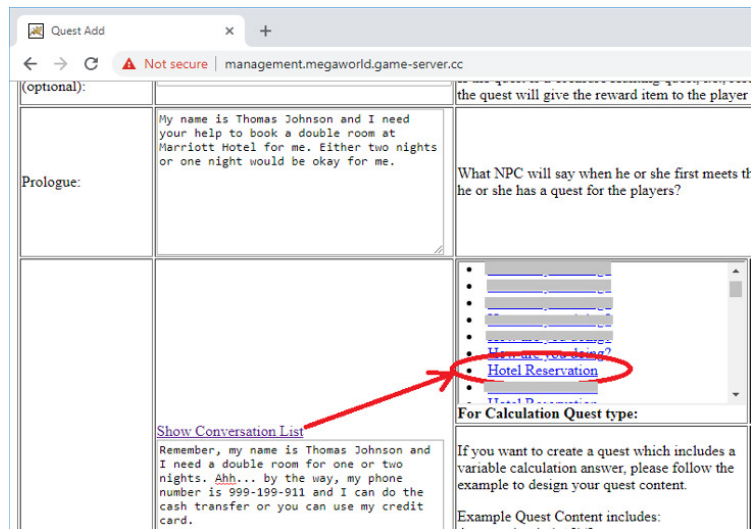


Fig. 4 Create a Conversation Quest by Selecting Predefined Conversation Tree

4 Solving a Conversation Quest

Learners in MEGA World can see some NPCs that have requests for them to help and solve. Fig. 5 shows that the NPC Guard “Thomas Johnson” in Midora City has a “Hotel Reservation” conversation quest that pre-created by the teacher. If the learner wants to take the quest and help the Guard, he or she can pick it up and then click the START link.

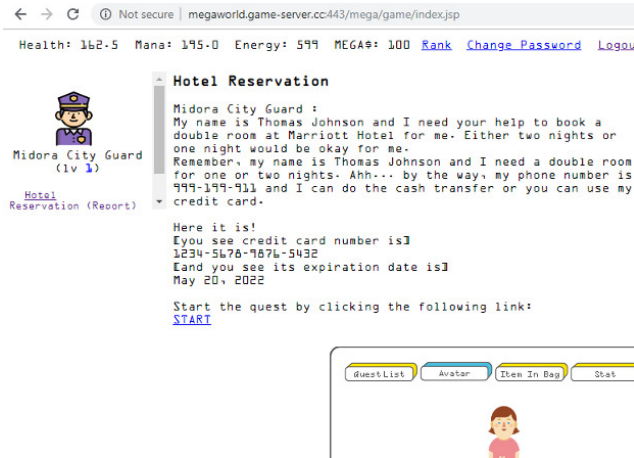


Fig. 5 Create a Conversation Quest by Selecting Predefined Conversation Tree

As Fig. 6 shows the learner needs to “speak” to the hotel staff with appropriate responses. The staff (i.e., computer) will try to get what the learner says with Google’s Speech-to-Text API’s help and then map to the predefined conversation tree to see what should it ask and talk for next. When the conversation ends, the learner will be redirected back to the NPC Guard and collects his or her rewards according to his or her performance of “speaking” and “communicating” to the hotel staff.

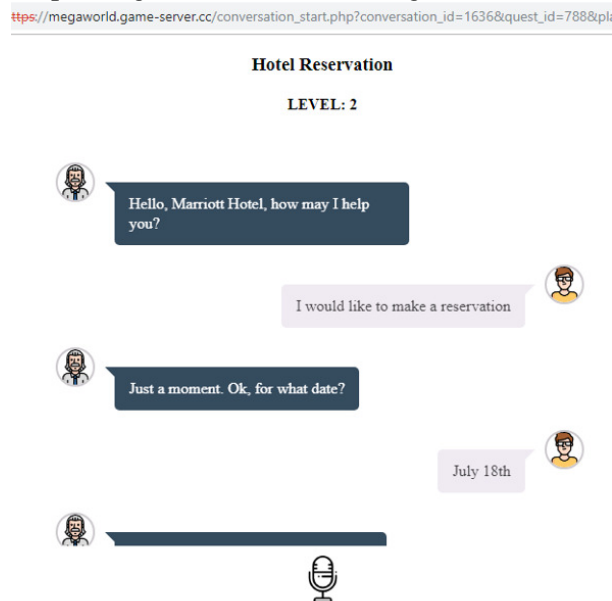


Fig. 6 Learner helps NPC “Thomas Johnson” book a room by “speaking”

5 Conclusion

In order to evaluate the effectiveness and usability of the conversation quests, the research team would like to conduct a quasi-experiment with English as a foreign language (EFL) teachers and learners. The conversation tree editor will be introduced to the teachers and a brief demographic questionnaire regarding learners' computer assisted language learning (CALL) experience will be distributed for the learners.

The research team will work with teachers and help them become capable of creating conversation trees, for different exercises in their courses, on their own. During the semester, learners are encouraged to play the game and solve conversation quests as frequently and as many as possible, or at least once per week. Learners' English speaking skills related with the pre-defined conversation trees will be assessed by the teachers at the end of the experiment. Moreover, another questionnaire will be given to the learners to investigate their perceptions toward the conversation quests.

Besides the data collected via questionnaires, the in-game data like the frequency of playing the game and solving conversation quests, the conversation quests took and solved, and the rewards (e.g., experience points) earned during the experiment can be analyzed and compared with learners' final oral exam scores and survey results. For instance, learners who received more rewards averagely for solving conversation quests may indicate that they have higher mastery level in terms of speaking. We also expect to see learners who are taking and solving conversation quests much often may have more improvements on their speaking skills. Last but not the least, we may be able to find out what kinds of conversations that learners may be scared from picking up and speaking due to they don't know how to speak aloud their thoughts in English.

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