

# TechCaFE

## Technology for Customizable and Fun Education

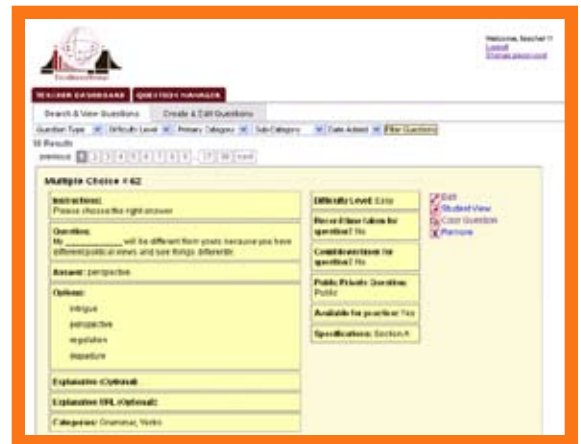


### About

**TechCaFE** (Technology for Customizable and Fun Education) provides educators with simple and customizable tools to make learning fun for students. TechCaFE currently offers tools for teaching and practicing English literacy. This includes **CaFE Teach**, a web-accessible content authoring tool that teachers use to create and modify English grammar exercises. Students learn content added by teachers through CaFE Teach via **CaFE Web**, a web-based practice tool, or **CaFE Phone**, a mobile phone game. Future work involves developing **CaFE Play** for customizing educational games.

### Cafe Teach

CaFE Teach is a web-accessible content authoring tool that teachers and experts use to create and modify English grammar exercises that students can access in different formats. The main functions of CaFE Teach include enabling teachers to create and manage different formats of questions for students to practice, and to track student performance. To provide this functionality, CaFE Teach has two views: Question Manager and Teacher Dashboard. The Question Manager view allows the teacher to create, edit, view and delete questions. CaFE Teach currently supports four formats of questions that are often a part of an English literacy curriculum: (1) Multiple Choice questions that can be used to reinforce concepts taught in grammar, vocabulary, reading or quantitative reasoning, (2) Fill in the Blanks questions that help to give additional practice in grammar, especially with prepositions, tenses and verbs, (3) Reading Comprehension questions that can be used for reading and writing class assignments where students read papers and answer questions, and (4) Listening Comprehension questions that can be used for listening and presentation classes where students watch videos or listen to audio clips and answer questions. Additionally, teachers can make questions available to specific groups of students. The Teacher Dashboard view allows teachers to track overall student performance as well as student performance in the targeted areas of grammar, vocabulary, listening and reading. Teachers can also track the performance of a single student.



### Cafe Web

CaFE Web is a web-based English grammar practice tool that allows students to access content created by experts via CaFE Teach. Through CaFE Web, students can practice skills by answering questions, get feedback, and track their performance over time. Students can answer questions specifically designated for them by a teacher as a class assignment, choose questions from a specific category such as grammar, vocabulary, listening, and reading, that they would like to practice, or they can choose to practice a variety of questions via a mixed mode where they get randomly selected questions from all categories. For each question a student attempts, feedback is provided for the answers; students are notified of a wrong answer via a red cross and a right answer via a green tick. CaFE Web can also provide audio feedback in the form of short sound clips, or an explanation for the answer via a text explanation or URL. This feedback can be created by teachers when they create the questions using CaFE Teach. Students can also use CaFE Web to view their overall progress as well as progress in specific areas such as grammar, vocabulary, reading, and listening.



# Cafe Phone

**CaFE Phone** is a mobile phone game that provides another modality for students to access content from CaFE Teach and practice English grammar. Student's motivation, learning, and easy deployment were the main objectives in the design and implementation of this tool. The current game on CaFE Phone is based on the scenario of a penalty kick in soccer. The theme of this game was inspired by the popularity of soccer among both girls and boys in Tanzania where CaFE Phone was first designed and implemented. The game serves as a simple motivational backdrop that provides incentives for students to answer questions that help them to practice their English literacy skills. The questions are downloaded from the CaFE Teach tool. If the student answers a question correctly, he or she scores a goal and adds to the total score; otherwise, the penalty kick is a miss and the student is encouraged to try again. The choice of a mobile phone as the platform for this tool is motivated by its ubiquity in most parts of the world and its ability to operate in situations where access to electricity is sparse. CaFE Phone has been tested and can be used both inside the classroom during a school day, and outside the classroom as an extra-curricular activity. It is designed to complement efforts of teachers rather than to replace them. CaFE Phone provides an engaging experience for students while they practice their English grammar, while providing feedback and personal attention that might not always be possible in crowded classrooms or student homes.



# Cafe Play

**CaFE Play**, a web-based tool for customizing educational games, is the newest addition to the Tech CaFE suite. This tool, still in an initial phase of development, was designed to increase the motivational aspect of CaFE Phone and CaFE Web for the students. CaFE Plat allows both teachers and students to customize the aspects of educational games made available on CaFE Phone and CaFE Web in several ways. Teachers are able to easily modify story lines and other aspects of the games to enhance the learning experience for specific concepts. Students are provided with the opportunity to personalize avatars and customize other elements of the games to suite their cultural and individual preferences and thereby increase their motivation to play the educational games. The customized games can then be downloaded and accessed via CaFE Phone or CaFE Web.



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