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Generalized Intelligent Framework for Tutoring (GIFT) Cloud / Virtual Open Campus Quick-Start Guide

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14. ABSTRACT

This document serves as the quick-start guide for GIFT Cloud, the web-based application version of the Generalized Intelligent Framework for Tutoring (GIFT). GIFT is a modular, open-source framework for building, deploying, and managing adaptive training content. GIFT Cloud allows learners, authors, and researchers to access GIFT without downloading and installing software on a desktop or laptop computer. The purpose of this document is to provide an overview of the primary interfaces and basic functions of GIFT Cloud. Topics include establishing a GIFT Account, taking courses on GIFT Cloud, orienting the user to GIFT's tools, and locating resources and providing feedback on GIFT Cloud.

15. SUBJECT TERMS

GIFT, generalized intelligent framework for tutoring, quick start, help and documentation, adaptive tutoring

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1.   Introduction

Thank you for visiting the Generalized Intelligent Framework for Tutoring (GIFT) Cloud / Virtual Open Campus. The purpose of this quick-start guide is to provide an overview of the primary interfaces and basic functions of GIFT.

GIFT is a modular, open-source framework for building, deploying, and managing adaptive training content. This software has the ability to incorporate various external hardware and software components in order to, for example, model attributes about the learner, tailor instruction to learners' needs, and allow learners to practice their knowledge in various training applications. GIFT is available to users with a GIFT Account at no cost.

GIFT Cloud is a new implementation of GIFT. This web-based application allows learners, authors, and researchers to access GIFT without downloading and installing the GIFT software on a desktop or laptop computer.

This quick-start guide is written specifically for GIFT Cloud, though some of the information in this document is also relevant to GIFT Local (running in Desktop Mode).

What is an ALPHA release?

GIFT Virtual Open Campus is in active development, so you might encounter software bugs along the way. We invite you to help shape the future of GIFT development by submitting your feedback on our forums at https://gifttutoring.org.

The Fine Print

GIFT is available to users with a GIFT Account at no cost. For more information about the ways in which GIFT can be used, please see the End User License Agreement located at https://gifttutoring.org/projects/gift/wiki/Gift_eula.

2.   What is GIFT Cloud/Virtual Open Campus?

This online version of GIFT (Fig. 1) allows users to develop adaptive tutoring courses in a server environment without downloading the GIFT software. Courses can be imported from/exported to GIFT Local (the downloadable version of GIFT) as desired. Additionally, GIFT Cloud allows users to upload course materials to their online workspaces for inclusion in GIFT Courses. GIFT Cloud is located at https://cloud.gifttutoring.org.
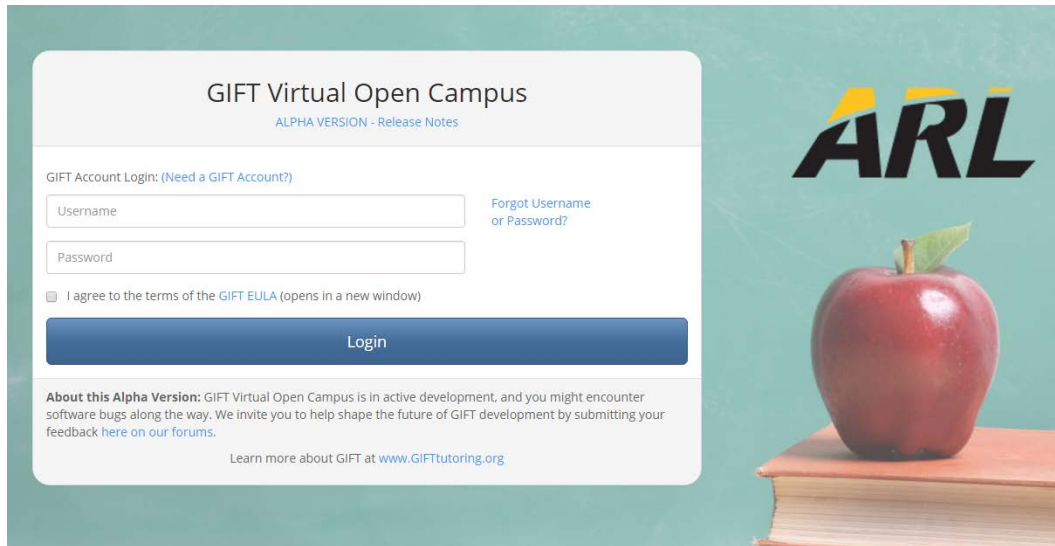

Fig. 1   GIFT Cloud / Virtual Open Campus log-in page

What is GIFT Local?

GIFT Local is the version of GIFT that is downloaded and installed to a Windows laptop or desktop computer. GIFT Local in Desktop Mode is very similar to GIFT Cloud; however, the former also contains advanced features and options for more advanced users. GIFT Local is available from https://gifttutoring.org in the Downloads section.

3.   Requirements for GIFT Cloud

GIFT Cloud is accessed via a web browser. Officially, GIFT Cloud has been tested to work on Windows 7, with Internet Explorer 11 and Google Chrome, respectively. Other operating systems and browsers are currently being evaluated for compatibility with GIFT Cloud.

3.1 Running Courses with Training Applications

GIFT is a framework designed to work with various external applications, referred to as *Training Applications* in GIFT. The training application that a learner is most likely to encounter as a GIFT Course is Microsoft PowerPoint. That application is also featured in many of the demonstration courses on GIFT Cloud (e.g., Logic Puzzle Tutorial, Hemorrhage Control, and COIN AutoTutor Session Example). Currently, GIFT Cloud has been tested to work with PowerPoint 2007 and, in most cases, has been found to work with PowerPoint 2010 and PowerPoint 2013 (32-bit version).
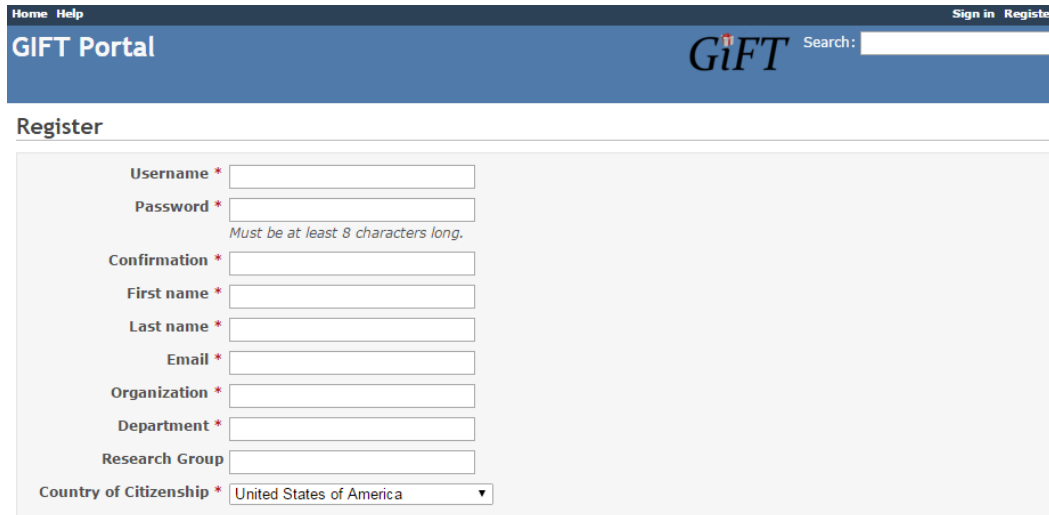
Additionally, GIFT Cloud uses a Gateway component as an interface between the browser and your local programs (when required by GIFT Courses). In order to run a course on GIFT Cloud that incorporates a training application (i.e., local program on your computer), Java is required. It is recommended that your computer is updated to the latest version of Java before running GIFT Courses that require Training Applications. Java can be downloaded and installed at no cost by visiting http://www.java.com.

3.2 Creating Courses and Experiments with GIFT

Clicking on the "course details" button under each course tile will indicate if any additional external programs (i.e., Training Applications) are required. The Authoring Tools (i.e., My Tools) and My Experiments have no software requirements beyond a web browser.

4.   Accessing GIFT with a GIFT Account

A GIFT Account is required to access GIFT Cloud/Virtual Open Campus. The GIFT Account allows users to log into GIFT Cloud, manage their personal storage in GIFT Cloud, download GIFT Local, and access resources, including news, publications, and our support forums. GIFT Accounts can be created on the GIFT portal located at https://gifttutoring.org (Fig. 2).

Fig. 2   GIFT Accounts are created on the GIFT Portal

More about GIFT Accounts

We also use the contact information provided in the GIFT Account to notify users of new GIFT features, planned maintenance to GIFT Cloud, and GIFT-relevant publications and events. These emails are infrequent. The GIFT team will not spam your email box or sell your information to a third party. The GIFT Accounts are used only for informational purposes and to ensure you have the best experience possible when interacting with GIFT Local, with GIFT Cloud, and on the GIFT Portal.

5.   Taking Courses from My Courses

Start exploring the features of GIFT Cloud by logging into the home page at https://cloud.gifttutoring.org with your GIFT Account. After a successful sign-in, the default page displayed is My Courses (Fig. 3).
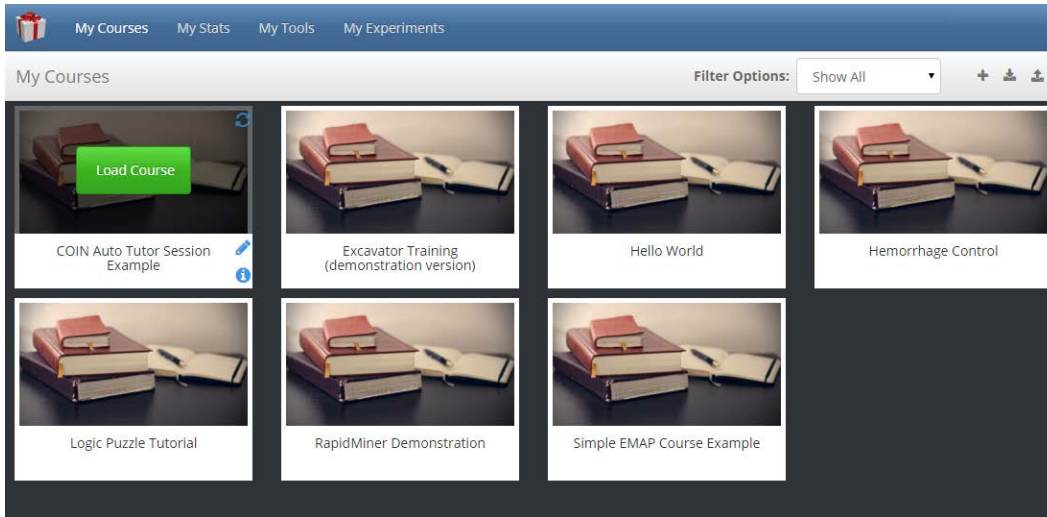

Fig. 3   Courses available to take or inspect are shown as tiles in My Courses

My Courses displays a list of courses available to the signed-in user for taking or editing. A number of demonstration courses are available to all users by default. Courses are displayed as course tiles.

To see more information about an individual course, move the mouse cursor over the course tile. Load Course begins the process of taking the course. The pencil icon allows the user to edit the course in My Tools. The "(*i*)" icon shows additional course details, including any Training Applications that are required to run the course.

The links at the top of the interface (blue bar) will navigate to My Stats (learner stats), My Tools (course authoring), and My Experiments (building research modules), respectively.

Finally, icons are available in the second-level heading (silver bar) on the right-hand side that will allow a user to create a new course, export a course, or import a course with GIFT Cloud, respectively. Courses can be transferred between GIFT users and/or between GIFT Cloud and GIFT Local using the import/export functions.

6. Launching Courses in GIFT Cloud with Java

GIFT Cloud has the ability to interact with external programs on your computer as part of a GIFT Course. When used in this manner, these external programs are referred to as *Training Applications* in GIFT.

How do I know if I need a Training Application to run a course?

There is an easy way to determine if a course requires an external program, or Training Application. Go to My Courses and move the mouse over a course tile. Click the "(*i*)" icon in the bottom left-hand corner of the tile to view Course Details. In the page that is displayed, look at the list of required Training Applications. The most common Training Application that is used is Microsoft PowerPoint.

Before taking any courses in GIFT Cloud that use Training Applications, both Java and the Training Application must be installed on the local computer. Java is available at no cost from www.Java.com. It is recommended that you update Java to the latest version.

In order for GIFT Cloud to interact with a Training Application, a small Java file known as a Gateway Module (with extension .jnlp) is downloaded in the browser during course runtime. The user that is running the course must manually launch this file and follow the brief instructions to ensure GIFT can connect with the necessary Training Applications. This file can be launched from the same location in which the user's preferred browser normally displays downloaded files.

The following 2 images illustrate that experience in Internet Explorer (Fig. 4) and Google Chrome (Fig. 5), respectively. The gateway module file that must be run is indicated by the red arrow in those images.

In summary, in order to run a course in GIFT Cloud that requires a Training Application, the user must first have the application and the latest version of Java installed on the local computer. Then, when the selected course is run, the interface will download a Java file, which the user must manually run to continue with the specific course.

Fig. 4   Location of downloaded gateway module file in Internet Explorer
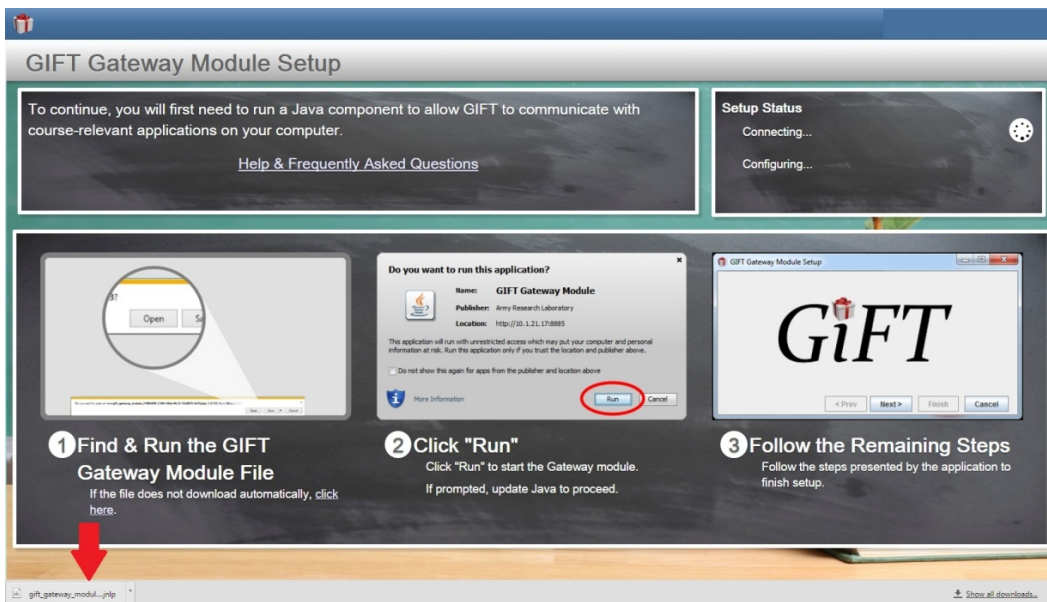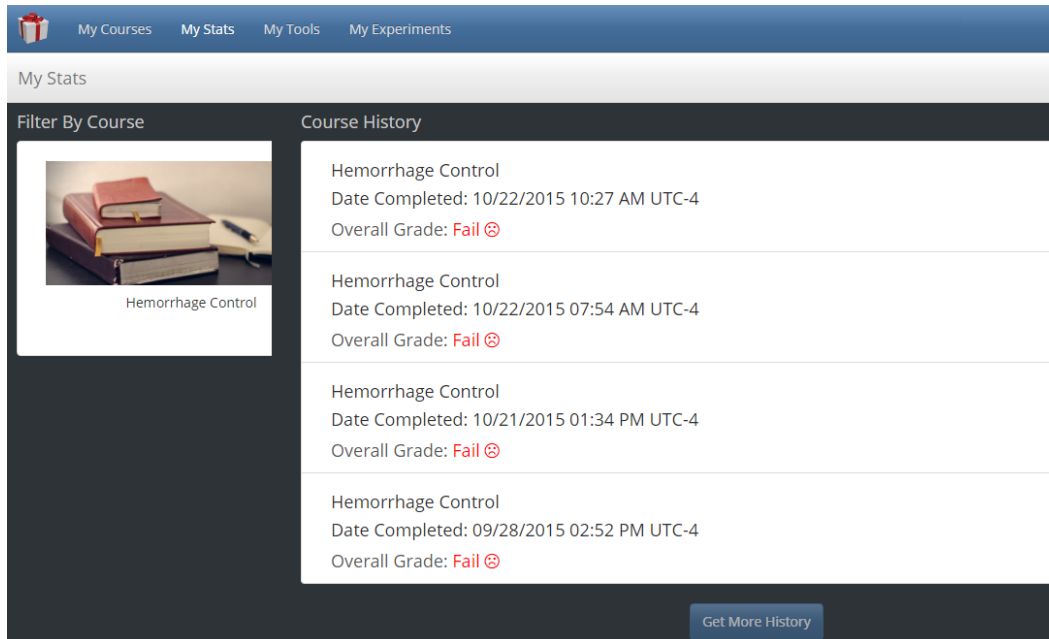

Fig. 5   Location of downloaded gateway module file in Google Chrome

7. Viewing Course History from My Stats

My Stats (Fig. 6) displays a record of courses taken by the user that is currently signed-in. The most recently taken courses are displayed at the top of the list. Clicking on a row in the Course History will show additional details about that instance in the pop-up Scorecard.

Fig. 6   My Stats displays course history for the current user

8. Creating and Editing Courses with My Tools

My Tools (Fig. 7) contains the authoring tools and other functions that are used to create and edit GIFT courses.
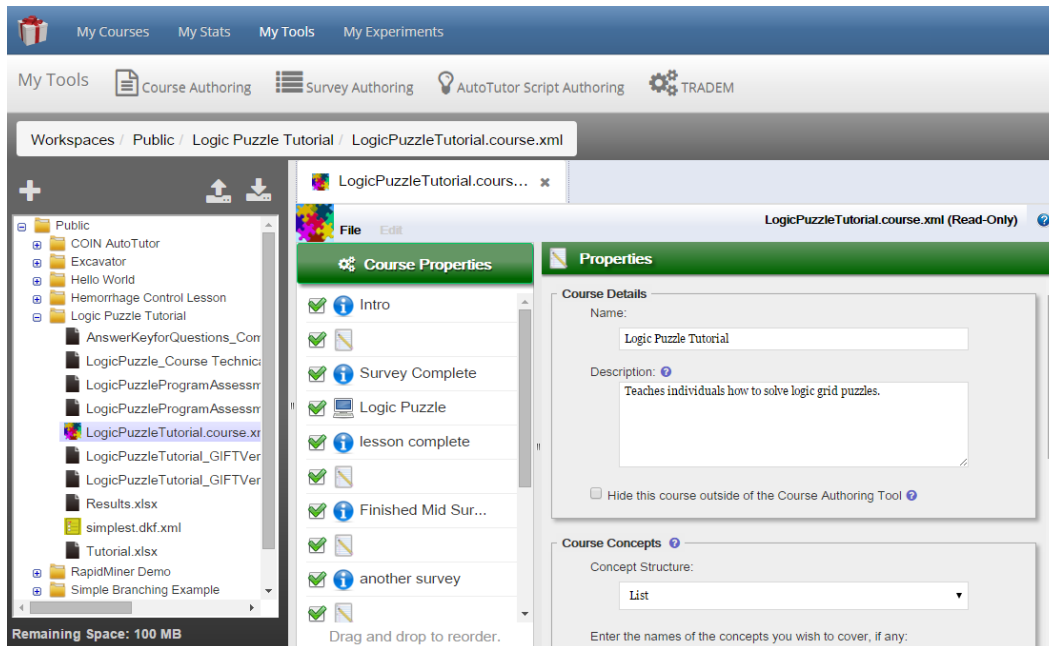

Fig. 7 **Default Course Authoring view with public Logic Puzzle Tutorial course opened**

The workspace is arranged into 3 main sections. The second-level heading (silver bar) at the top of the window contains links to each of the major tools. The default page is Course Authoring. Surveys and question banks are managed in the Survey Authoring interface. Other tools will appear in this area as they become available.

Next, the file browser is displayed on the left-hand side of the interface. Course files and their associated media are organized into folders. The Public folder contains demonstration courses and is read-only; copies of these courses can be moved to the user's folder for editing, if desired. Each GIFT Account currently has 100 MB of space available on the server to create courses and upload media to show in those courses. Finally, the right-hand side displays individual course files that are currently open. Open files are organized into tabs at the top of this portion of the interface.

For additional information about creating courses, and the GIFT architecture, please review the GIFT documentation and visit the forums at GIFTTutoring.org.

9.   Creating Questions and Surveys in Survey Authoring

Clicking on the Survey Authoring link will navigate to the GIFT Survey System (Fig. 8). This is where questions, surveys, and survey banks are managed and created in GIFT.
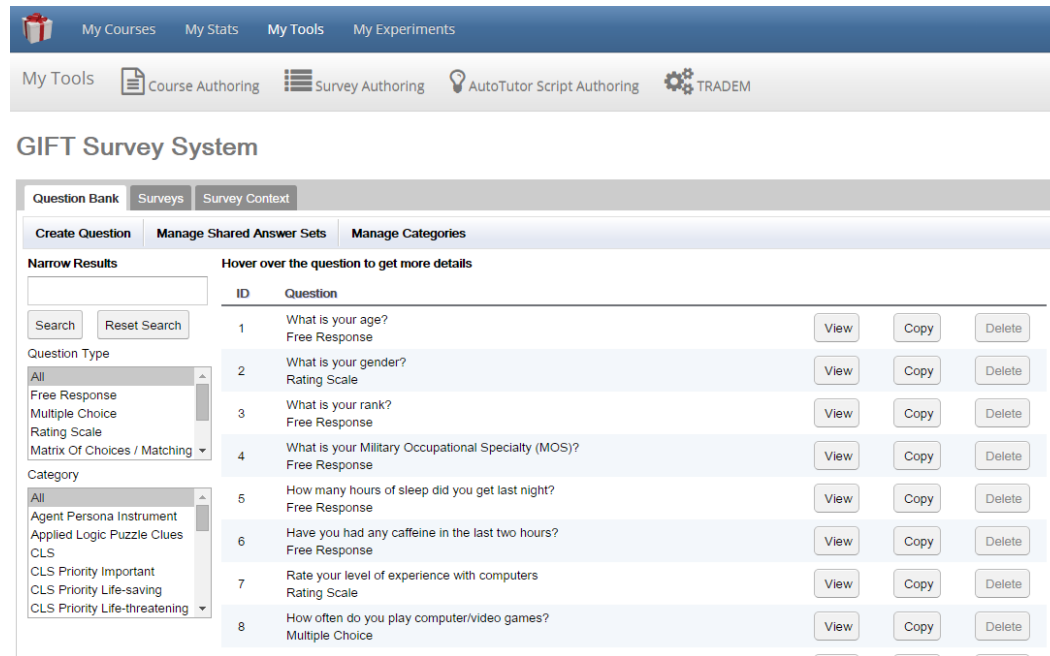

Fig. 8   Tabs within the GIFT Survey System display existing questions and surveys available for reuse

Questions, Surveys, and Survey Contexts are the 3 primary elements of the GIFT Survey System. In GIFT, surveys are made up of questions. GIFT Courses are linked to a survey context, which is simply a collection of surveys. Questions can appear in multiple surveys, and surveys can be a part of multiple survey contexts.

Finally, different courses can use the same survey context. The system is organized in a manner that encourages reuse of questions, answer sets, and surveys, respectively.

GIFT currently supports a number of different question formats, and questions can be linked to a number of different attributes and learning objectives. Question banks are used within GIFT's pedagogical engine.

For additional information about creating questions and surveys, please review the GIFT documentation and visit the forums at GIFTTutoring.org.

10. Conducting Research with My Experiments

Clicking on the My Experiments link will navigate to the Experiments page (Fig. 9). The functions on this page are intended to support experimental research by leveraging GIFT features within GIFT Courses.
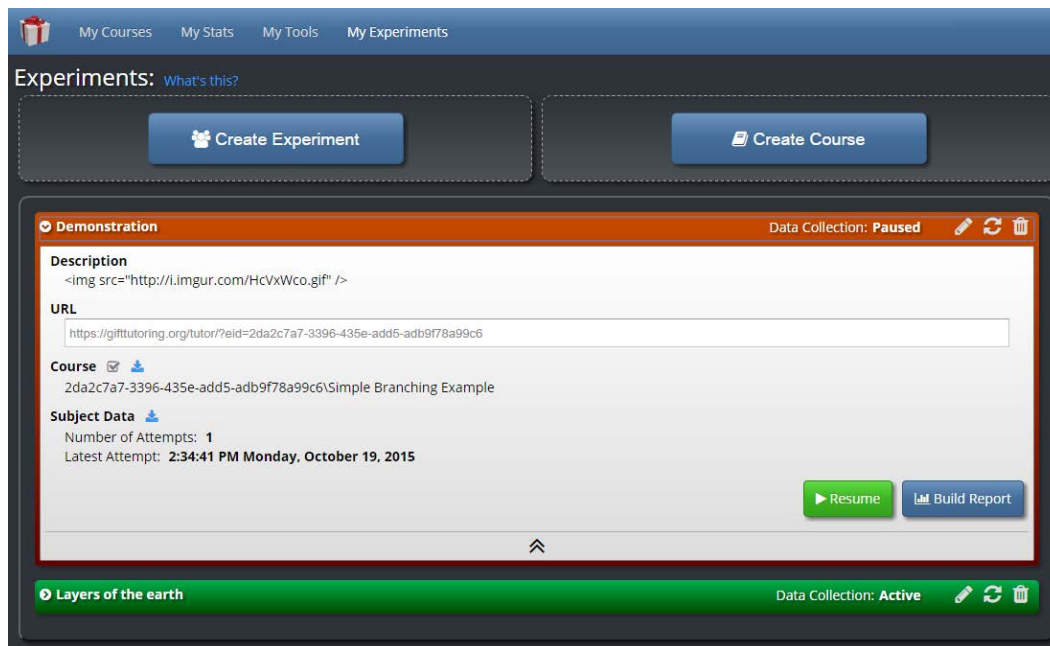

Fig. 9   My Experiments provides functions that support research using GIFT Courses

Experiments are created from existing GIFT Courses. Creating an experiment will spawn a copy of an existing GIFT course that can no longer be altered (for experimental control). Additionally, a unique link to access this Experiment is generated upon creation. The link can be shared with participants in the experiment, and participants may interact with an Experiment without creating or logging-in with a GIFT Account.

Experiments can be paused and resumed to accommodate a data collection schedule. Clicking on an existing Experiment in the bottom portion of this interface will provide details of the experiment, including the experiment description, unique access link, course ID, number of participant attempts, and the date and time of the last participant attempt.

The interface also provides a means to customize reports and download data with the Build Report button.

11. Get More Information and Help

This GIFT quick-start guide covers each of the major GIFT interfaces and provides only a basic overview of GIFT's capabilities.

11.1 Things to Try

The public demonstration courses are a good way to examine how GIFT Courses work. Start by taking some of these courses.

Opening each of these demonstration courses under My Tools will provide examples of how GIFT Courses are constructed. Individual surveys from these demonstration courses can be viewed within the Survey Authoring section of My Tools.

Once a couple of courses have been run, examine the course history under My Stats to get a sense of the overview information that is generated for the learner record.

Also, try to generate an experiment from an existing GIFT Course and then run the special participant URL that is generated. This should provide a basic example of how an experimental participant's experience with GIFT is different from a learner/student.

11.2 How to Get Help

There are many resources available that will provide more information about GIFT. Log into GIFTTutoring.org to access publications related to the theory and implementation of GIFT.

GIFTTutoring.org is also home to our support forums, where users can interact with the development team and the rest of the GIFT user community. The development team actively monitors the forums and regularly responds to forum posts.

For advanced users, it may be helpful to download and install GIFT Local. There, you will find extended functions, administrator tools, and additional documentation. GIFT Local is available in the Downloads section of the GIFT Portal (located at https://gifttutoring.org).

Finally, remember that GIFT Cloud is in Alpha under active development. Your feedback will contribute to the development of features and functions that ultimately help users get the most out of GIFT. Thank you for your interest in this project.

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