

Running Head: USABILITY ALIVE!

## **Usability Alive!: Evaluating the Usability of *Teachtci.com***

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## Introduction

*Teachtci.com* is a Social Studies learning website which features lesson modules, assessments, online grading, digital articles, multimedia presentations, interactive maps, and activities for grades K-12<sup>th</sup>. TCI is Teachers' Curriculum Institute, a K-12 education company focused on social studies, history, geography, government and economics. *Teachtci.com* is open to the public and free for a 30-day trial for teachers and students. After the free trial pricing ranges from \$70 for a 6-year online students subscription to \$1,500 for a 6-year teacher subscription with various digital curriculum materials. The lessons are arranged by modules into chapters sequentially and the activities are organized by tabs, such as online textbook, interactive notebook, jeopardy-style reading challenge activities, grades, glossary cards, and maps. The content presentation is arranged in chapters and each has reading, a quiz, and interactive notebook activity that is submitted for grading.

This usability test focuses on the *Teachtci.com* site and specifically the *Government Alive! 2014 Civics, Geography, and Economics* online courses for grades 4<sup>th</sup>-8<sup>th</sup>, within the site. Users of the site would be ideally students and teachers of students grades K-12<sup>th</sup> grades who want to learn social studies online.

## Test Users

Both of our test users are in the eighth grade. User 1 is a fourteen year old girl at Jennings Middle School in Hillsborough County and User 2 is a thirteen year old girl at Cornerstone Christian Academy in Dallas, Texas. The five tasks that the girls are evaluated on in this small-scale usability test include the following items:

- (1) registering
- (2) login
- (3) selecting a *Government Alive!* Assignment within the site
- (4) completing and submit online notebook activities for the lesson
- (5) studying with the online glossary cards

## Usability Factors

The three usability factors analyzed in the site are Learnability, Error, and Satisfaction. Learnability is how easy is it for users to perform basic tasks the first time they encounter the site. Error describes how many mistakes users make, how important the errors are, and how easily they can recover from the errors. Finally, Satisfaction is how enjoyable is it to use the site.

## Small-scale Usability Test for *Teachtci.com*

*User 1 (tested by Jen Christie)*

<b>Task</b>	<b>Clicks</b>	<b>Duration</b>	<b>Comments</b>
<b>1. Register</b>	4	5:16-5:23 PM (7 min)	I already created a student account for user. I gave the user the teacher's email, the student username, & the teacher's password. The user asked "What do I put in here?" for teacher email. I helped and the user figured out the rest on her own.
<b>2. Login</b>	1	5:24-5:25 PM (1 min)	Once logged out, the student was able to log right back in.
<b>3. Select a <i>Government Alive!</i> assignment</b>	1	5:26-5:28 PM (2 min)	The student chose Ch.3 (not a beginning Ch.)
<b>4. Complete &amp; submit an online notebook activities for the lesson</b>	45	5:29-5:59 PM (30 min)	The student glossed over much of the reading and didn't expand the graphics (by clicking on them). She typed pretty good answers by scanning the text and from prior knowledge. The user saved and submitted answers easily.
<b>5. Study with online Glossary Cards</b>	55	6:00-6:45 PM (45 min)	The user asked "What do I do?" I said "scroll up & click on Glossary Cards". Then the user was able to figure out on her own to flip the cards and guess definitions independently.

*User 2 (tested by Alea Frazier)*

Task	Clicks	Duration	Comments
<b>1. Register</b>	4	9:25-9:34 PM (9 min)	I had the user create a student account, using myself as the teacher. I had to walk her through the sign up process.
<b>2. Login</b>	1	9:35-9:36 PM (1 min)	She had no problem figuring out how to log in on her own.
<b>3. Select a <i>Government Alive!</i> assignment</b>	1	9:37-9:39 PM (2 min)	After a brief deliberation, the student chose Ch.1 so she would be at the beginning.
<b>4. Complete &amp; submit an online notebook activities for the lesson</b>	59	9:40-10:22 PM (42 min)	The student initially began reading the material but decided there was too much to read so she started skimming. After expanding several, most of the graphics were skipped as well. Her answers were decent and based on prior knowledge and chapter skimming. She was able to save and submit with ease.
<b>5. Study with online Glossary Cards</b>	75	10:23-11:00 PM (37 min)	The student figured out how to control the cards on her own, but had some trouble deciding on the answers. There were several times that she either went rapidly through cards, barely reading them, or clicked more than one answer option before deciding.

**Questionnaire**1. How does the site rate in Learnability?

The PC that User 1 used was a touch screen laptop and the user both typed, scrolled with the mouse, and tapped to navigate the site, on her own. User 2 was working on an iPad mini and that seemed to slow her down as she was not very familiar with the tool. The site appears intuitive but the users needed some prompting to perform basic tasks. The site is text heavy with many references to other insets and figures to answers questions. The users found it difficult to do so much reading and searching for information just to answer the interactive notebook questions. Using prior knowledge, the users answered most questions correctly—all questions were free response. I (Christie) would rate the Learnability of *Teachtci.com's Government Alive! 2014 Civics, Geography, and Economics* a 10 out of 20 points due to difficulty for eighth graders, since Civics is usually only a 7th grade course and should be catered to that reading level. I (Frazier) would rate the Learnability of *Teachtci.com's Government Alive! 2014 Civics, Geography, and Economics* a 15 out of 20 points because the material was

appropriate for eighth grade, but there was too much of it and it seemed to become overwhelming.

*Time on Task (in minutes)*

	<b>User 1</b>	<b>User 2</b>	<b>Total</b>	<b>Avg.</b>
<b>Task 1</b>	7	9	16	8
<b>Task 2</b>	1	1	2	1
<b>Task 3</b>	2	2	4	2
<b>Task 4</b>	30	42	72	36
<b>Task 5</b>	45	37	82	41
<b>Total Time Spent</b>	85	91	176	88

As the above table shows, both students spent a significant amount of time on these tasks. On average, our students spent over an hour and a half doing seemingly simple tasks. Considering this website is offering a class aid, as the teacher, it would be important to make sure that this is actually benefiting the student and not adding an extra stressor or requirement to the course load.

## 2. How does the site rate in Error?

Due to the site's design, the users made relatively few navigation errors. Once users have clicked on the lesson chapter or Glossary Cards tabs, the simplistic design has the user click "next page" (or "previous page") continuously to progress through the lessons and activities with ease. The Glossary Cards have a game quality to them that both students liked. User 1 often guessed aloud for the correct definitions. User 2 was more subdued but always had a big smile when she got an answer correct. For Error, I (Christie) rate the site 15 out of 20 points, because finding the interactive notebook questions require a lot of scrolling up the page and clicking on insets to expand the information to answer correctly, which increases possible errors and encourages guessing and answering by prior knowledge only. I (Frazier) also feel that 15 out of 20 points is a fair assessment for Error. The constant scrolling and having to do in depth searches for answers discouraged my student and was very time consuming.

*Errors*

	<b>User 1</b>	<b>User 2</b>	<b>Total</b>	<b>Avg.</b>
<b>Task 1</b>	1	3	4	2
<b>Task 2</b>	0	0	0	0
<b>Task 3</b>	0	0	0	0
<b>Task 4</b>	1	2	3	1.5
<b>Task 5</b>	1	5	6	3
<b>Total Errors</b>	3	10	13	6.5

As this table shows, our students went through the site with relatively few errors. Although User 2 had significantly more errors, I (Frazier) believe that was due more to her unfamiliarity with the iPad, rather than because of the site itself. Overall, it can be safe to say that the site was very user friendly and easy to use.

### 3. How does the site rate in Satisfaction?

User 1 said the site was fun and like playing a video game, rather than reading a textbook. User 2 said that she liked it much better than reading a textbook, but thought that there was still too much reading. The users liked the touch screen navigation and glossary cards which resembled index cards to flip. The graphics were attractive and the questions were hard but not too hard, in the users' opinion. I (Christie) rate the site highly as 18 out of 20 for Satisfaction because the user really liked using the site and learning online interactively. I (Frazier) would also give an 18 out of 20 because of how much my student liked it. For a full 20, there would need to be less reading to keep the student from getting bogged down.

## Satisfaction survey (Christie) (Frazier)

	Very Easy	Easy	Neither Easy Nor Difficult	Difficult	Very Difficult
<b>Register</b>		X X			
<b>Login</b>	X	X			
<b>Select a Government Alive! assignment</b>	X	X			
<b>Complete &amp; submit an online notebook activities for the lesson</b>		X X			
<b>Study with online glossary cards</b>		X		X	

Overall, both users really seemed to like *TCI* and the setup of the site. The biggest discrepancy between the two girls was that User 2 found the questions in the Glossary Cards too difficult and struggled with the cards flipping (once again, this is probably due to the newness of the iPad). User 1 got so into the game-like style of the Glossary Cards that she began saying the answers aloud, not just clicking on them. Satisfaction was high between the two.

## Results

### *Task Completion Rates*

User	Task 1	Task 2	Task 3	Task 4	Task 5
1	X	yes	yes	yes	yes
2	yes	yes	yes	yes	yes
<b>Success</b>	50%	100%	100%	100%	100%
<b>Completion Rates</b>	50%	100%	100%	100%	100%

### Impressions of *Teachtci.com*

While we like the rigor of the content and think the site strengthens internet research skills, we feel that the site would be a better fit for Honors classes or the High School level. The maps, charts, and images accompanying the text were beneficial to the comprehension and broke up the monotony of text. Obviously, *TCI* is just one tool in teaching Social Studies that a teacher could use along with other learning materials and content sources. I (Christie) have used the print version of *TCI: History Alive!* in some of my lessons. The students liked the activities, which were interactive and incorporated group based learning for all reading levels, allowing everyone to participate fully. A way to improve the site would be to add more audio, videos, and photo galleries that teach, so as to better engage learners. It would also be good to incorporate more historical documents into the lesson plans.

### Site Score

We believe that our score gives *TCI* a fair rating and that our critique of the three areas was neither too harsh nor too slight. Taking into account both of our opinions concerning *TCI*, we came to the following rating of the site, based on Learnability, Error, and Satisfaction:

- Learnability – 12.5 out of 20
- Error – 15 out of 20
- Satisfaction – 18 out of 20
- Total Score – 45.5 out of 60**

### *Ratings*



	<b>Learnability</b>	<b>Error</b>	<b>Satisfaction</b>	<b>Total</b>
<b>Christie</b>	10 / 20	15 / 20	18 / 20	43 / 60
<b>Frazier</b>	15 / 20	15 / 20	18 / 20	48 / 60
<b>Totals</b>	25 / 40	30 / 40	36 / 40	91 / 120
<b>Avg.</b>	12.5 / 20	15 / 20	18 / 20	45.5 / 60

### **Conclusion**

After reviewing *Teachtci.com* ourselves, administering the usability test on two eighth grade students, and reviewing the gathered data, we have determined that this site can be a great resource for parents, students, and teachers. Since the website is open access, parents can brush up on their social studies facts so they can help their children study. If students are struggling, they can use this site for additional help. With this site, teachers have access to curriculum guides, lesson plans, review ideas, and much more. All of which are great classroom aids. Overall, we gave *Teachtci.com* a rating of 45.5 out 60.