EDDIFY.CO USABILITY REPORT

eLearning Website Usability Study

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Usability Study Results
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Introduction

Eddify.co is an online-learning (eLearning) website that caters to both academic pursuits as well as vocational or career advancement pursuits. Eddify.co provides students the opportunity to learn at their own pace from the comfort of their home through linear curriculum structure.

Babar, Walker, & Kihara Associates conducted a usability test using a live version of Eddify.co located on the test administrator's desktop. Two cameras were used to record the participants face, site navigation choices and voice responses.

The test administrator, data logger, and camera operator were all present in the testing room to aid in the facilitation of every test session. Only the test administrator interacted with participants during test sessions.

Executive Summary

This report documents the findings of a usability test of the website Eddify.co carried out between the last week October and the first week of November 2016 by Babar, Walker, & Kihara Associates.

The main purpose of the test was to assess the usability of the current website's interface design, information findability, and product checkout-process. We collected data using quantitative and qualitative methods.

A total of 10 participants took part in our study. This number is twice the industry standard for the number of participants required to yield meaningful data in a usability study. All studies were conducted at the Kennesaw State Marietta campus.

Positive aspects about Eddify.co:

- **Color palette**. Test participants considered the site color scheme to be aesthetically pleasing and appropriate.

- **Layout and design**. All test participants commented positively on the navigational structure of the site. Particularly, the way relevant images were used to reinforce the message being conveyed.

- **Tolerant search**. Several test participants mistyped the name of a course or instructor. The search feature accepted erroneous input, and offered up suggestions after participants hit "Enter" returning the participant's desired outcome 100% of the time.

Areas of opportunity for Eddify.co:

- **Home page misnomers**. 60% participants were unsure of the type of services offered by the website. Most concluded that Eddify.co was strictly a college entrance exam prep website and nothing more.
- **Broken links**. None of the three most prominent links on the homepage slider met participants' expectations because none of them were hyperlinked to their respective relevant pages.
- **Missing tags**. When participants found their product of choice, some found that categorization tags that would have simplified their search experience were missing.
- **Instructor image**. 40% participants pointed out that the instructors needed professional profile pictures to match the rest of the site.
- **Call to action button disappearance**. 70% of users reported that at least once during their checkout process, they couldn't locate the "Take this Course" button from where it originally appeared
- **Logout page refresh fail**. After completing the outlined tasks, four users pointed out that the website was unresponsive after clicking on the "Logout" button. These users had varying opinion on where the page should default to after logging out.

Recommendations:

- Allocate more resources towards web content writing
- Improve product classification using tags

- Invest more time and resources for web development to fix
    - Broken links
    - Missing call to action button
    - Streamlining the logout sequence and redirection
    - Adding more payment options during the checkout-process

Methodology

This usability study was conducted in a formative manner because the website, Eddify.co is under development. The advantage of formative study is that problems discovered can be resolved before the final product goes live.

Recruitment was done via word of mouth. Each team member was responsible for recruiting 3 to 4 participants. A total of 11 participants were made to sign a consent form that allowed the research team to video tape their sessions. As compensation, the participants were given pizza.

The responses of the participant were recorded via two cameras; one facing the screen and the other facing the participant. Furthermore, one team member acted as a logger and documented the responses in writing. The website was viewed on a Windows 10 desktop as well as an iMac.

Listed below are the methods used for testing the product:

1. **Look and feel** Participants were asked to log on to Eddify.co. Once at the home page of the website, they were asked to look at the page in front of them and without clicking on any buttons respond to the following questions asked by the moderator:
    - What do you think this website about?
    - Please give us feedback regarding the layout of the website.
    - What are the aesthetic qualities that appeal or do not appeal to you and why?
    - What do you expect to find upon clicking on the different tabs or buttons on the website?

- Give us a general overview of your first impression of the page open in front of you.

2. **Think Aloud Protocol** This methodology involved the presence of a moderator who explains the process to the participants. The moderator hands out a printed document with two scenarios accompanying four tasks each. The document is read to the participants and they are asked to verbally illustrate their thoughts as the perform the tasks.

   The moderator explained the Think Aloud Protocol as follows:

   What we're going to be doing today is called a think aloud protocol. You will be given a task regarding the website, and during the task, we would like you to share your thoughts. So, if you are looking for something, if you are clicking a button, if there's some you like or dislike, let me know— it's all valuable feedback.

3. **System Usability Scale** This is a simple 10-item Likert scale of 5 points ranging from strongly agree to strongly disagree. It is given to the participant after the think aloud protocol to quantify their experience of the TAP. The system usability scale used was originally developed by Digital Equipment Corporation, 1986.

4. **Product Reaction Cards** (Developed by 2002 Microsoft Corporation. All rights reserved.) The complete set of 118 cards were placed randomly on the table. The participants were asked to view all the cards and then pick out 5 words that best described their experience of using the product.

Test Goals and Objectives

- To study whether the layout of the website allows the users to understand what the website is about and invites them to use the website.
- To see whether users can navigate the website and find their desired course.
- To study if users can successfully register for the desired course.

Metrics

Age

The pre-test questionnaire was designed to ensure that participants were within the desired age group, were knowledgeable and skilled in browsing the internet from a desktop computer.

The appropriate age group for this study was between the ages of 15 – 30 years but the ideal age was participants that have most recently graduated high school. To measure this, our study used date ranges as follows:
15 – 20
21 – 30
31 – 40
51 or Above

Internet Experience

Since our client's product is an online learning service, it was imperative to measure participants' ability to navigate the internet. We asked participants questions that would yield the answers we needed as follows:

1. Have you ever used a web browser?
2. How long have you been browsing the web?
    a. 0-3 months
    b. 4-6 months
    c. 7-9 months
    d. 10-12 months
    e. More than 12

Program/Application Experience

This metric was used to measure the participants' expertise using mid-high level software applications. Participants could check from a list of four programs and were later ranked as follows:

o **1 Program checked**: Beginner
o **2 Programs checked**: Intermediate
o **3 or more Programs checked**: Advanced

Participants

Efforts were made to recruit participants between of 15 and 30 years of age. The closer to high school graduation (15 – 20 years) the more relevant the participant since the usability test was on a product that offers services for high school students as well as college applicants.

User #	Sex/Age	Program Experience	Internet Experience
1	M 15-20	Intermediate	Advanced > 12 Months
2	M 21-30	Advanced	Advanced > 12 Months
3	F 21-30	Advanced	Advanced > 12 Months
4	M 21-30	Advanced	Advanced > 12 Months
5	M 15-20	Beginner	Advanced > 12 Months
6	F 15-20	Advanced	Advanced > 12 Months
7	F 15-20	Intermediate	Advanced > 12 Months
8	F 15-20	Intermediate	Advanced > 12 Months
9	F 21-30	Advanced	Advanced > 12 Months

Table 1: User Profile Sex, Age, and Experience

Scenarios and Tasks

Scenario 1

You're a freshman in college struggling with Calculus. You've tried going to the SMART center on campus but you don't find that to be useful because there are a lot of students occupying the attention of available tutors.

You particularly want to do better in Math so that you can be accepted into the KSU Engineering program. You don't have much time to study or attend classes in person so you are looking for an online substitute course.

Tasks

1. Find your desired course (Derivatives)

2. Find out the instructor's name
3. Find out how long it will take you complete the course
4. Take the course

Scenario 2

You are a student looking for a way to make some money while in school. You are a decent photographer and you want to improve your photography skills and your friend tells you that she stumbled upon a website where you could take free photography lessons to perfect your skills.

Your goal is to learn as much as you can about the trade so that you can start your own photography gig.

Tasks
1. Find the course you need to take.
2. Find out the instructor's name
3. Find out how long it will take you complete the course
4. Take the course

Findings

This section of the report will share our raw data gathered from 9 out of 11 participants. We tossed out data from our first two participants because we experienced glitches while conducting the tests.

Look & Feel Home Page Issues

1. What do you think this site is about?

User	User Comment
1	A tutoring website for students.
2	Seems to be some sort of help with courses.
3	Tutoring
4	A site for preparing for standardized or college tests.
5	If you need a tutor, you can go to this website and get an online tutor.
6	Test prep course, something education related.
7	Tutoring
8	Prep courses or some sort of education website.
9	Tutoring

Table 2: Participant Response to Look and Feel

2. What do you think about the layout of this page?

User	User Comment
1	Looks really nice. Color scheme is good.
2	I like the way it transitions. I like how the page displays how you can become an instructor. I don't understand the mouse hover enlargement when I hover over the course boxes; is it clickable?
3	The word animation is cool. There is enough visual content to keep me interested.
4	The aesthetics look really good. I like them a lot. The website is really intuitive and I'm having a hard time finding something to critique.
5	N/A
6	looks pretty nice, I like the graphics and the moving images.
7	Overall layout is nice. Doesn't like the animation for the text. Also, doesn't understand what the countdown is for. Likes how there are prices immediately when you scroll down. Found the image sliders a little bit unclear.
8	I like the layout and the colors. I don't know what "Events" means in the navigation bar. I can't think of any events related to tutoring.
9	The word animation does a good job of telling what the website is about. I like the high definition background pictures.

Table 3: Participant Feedback about Home page layout

Think Aloud Protocol

Scenario 1 Tasks

1. Find desire course (derivatives)
2. Find out the instructor's name & curriculum
3. Find out how long it takes to complete the course
4. Take the course

User	Task 1	Task 2	Task 3	Task 4
1	SUCCESS	SUCCESS: The user went beyond the task and found a video that was attached to the curriculum. "The video is cute"	SUCCESS	SUCCESS
2	SUCCESS	SUCCESS: I like how the course description mentions "Designed to reintroduce" so that students can refresh their knowledge.	SUCCESS	SUCCESS

3	SUCCESS: There's alot of information to look at when I hover over the "Courses" tab.	SUCCESS	SUCCESS	SUCCESS
4	SUCCESS: User decides to take an alternate route and use the search bar to find the course.	SUCCESS	SUCCESS: The user finds the course features column convenient and provides most of the information a user would be looking for.	SUCCESS
5	SUCCESS: User clicked the premier math help button on the home page to reach the derivatives course.	SUCCESS	SUCCESS	SUCCESS
6	SUCCESS	SUCCESS	SUCCESS	SUCCESS: Appreciates the checkout process. Found it very simple.
7	SUCCESS: User uses the premier math help button to get them to the derivatives course. Second option would be to search for the course.	SUCCESS: Found the course features and the top information bar extremely helpful.	SUCCESS: Finds the instructors feature to be helpful. Knows who is going to be teaching the course.	SUCCESS
8	SUCCESS	SUCCESS: The "Course features" sidebar gives a good summary of everything I need to know.	SUCCESS	SUCCESS
9	SUCCESS	SUCCESS: The user went beyond the task and found a video that was attached to the curriculum. "The video is cute"	SUCCESS	SUCCESS

Table 4: Participant Feedback about Scenario 1 Tasks

Scenario 2 Tasks

1. Find desire course (derivatives)
2. Find out the instructor's name & curriculum
3. Find out how long it takes to complete the course
4. Take the course

User	Task 1	Task 2	Task 3	Task 4
1	SUCCESS	SUCCESS	SUCCESS	SUCCESS
2	SUCCESS: The "Read more" option on the course box tells me where I can get more information.	SUCCESS	SUCCESS: The user clicks on the name of the instructor and says, "I'd probably want to find more information".	SUCCESS
3	SUCCESS	SUCCESS	FAIL: : The user could not find the tab to take the course.	FAIL
4	SUCCESS: User finds the photography category in the sidebar.	SUCCESS	SUCCESS: User finds the website hard to critique. Doesn't know the purpose of the big image on the course page.	SUCCESS
5	SUCCESS	SUCCESS	SUCCESS	SUCCESS: Found the checkout to be simple.
6	SUCCESS	SUCCESS: Found the big image on course page to be very distracting.	SUCCESS	SUCCESS
7	SUCCESS: User uses the search bar to find the photography class.	SUCCESS	SUCCESS	SUCCESS: Finds the checkout to be convenient and easy to follow.
8	SUCESS	SUCCESS	FAIL: The user could find the tab to take the course and therefore, adds the course to the wish list	FAIL

			instead.	
9	SUCCESS	SUCCESS: The user found the course description but, said that there was no description of the curriculum.	SUCCESS: The user was unable to sign up for the first photography course she found so, she signed up for a different photography courses instead.	SUCCESS

Table 5: Participant Feedback about Scenario 2 Tasks

System Usability Scale (SUS)

The SUS comprised of questions on a Likert scale ranging from 1–5. The lower end of the scale indicated **Strongly Disagree** while the upper end indicated **Strongly Agree**.

Calculations have been performed to yield the mean (average) response based on all nine participants' data as shown in the figure below.

System Usability Prompt	Mean	Outcome
I think that I would like to use this system frequently	3.4	Agree
I found the system unnecessarily complex	1.7	Disagree
I thought the system was easy to use	4.4	Agree
I would need technical support to be able to use this system	1.1	Disagree
I found the various functions in this system were well integrated	4.2	Agree
I thought there was too much inconsistency in this system	1.4	Disagree
I imagine most people would learn to use this system quickly	4.5	Agree
I found the system very cumbersome to use	1.6	Disagree
I felt confident using this system	4.0	Agree
I needed to learn a lot of things before I could use this system	1.3	Disagree

Table 6: System Usability Scale Questions and Mean Scores from Participants

Product Reaction Cards

The final activity in the usability test required that participants pick five cards from a laid-out stack of one hundred and twenty cards. The participants were asked to pick five cards that best describe the website they just tested.

User	Product Reaction Card
1	Efficient, Familiar, Clean, Professional, Expected
2	Straightforward, Impressive, Helpful, Organized, Understandable
3	Sufficient, Usable, Clear, Accessible, Consistent
4	Professional, Clean, Comprehensive, Intuitive, Inviting

5	Helpful, Effective, Easy to Use, Simplistic, Straightforward
6	Fresh, Timesaving, Organized, Efficient, Sufficient
7	Clean, Engaging, Fresh, Appealing, Essential
8	Intuitive, Connected, Organized, Simplistic, Clean
9	Innovative, Secure, Easy to Use, Organized, Clean

Table 7: Product Reaction Cards Feedback from our Participants

The chart below shows terms that appeared with the most frequency (at least 3) from the product reaction card activity.

Term	Frequency
Clean	5
Organized	4
Easy to Use, Efficient, Fresh, Helpful	3

Table 8: Most Popular Product Reaction Cards

Recommendations

These recommendations are based on the usability test findings and are listed in decreasing order of priority.

1   **Fix the Home page misnomers**. 60% participants were unsure of the type of services offered by the website.

- Make sure that all tabs and call to action buttons are relevant and appropriately labeled to match the user's expectations. For example, participant #7 pointed out that "Start Today" is vague. "It makes me wonder whether I start today as a tutor or as a student."

Figure 1: Eddify.co Homepage Screenshot

2   **Broken links**. Many prominent links inviting participants to a deeper plunge into the site from the home page and banner are not functional. For example, "Buy Now" and "View More".

Figure 2: A Screenshot highlighting broken links on the home page

3   **Add all missing tags**. When creating courses and lessons, make sure that each is tagged to make the searching process easier for participants.

- Participant #2 was looking for a free Calculus found out that "Calculus" was not tagged under the overall category "Math". Making sure that all courses are appropriately categorized will help users find material faster which will improve usability experience.

4   **Fix the call to action button disappearance**. 70% of users reported that at least once during their checkout process, they couldn't locate the "Take this Course" button from where it originally appeared.

- The red box in the image below shows where the missing button should be. This is a coding issue that could cost the company revenue if not addressed in time.
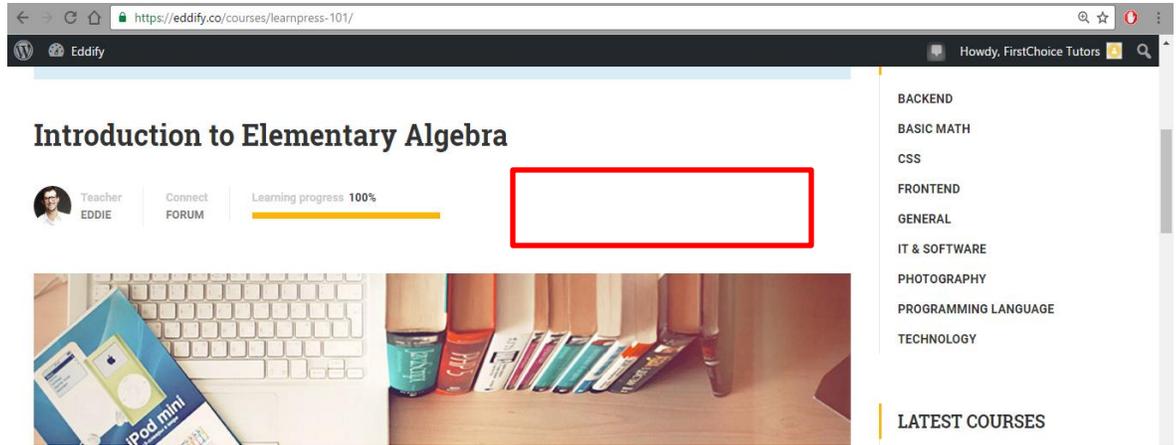

Figure 3: Missing call to action button screenshot

5 **Fix the logout page refresh fail**. After completing the outlined tasks, four users pointed out that the website was unresponsive after clicking on the "Logout" button. These users had varying opinion on where the page should default to after logging out.

- This is a minor coding issue that only matters to users who want to hang around the site after logging out.