

Psychology 689
Fall 2018
Jonathan Van Luven
Evaluation and Redesign of TedKnowsHomes Website
Version 3.0

Keller Williams Palos Verdes
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Table of Contents

1. Executive Summary	4
2. Introduction.....	5
2.1. Background	6
2.2. Customers	6
2.3. Rationale	6
2.4. Constraints.....	7
2.5. Purpose.....	7
2.6. Objectives.....	7
2.7. Project Timeline	8
3. Methods.....	9
3.1. Step 1: User needs analysis.....	9
3.2. Step 2: Heuristic evaluation	9
3.3. Step 3: Usability test	9
3.4. Step 4: Redesign website	10
3.5. Step 5: Usability test of redesign.....	10
3.6. Step 6: Final recommendations	11
4. Results	11
4.1. User Needs Analysis.....	11
4.2. Summary of Top Five Heuristic Evaluation Findings.....	12
4.3. Specific Heuristic Evaluation Findings.....	12
4.4. Minor Heuristic Evaluation Findings	17
4.5. First Usability Test Results	18
4.6. Website Redesign	19
4.7. Second Usability Test.....	22
5. Discussion.....	24
5.1. Final Recommendations	24
5.2. Conclusion	25
6. Appendices.....	26
6.1. Appendix A: Consent Form	26
6.2. Appendix B: User Needs Analysis Email Questionnaire.....	27

6.3. Appendix C: Usability Test Tasks.....28

1. Executive Summary

Ted Kerwin is a realtor for Keller Williams Palos Verdes that wants to improve his website, so the number of customer inquiries he receives through the contact page will increase. The website provides tips on how to start the process of buying a home now, information on the types of services Ted provides, background on Ted and his Real Estate group, and contact information. The specific objectives that were set to improve the website are as follows:

- Increase customer inquiries about buying and selling homes.
- Make the website easier to use.
- Design the website to meet usability standards.
- Increase user satisfaction.

Each objective has specific measures and performance criteria to determine if it was completed successfully. The objectives were met using a 6-step plan, which is outlined below:

1. User needs analysis
2. Heuristic evaluation
3. Usability test
4. Website redesign
5. Usability test on the redesign
6. Final recommendations

The results user needs analysis (Step 1) and heuristic evaluation (Step 2) were used to identify the major issues of the website that were examined in the initial usability test (Step 3). The website's issues that were confirmed in the usability test were fixed in the website redesign (Step 4). The second usability test (Step 5) determined if the website redesign had fixed the website's major issues, and those results informed the final recommendations (Step 6).

Summaries of the results from each step of the project can be found below.

Top customer responses from User Needs Analysis:

- 6/8 users claimed they used the website looking to buy a home.
- 5/8 users requested that the website add more tips for people looking to buy or sell homes.
- 3/8 users wanted the website to specify what cities Ted covers.
- 2/8 wanted to be responded to sooner by Ted.
- 1/8 users said the font on the website was too small.

Top 5 Heuristic violations:

1. Clicking the contact icon in the top right brings user to a slightly different contact page than the original
2. There is no back button on the page to bring user to homepage.
3. At the top of each page the name of the page and a phrase is overlaid on a picture of a home interior.

4. Contact icon looks like it should be clickable to make a call, but it is not.
5. Contact page does not autofill for returning users

First Usability test tasks:

1. Fill out the contact page and select “I’m looking buy a new home” for reason of inquiry.
2. Name the dollar amount of transactions Keller Williams Palos Verdes is responsible for each year.
3. Name the real estate area Ted works in.
4. Name the services Ted offers his customers.
5. Name how much Ted charges for a market evaluation of your home.

First Usability test results:

- The average time on task was more than double the optimal time on task for all tasks except task 4.
- Average lostness scores were over 0.4 for all tasks except task 4.
- Average SUS score was 80.

Areas fixed in the redesign:

- The three contact pages were made into a single contact page, so all contact links led to the same place.
- The annual Keller Williams Palos Verdes transaction amount was added to the services page and bolded.
- Information about Ted’s real estate area was added to the about page.
- The text in the banner of each page was placed above the photo.
- Added the phrase “Contact for a FREE Market Evaluation of your home!” on the home and contact pages.

Second Usability test results:

- The average time on task was reduced for all tasks except task 4 compared to the first usability test.
- The average lostness score was lower than 0.4 for all tasks except task 2.
- The average SUS score was 82.

The results of the second usability test showed that the website redesign had fixed almost all the website’s major issues, so the final recommendations given to Ted were to keep the website in the same form as the website redesign except for one last change. Since the lostness score for task 2 (Keller Williams Palos Verdes’ annual dollar amount of transactions) was not reduced to below 0.4, a final recommendation was given to fix this issue. The recommendation given to increase the saliency of the \$1 Billion in transactions was to move it to the homepage of the website. After the implementation of all of these recommendations, the website will be free of heuristic violations and increase user satisfaction and ease of use.

2. Introduction

This report provides details on the methods and results of a website redesign project for a realtor. The report consists of background information on the on the website and supervisor, objectives for the project, step-by-step plan describing the tasks that were performed to meet the objectives, metrics to evaluate the completion of each objective, a timeline that gives the estimated starting and ending dates for each step of the project, results of the tests completed, and final recommendations based on those results. The overall goal of this project was to increase user satisfaction and ease of use for the website.

2.1. Background

Ted Kerwin is a realtor that wants improvements made on his website. Ted previously worked for Century 21, but last year moved to Keller Williams to increase his number of clients. The website he uses is www.tedknowshomes.com, which gives tips for finding a home, background information on his life and real estate group, and contact information. The website is decorated with photos of homes and Ted. The contact page offers a free market analysis of customer homes, which asks for email addresses and names of the customers.

2.2 Customers

The contact page allows for customers to identify what they specifically are looking for, which was used to identify the types of customers that use this website.

Types of Customers:

- Looking for list of homes for sale in their area
- Looking for fair market value evaluation of their home
- Looking to buy a home
- Looking to sell a home

The customers are people that are looking to gain more information on how to buy or sell homes. They typically are middle-aged adults, 40 years and older. The customers' experience with buying or selling homes can range from beginner to experienced, but the website is specifically targeted towards novice customers. Novice customers would value the basic tips given on how to buy a home, while more experienced customers can be assumed to already know that information.

2.3 Rationale

Ted wanted to improve the website because he does not get enough inquiries from customers. He claimed to get only about two emails a month from customers on the website, and he wanted to increase that to at least two per week. He created the website himself, so he wanted an experienced professional to conduct user testing to analyze the website's usability and user

satisfaction and use that data to make improvements. This was an unpaid project worked on for 14 weeks at 10 hours per week.

2.4 Constraints

There were several constraints that could possibly lead to delays in the projects, which are listed below:

- Communication delays with supervisor
- Participant recruitment due to lack of funding

Both possible constraints set the project back about a week. Specifically, Ted was on vacation and forgot his website administrator password, which set back the redesign of the website (Step 4). Participant recruitment for the second usability test also took a few days longer than expected because they could not be those used in the first usability test.

2.5 Purpose

The purpose of this project is to redesign the website to increase customer inquiries about buying and selling homes. To increase inquiries, the website was analyzed to find issues that do not meet usability standards. Based on the issues, improvements were implemented to increase ease of use and user satisfaction, which will presumably increase customer inquiries about buying and selling homes.

2.6 Objectives

Based on the purpose of this project, objectives were set addressing specific goals, which are listed below:

Objective 1:

- Increase customer inquiries about buying and selling homes.
- *Measure*: This objective was measured by counting the number of emails Ted receives after redesigning the website.
- *Performance specifications*: Two or more emails per week, which Ted stated was his goal, was considered successfully meeting this objective.

Objective 2:

- Make the website easier to use.
- *Measure*: This objective was measured by doing a usability test measuring lostness and time on task.

- *Performance specifications:* Lostness scores that are lower than 0.4 indicate that the users are not lost. Time on task scores were compared before and after the redesign, so lower time on task scores after the redesign were considered successful.

Objective 3:

- Design the website to meet usability standards.
- *Measure:* This objective was measured by doing a heuristic analysis using Nielsen’s 10 Heuristics for User Interface Design.
- *Performance specifications:* This objective was considered successful when all issues identified in the heuristic evaluation were fixed in the redesign.

Objective 4:

- Increase user satisfaction.
- *Measure:* This objective was measured by giving out System Usability Scale (SUS) surveys to participants in the usability study.
- *Performance specifications:* SUS scores above 74 indicated that user satisfaction was successfully increased.

2.7 Project Timeline: Weekly Schedule

Time Period	Task	Deliverable
Week 1: 9/10 – 9/15	Draft project proposal	Written proposal to supervisor and instructor
Week 2: 9/17 – 9/21	Final proposal	Written proposal to supervisor and instructor
Week 3: 9/24 – 9/28	User needs assessment	
Week 4: 10/1 – 10/5	Heuristic analysis	Written progress report to instructor
Week 5: 10/8 – 10/12	Usability testing	
Week 6: 10/15 – 10/19	Midterm progress report	Oral report to instructor
Week 7: 10/22 – 10/26	Usability Testing	
Week 8: 10/29 – 11/2	Redesign website based on results of usability test	Written progress report to instructor
Week 9: 11/5 – 11/9	Redesign website based on results of usability test	
Week 10: 11/12 – 11/16	Usability testing of redesign	Written progress report to instructor

Week 11: 11/19 – 11/23	Usability testing of redesign	
Week 12: 11/26 – 11/30	Final design recommendations	
Week 13: 12/3 – 12/7	Draft final report	Written final report to supervisor and instructor
Week 14: 12/10 – 12/14	Final report	Written final report to supervisor and instructor

3. Method

This section individually describes the materials, equipment, and procedures used in each of the 6 steps of this project.

3.1 Step 1: User needs analysis

A user needs analysis was conducted to identify what past users of Ted’s website were looking for when they first accessed the site. This analysis was in the form of a questionnaire, which was emailed to 20 previous customers of Ted. The questions asked in the questionnaire can be found in *6.3 Appendix B*.

The results from the questionnaires were discussed with Ted to create a plan of what needed to be added to the website to meet user needs. A list was made of all information users wished had been on the website when they first used it, which was used in the redesign of the website (Step 4). All negative comments about the website being difficult to navigate were focused on in the heuristic analysis (Step 2).

3.2 Step 2: Heuristic evaluation

A heuristic evaluation was conducted for the website. The evaluation used Nielsen’s 10 Heuristics for User Interface Design. Three evaluators individually did a heuristic analysis of the website, in which they visited the website and searched for issues that did not meet the standards set by Nielsen’s 10 Heuristics for User Interface Design. Each issue was given a severity rating (0-4) and an ease of fixing score (0-3). The results were compiled together to form a final heuristic evaluation, and the top five major issues were used to plan the first usability test (Step 3).

3.3 Step 3: Usability test

The results of the user needs analysis (Step 1) and the heuristic evaluation (Step 2) were used to form the testing items for the usability test. The comments from the customer surveys about what was difficult to find or navigate to on the website and the top 5 issues found in the heuristic evaluation were used to create specific tasks in the usability test (6.3 Appendix C).

The tasks were designed to help empirically examine the website's previously identified issues. Each task was written into a scenario with a backstory that explained why the participant is doing the task and what he or she is trying to accomplish. Each task was walked through to get an average optimal time to complete task and the minimum number of screens that must be visited to complete each task.

5 participants were used for the usability test, for which they were not paid. The participants needed to not be familiar with the website, so they were to be asked if they have ever used it before beginning the study. Each participant was asked to speak his or her thoughts aloud as they did the tasks, in which they were given 45 minutes. Participants were also given an SUS survey after completing all tasks to gather subjective data on usability.

Data was collected using Zoom, which records the screen and audio from the participant. Each video of the tasks being done was watched to gather the following data:

- Time on task (seconds)
- Number of different screens visited during the task
- Number of new screens visited during the task
- Oral feedback from the participants as they completed the task.

The time on task was compared with the optimal time on task, and lostness scores were calculated using the number of different and new screens visited during the task,

$$L = \sqrt{\left(\left(\frac{N}{S}\right) - 1\right)^2 + \left(\left(\frac{R}{N}\right) - 1\right)^2}$$

3.4 Step 4: Redesign website

The results of the usability test were used to highlight the areas of the website that needed to be redesigned. Lostness scores above 0.4 indicated that the user was lost, and time on task values that were significantly higher than the optimal time on task indicated that the area needs to be fixed. The areas of the website that were found to have issues were redesigned to reduce the number of clicks and follow Nielsen's 10 heuristics. The redesign was done using the Squarespace website building service because the website was originally created with it.

3.5 Step 5: Usability test of redesign

Another usability test was run on the mockup website using the same tasks from the first usability test (Step 3). Four new participants were used to ensure that they were not familiar with the website. The participants were again told to speak their thoughts aloud as they completed the tasks, in which they were given 45 minutes total. They were also given an SUS survey when they completed all tasks.

The data was again collected using Zoom and included the following:

- Time on task (seconds)
- Number of different screens visited during the task
- Number of new screens visited during the task
- Oral feedback from the participants as they completed the task.

This data was compared with the data from the first usability test to confirm that the redesign had fixed the website’s major issues.

3.6 Step 6: Final recommendations

The redesigned areas of the website that were shown to improve in the second usability test (Step 5) were given to Ted as final recommendations for how to fix the website’s major issues. SUS scores for the first and second usability tests were compared to determine if user satisfaction increased.

4. Results

4.1 User Needs Analysis

Response	Frequency (Out of 8)
Used the website looking to buy a home	6/8
Add more tips for people looking to buy or sell homes.	5/8
Specify what cities Ted covers	3/8
Want faster response to first inquiry	2/8
Want larger font size	1/8

Table 4.1. This table shows the 5 most relevant comments from the user needs analysis.

The user needs analysis questionnaire was emailed to 20 of Ted’s previous customers and only 8 replied. Common answers were grouped together to identify what the top, relevant responses were. 6/8 users claimed they used the website looking to buy a home. 5/8 users requested that the website add more tips for people looking to buy or sell homes. 3/8 users wanted the website to specify what cities Ted covers. 2/8 wanted to be responded to sooner by Ted. 1/8 users said the font on the website was too small. These responses indicate that the users are mostly novice buyers that want more information on the website, such as tips and Ted’s specific real estate area.

4.2 Summary of Top Five Heuristic Evaluation Findings

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
4.3.1	Clicking the contact icon in the top right brings user to a slightly different contact page than the original	2.00	2 out of 3	1	Nielsen: #4	Consistency and standards
4.3.2	There is no back button on the page to bring user to homepage	1.00	2 out of 3	1	Nielsen: #3	User control and freedom
4.3.3	At the top of each page the name of the page and a phrase is overlaid on a picture of a home interior	2.00	3 out of 3	1	Nielsen: #8	Aesthetic and minimalist design
4.3.4	Contact icon looks like it should be clickable to make a call, but it is not	1.00	2 out of 3	1	Nielsen: #4	Consistency and Standards
4.3.5	Contact page does not autofill for returning users	2	3 out of 3	1	Nielsen: #7	Flexibility and efficiency of use

Table 3.4. Summary of the 5 most severe violations of the TedKnowsHomes website.

4.3 Specific Heuristic Evaluation Findings

4.3.1 There are three contact pages that ask for slightly differing information.

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
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4.3.1	Clicking the contact icon in the top right brings user to a slightly different contact page than the original	2.00	2 out of 3	1	Nielsen: #4	Consistency and standards
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Problem

A contact page can be brought up by clicking a banner at the top of the page for first time users, clicking the contact page tab, or clicking the phone number in the top right each page. Each of these contact pages is slightly different. One page asks the user to identify his or her type of inquiry, one asks for a subject, and one has neither.

Evidence

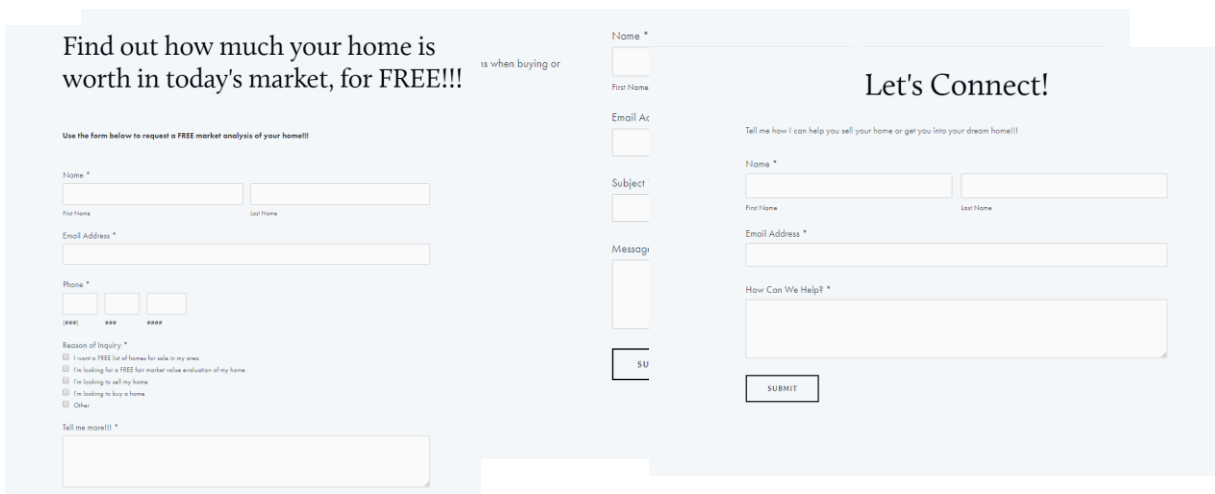


Figure 4.3.1. Each contact page asks for slightly different information from the user, so there is no consistency.

Recommendation

Each link to the contact page should lead to the same page.

4.3.2 There is no back button on the page to bring user to homepage

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
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4.3.2	There is no back button on the page to bring user to homepage	1.00	2 out of 3	1	Nielsen: #3	User control and freedom
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Problem

At the top of each page, there is no back button allowing the user to return to the previous page. There is also no breadcrumb trail that tells the user what pages he or she has been previously been on.

Evidence

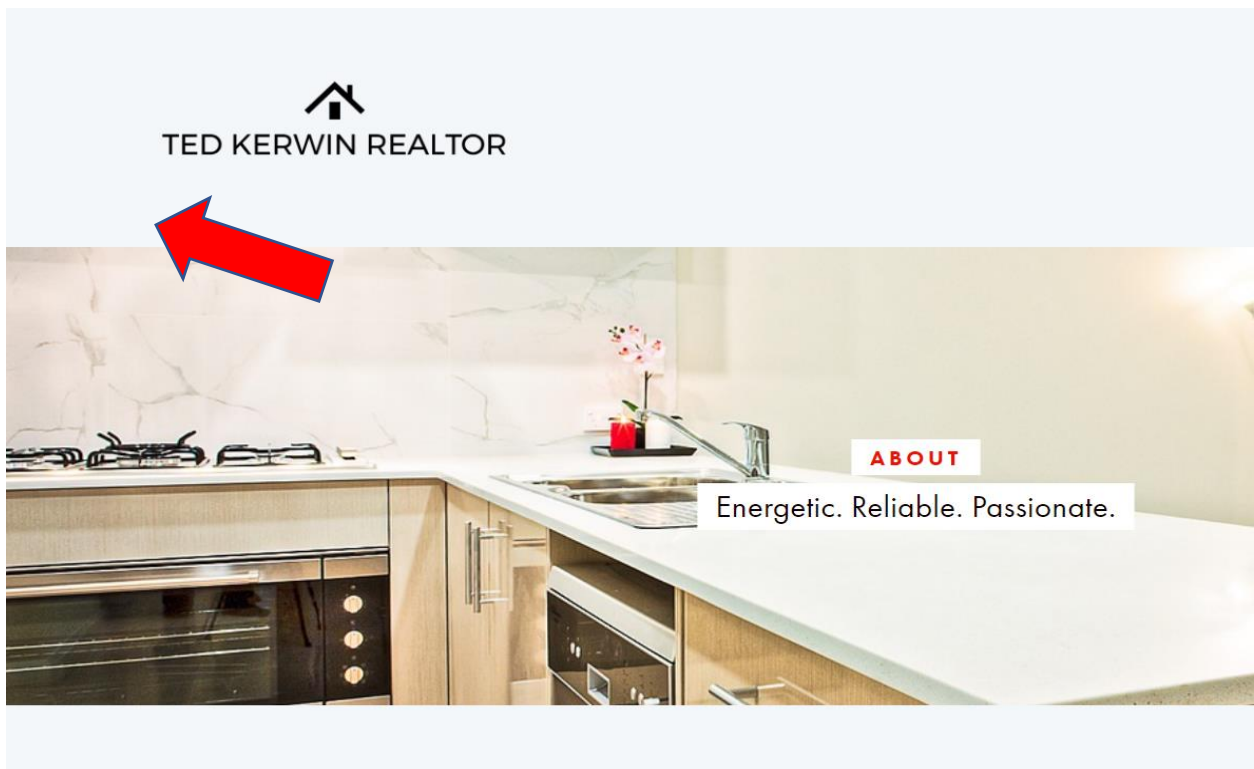


Figure 4.3.2. There is no back button to allow the user to return to the previous page.

Recommendation

A breadcrumb trail should be added to the top left of every page that tells the user what pages he or she has visited and allows him or her to return to one of those pages.

4.3.3 At the top of each page, the title of the page is overlaid on a picture of a home interior.

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
	At the top of each page, the title of the page is overlaid on a picture of a home interior	2.00	3 out of 3	1	Nielsen: #8	Aesthetic and minimalist design

Problem

At the top of each page, there is a decorative banner that shows a picture of a home interior. The title of the page and a phrase describing the contents of the page is on top of that banner. The white text box blends in with the home interior photo, which makes the text difficult to read due to poor contrast.

Evidence

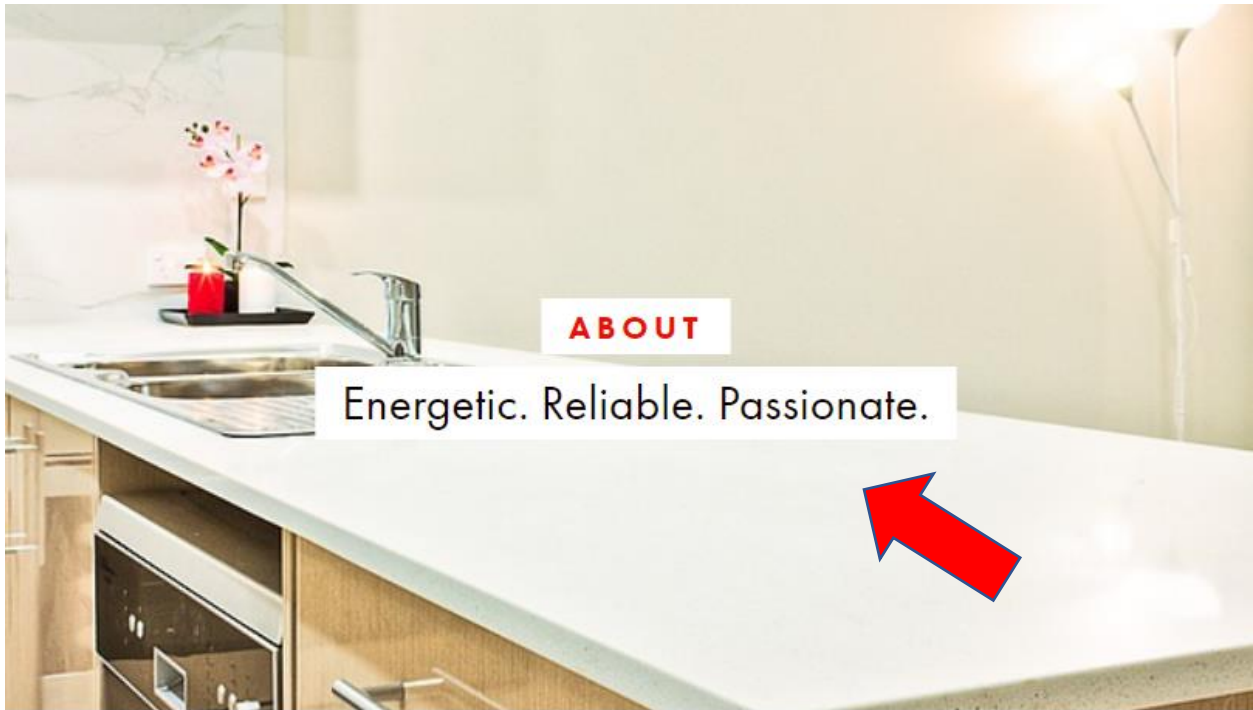


Figure 4.3.3. The title of the page and phrase is overlaid on a decorative image with poor contrast.

Recommendation

To resolve this issue, the title of the page should be above the decorative picture or have a black text box with white text to increase the contrast.

4.3.4 Contact icon looks like it should be clickable to make a call, but it is not.

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
4.3.4	Contact phone icon looks like it should be clickable to make a call, but it is not	1.00	2 out of 3	1	Nielsen: #4	Consistency and Standards

Problem

There is a contact phone icon on the homepage and contact page that looks like the user should be able to click it to call Ted, but it does nothing.

Evidence

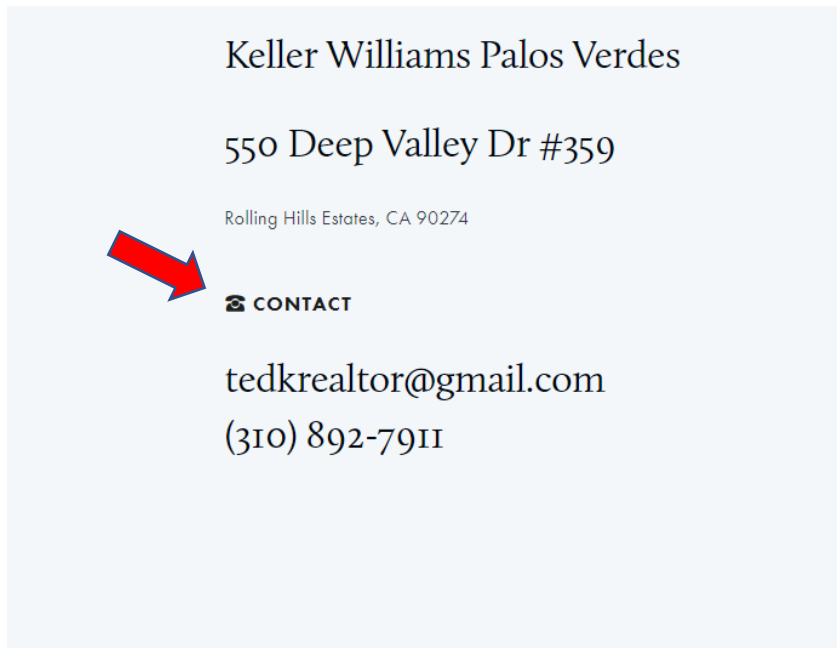


Figure 4.3.4. The contact icon on the homepage and contact page is not clickable.

Recommendation

The icon should be clickable, which would call Ted's phone number listed below.

4.3.5 Contact page does not autofill for returning users

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
4.3.5	Contact page does not autofill for returning users	2	3 out of 3	1	Nielsen: #7	Flexibility and efficiency of use

Problem

When returning users type in their information in any of the three contact pages, the forms do not autofill with their information. The page should remember returning users, so they do not have to spend time re-entering all their information.

Evidence

Use the form below to request a FREE market analysis of your home!!!

Name *

Jon|

First Name Last Name

Email Address *

Phone *

(###) ### ####

Reason of Inquiry *

I want a FREE list of homes for sale in my area

I'm looking for a FREE fair market value evaluation of my home

I'm looking to sell my home

I'm looking to buy a home

Other

Tell me more!!! *

Figure 4.3.5. The contact page does not autofill for returning users.

Recommendation

The contact page should remember returning users' information and autofill when they re-enter it.

4.4 Minor Heuristic Evaluation Findings

#	Problem	Severity Ranking	Number of Identifying Evaluators	Ease of Fixing Rating	Heuristics Violated	Broad Heuristic
4.4.1	When window is made thinner, the words under the title of the page overlap	1	2 out of 3	0	Nielsen: #8	Aesthetic and minimalist design
4.4.2	There is a big area of empty space toward the bottom of the page.	1	3 out of 3	0	Nielsen: #8	Aesthetic and minimalist design
4.4.3	Arrow next to word location that is not clickable and seems to have no purpose	1	2 out of 3	0	Nielsen: #2	Match between system and the real world

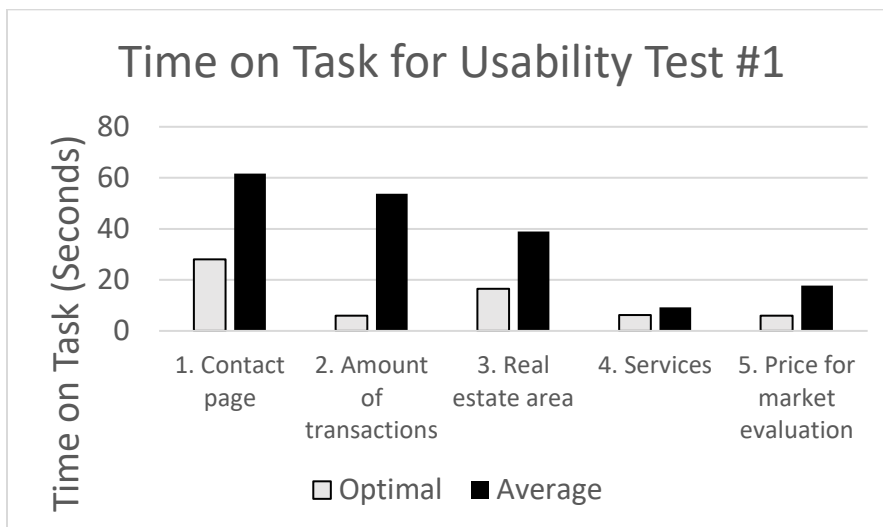
Table 3.6.1 Minor heuristic violations.

4.5 First Usability Test Results

4.5.1 First Demographics

All 5 participants were females aged between 50 and 60. None of the participants had previously used the TedKnowsHomes website.

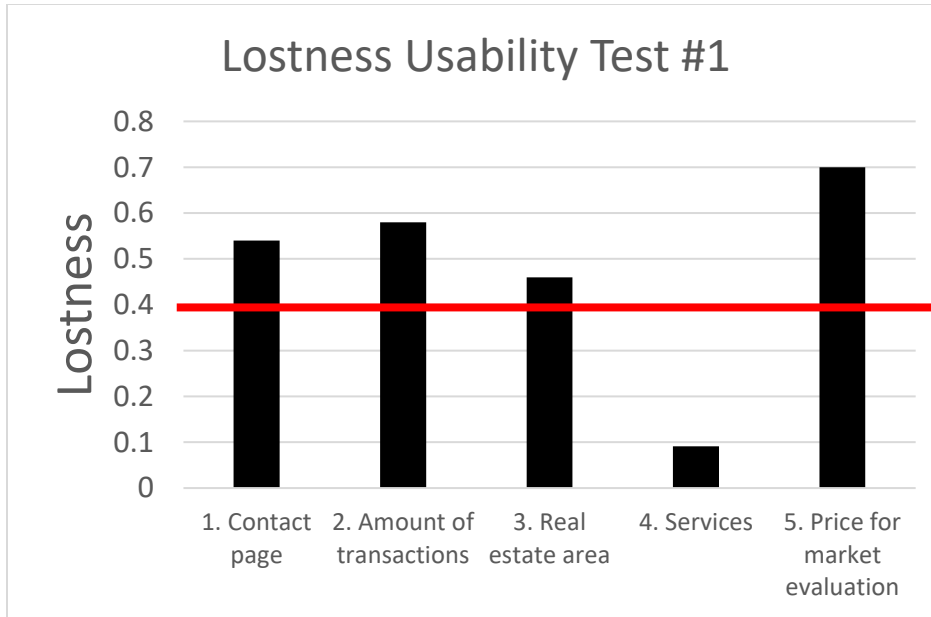
4.5.2 First Time on Task



Graph 4.5.2. The average time on task was more than double the optimal time on task for all tasks except task 4.

Overall, the average time on task for each task except task 4 was at least double the optimal time on task. The average time on task for task 2 was much more than double the optimal time on task. The average time on task for task 4 was only 3 seconds longer than the optimal time on task.

4.5.3 First Lostness



Graph 4.5.3. Average lostness scores were over 0.4 for all tasks except task 4.

Average lostness scores were significant for tasks 1, 2, 3, and 5, with means above 0.4 (indicated by the horizontal line in Graph 4.5.3). These scores indicate that the participants were lost for those tasks. The average lostness score for Task 4 was below 0.4, indicating that the users were not lost.

4.5.4 First System Usability Scale

After completing all five tasks, the average SUS score was 80. Scores above 74 mean the system is above average in usability.

4.6 Website Redesign

4.6.1 Contact Page

The results of the first task confirmed that the differences between the three contact pages caused users to have increased time on task and lostness. Thus, the three contact pages were made into a

single contact page, so all contact links led to the same place. This was done to increase consistency.

Evidence

Use the form below to request a FREE market analysis of your home!!!

Name *

First Name Last Name

Email Address *

Phone *

(##) ### ####

Reason of Inquiry *

I want a FREE list of homes for sale in my area

I'm looking for a FREE fair market value evaluation of my home

I'm looking to sell my home

I'm looking to buy a home

Other

Tell me more!!! *

SUBMIT

Figure 4.6.1. The final contact page of the website.

4.6.2 Annual Transactions

The results of the second task showed that it was difficult for users to find the annual transaction amount for Keller Williams Palos Verdes, due to significantly high average time on task and lostness. To fix this issue, the transaction amount was added to the services page and bolded.

Evidence

Services

HOME BUYING

Home buying can be one of the scariest things you will ever do, but Ted is here to make the process go as smoothly and stress free as possible. Ted can help get you in front of a lender who will get you pre-qualified for a loan. Once we know exactly what your price range is, we can find you your dream home! Keller Williams is responsible for **\$1 Billion** in transactions per year, so we have the experience you want to help sell your home!

Figure 4.6.2. The annual transaction amount was added to the services page in bold-text.

4.6.3 Ted's Real Estate Area

The results of the third task showed that it was difficult for users to find the geographical area of Ted's home buying and selling expertise, due to significantly high average time on task and lostness. To fix this issue, information about Ted's real estate area was added to the about page.

Evidence



REALTOR IN THE SOUTH BAY

Ted Kerwin

The Stephen Haw Group - Palos Verdes, California

Ted is an energetic and passionate agent who lives and breathes South Bay real estate. Born and raised in the South Bay, Ted has deep roots in the area. His great grandparents were original residents of Hermosa Beach, helping develop the city by opening up the first bakery in 1910. The Kerwin's have been a staple in the beach cities community and culture for over 100 years and are considered to be pioneers of South Bay surfing. Since graduating from California State University of Fullerton, Ted has dedicated himself to serving home buyers and sellers, through hard work and a genuine desire to provide for his clients. He understands how special and unique our area truly is. His local knowledge and background makes his services invaluable. Ted's relentless effort to achieve customer satisfaction, makes him one of a kind.

Ted is a member of The Stephen Haw Group out of Keller Williams Palos Verdes. The group is responsible for more than \$1 Billion of transactions and is continuously one of the top producing teams in all of Southern California. Ted's realtor expertise is in the South Bay, but he can help you buy or sell a home in all of Southern California.

Figure 4.6.3. Information about Ted's real estate area was added to the about page.

4.6.4 Page Titles and Banner

The results of task 4 were not significant for time on task or lostness, which means that the contrast issue of the banner did not make it significantly harder to read the text. The problem was still fixed, however, because it was poor contrast. To fix the issue, the text was placed above the photo.

Evidence

ABOUT

Energetic. Reliable. Passionate.



Figure 4.6.4. The title of the page and phrase was put above the banner to eliminate the contrast issue.

4.6.5 Price of Market Evaluation of Home

The results of task 5 showed that it was difficult for users to find the price of a market evaluation of their homes, due to significantly high average time on task and lostness. This issue was fixed by adding the phrase “Contact for a FREE Market Evaluation of your home!” on the home and contact pages.

Evidence

<p>Contact for a FREE Market Evaluation of your home!</p> <p>CONTACT</p> <p>tedkrealtor@gmail.com (310) 892-7911</p>	<p>Contact for a FREE Market Evaluation of your home!</p> <p><u>tedkrealtor@gmail.com</u> (310) 892-7911</p>
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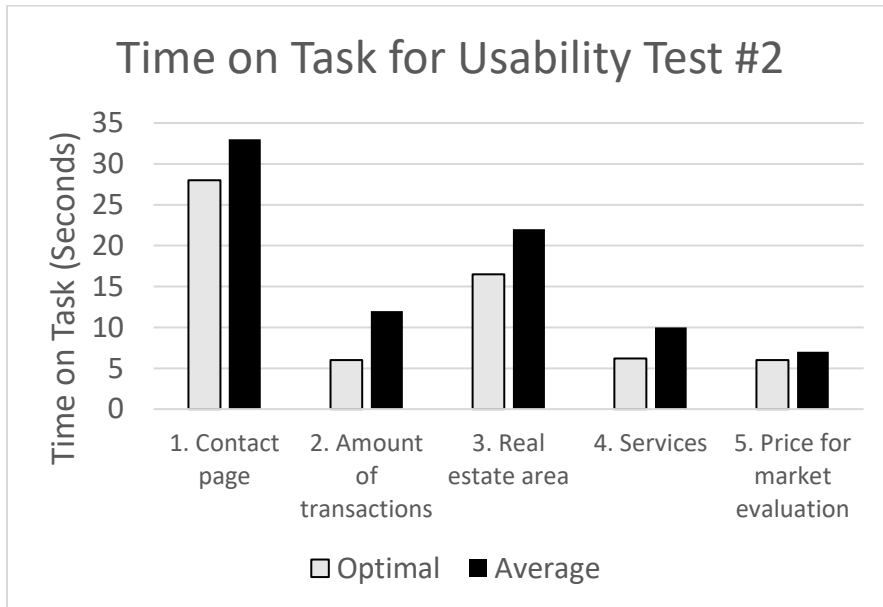
Figure 4.6.5. On the home and contact pages, the free market evaluation of a home was advertised.

4.7 Second Usability Test

4.7.1 Second Demographics

The second round of usability testing only had 4 participants, which consisted of 2 males and 2 females aged between 40 and 60. None of the participants had previously used the TedKnowsHomes website.

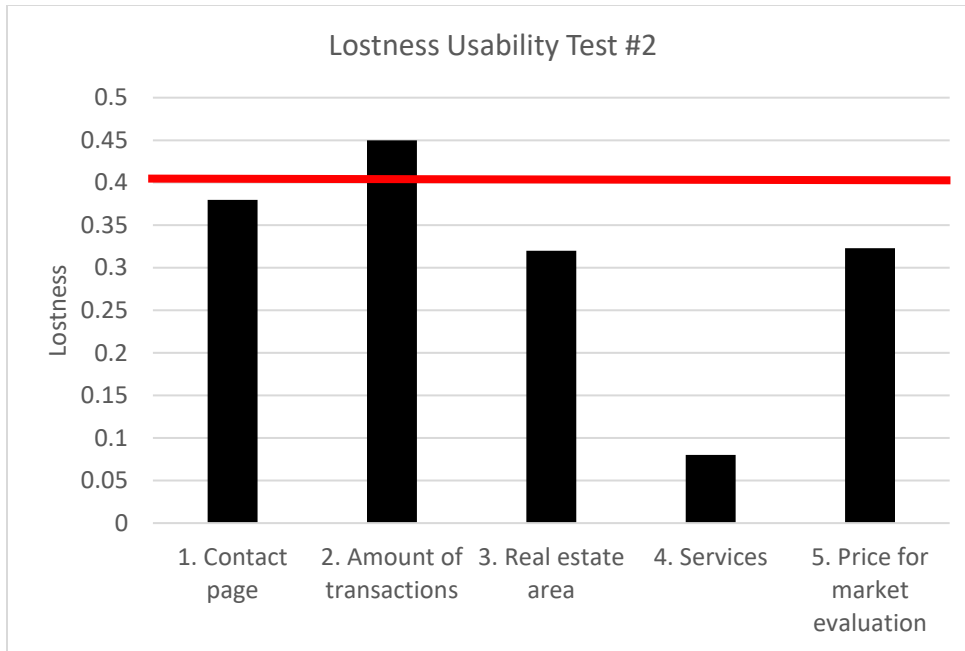
4.7.2 Second Time on Task



Graph 4.5.2. The average time on task was reduced for all tasks except task 4 compared to the first usability test.

Overall, the average time on task for each task was less than 10 seconds greater than the optimal time on task, which is a significant improvement from the first usability test. The average time on task for task 2 showed the biggest improvement, but it is still double the optimal time on task. The average time on task for task 4 increased by a second in comparison to the first usability test, but it is still not significantly higher.

4.7.3 Second Lostness Test



Graph 4.7.3. The average lostness score was lower than 0.4 for all tasks except task 2.

Average lostness scores were lower in comparison to the scores in the first usability test for all tasks. The only task that was still above 0.4 was task 2, which means that users were lost for only task 2.

4.7.4 Second System Usability Scale

After completing all five tasks, the average SUS score was 82. Scores above 74 mean the system is above average in usability.

5. Discussion

5.1 Final Recommendations

The results of the second usability test showed that the website redesign improved performance on all five of the tasks measured by average time on task and lostness. Task 2 was the only task that did not improve enough to be considered no longer an issue.

According to these results, all the changes made in the redesign of the website improved its usability except for adding the annual amount of transactions on the services page. A possible way to increase the saliency of the \$1 Billion in transactions would be to move it to the homepage of the website. The homepage of the website begins with tips on how to buy your first home, but above that should possibly be a few short facts about Ted and his real estate team. Moving this information to the front and center of the website will make it hard not to miss.

The final recommendations are to implement these confirmed solutions to the website's major issues:

- Have one single contact page.
- Put information about Ted's real estate area of expertise on the About page.
- Separate the page titles and photos of home interiors by putting the title above the photo.
- Put advertisements to the free market evaluation of homes on the Home and Contact pages.

Separate pages on Squarespace were made for the redesign, so to implement the changes, the redesigned just need to be swapped out with the old pages.

5.2 Conclusion

The objectives of this project were as follows:

- Increase customer inquiries about buying and selling homes.
- Make the website easier to use.
- Design the website to meet usability standards.
- Increase user satisfaction.

To measure if there was an increase in customer inquiries, I will have to wait and see if Ted receives more than two emails per week for the month after the final website design recommendations have been implemented. Thus, this objective has yet to be met. The second objective was confirmed to have been met due to the improvements in average time on task and lostness scores from the first usability test to the second. These improvements show that the redesign of the website made it easier to use. The third objective was met by using the redesigning the website to fix the usability standards violations identified in the heuristic evaluation. The fourth objective was technically met before the redesign of the website, as the average SUS score was 80, which is above the previously set performance specification of 74. Average SUS score did improve slightly to 82, however, in the second usability test. The results of this project show that so far three of the four objectives have been met according to their previously established performance specifications. The first objective may be met in as little as four weeks

6.1 Appendix A: Consent Form

Notice of Informed Consent

Evaluation and Redesign of TedKnowsHomes Website

Jonathan Van Luven

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California State University, Long Beach (CSULB)

You are being asked to participate in a research study.

The purpose of this study is to determine the usability of the website TedKnowsHomes. If you decide to participate you will be asked to fill out a short demographic survey, explore the TedKnowsHomes website, and perform tasks on the website, which are all for research purposes. The total time of your participation is expected to last 45 minutes. The risks to participating in this study include visual fatigue, discomfort with some questions, frustration, and audio/video recording that will reveal your identity. The investigator will make every attempt to reduce these risks by making the study self-paced, granting you the option to skip any question you are uncomfortable answering, granting you breaks, and granting the option to decline having your video recording shown outside of the research team.

Any information collected from you in this study will be stored in a secure location and will not be shared with anyone who does not have appropriate provisions to access the information.

Signing this document means that all information about the study has been explained to you orally, the investigator has answered any questions you have about the study and that you voluntarily agree to participate.

Name of Subject (Printed)

Subject Signature

Date

PERMISSION TO USE VIDEO CLIPS FOR EDUCATIONAL PURPOSES (OPTIONAL)

I agree to allow the researchers to use my video recordings for educational purposes (i.e., to have parts of my usability test session shown to designers to highlight issues with the web site; some clips of the test session may be used to train student assistants in the coding of usability data).

Participant's Name

Participant's Signature

Date

6.2 Appendix B: User Needs Analysis Email Questionnaire

Hello,

You are a recent customer of Ted Kerwin. He is hoping to find out how he can improve his website to make it more user friendly and informative. If you have just 3 minutes, please respond to this email with your answers to each of the following questions if you used his website in the past:

- How did you hear about this website?
- What type of customer did you identify as? (buyer, seller, asked for a list of homes, or fair market evaluation of home)
- Did the website provide you with what you were looking for?
- What other information would they have liked to see on the website?
- Was there anything that was difficult to find or made the website difficult to navigate?

Thank you for your time!

Jonathan Van Luven

Usability Researcher

6.3 Appendix C: Usability Test Tasks

Number of Task	Task Description
1	You recently got married and had a big promotion at work, so you think it may be time to start saving to buy a home. You are hoping to find out more information from Ted on how to get started on buying a new home. Fill out the contact page and select “I’m looking buy a new home” for reason of inquiry.
2	You recently inherited a very large home that you have no intentions in living in, since you do not want to move. You have been searching for a trustworthy real estate team that has a lot of experience selling expensive homes. Name the dollar amount of transactions Keller Williams Palos Verdes is responsible for each year.
3	You live in Santa Monica and are looking to buy a home near where you currently live. A friend recommended Ted to you, but you are unsure if Ted is too far from Santa Monica. Name the real estate area Ted works in.
4	You saw an ad for Ted Kerwin Realtor on Facebook and are curious about what makes him so special as a real estate agent. Name the services Ted offers his customers.
5	You want to know how much your home costs because you are considering selling it if the price is high. Name how much Ted charges for a market evaluation of your home.