# User Experience Research Report: Heuristic Evaluation

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Word count: 4149



## **Executive Summary**

This report will document our heuristics evaluation of Praktio's web-based transactional law courses: Contract Fundamentals and Precision Training. Heuristics evaluation is a cheap, fast and easy-to-use usability engineering method designed by Jakob Nielsen in 1994 to find usability problems in user interface designs. Generally, the process starts off with a meeting of all evaluators to agree on the scope of the project. Evaluators then perform individual analysis of each of the ten heuristics and track the adherence and violations of each. These heuristics cover topics such as feedback, visibility, user control, user efficiency, help, error handling, error prevention and use of metaphors that match the real world. It has been determined through the study that different evaluators find different heuristics, therefore, each evaluator performs a complete heuristics evaluation individually. Each finding is given a severity rating from 0 (not a usability problem) to 4 (usability catastrophe) and assigned a recommendation. Finally, all evaluators meet to debrief, share their findings, and create a consolidated report of findings, recommendations and severity ratings.

Initially, our team of 4 met to agree that the scope and focus of our analysis should be the usability of the interface within each course as opposed to the main website prior to entering each course. We individually performed a heuristics evaluation of Contract Fundamentals and Precision Training. Afterwards, we met and consolidated our findings, recommendations and severity ratings. We discussed as a group and selected some key findings to highlight for the purpose of improving the usability of Praktio's courses, as well as, document some good examples of heuristics that Praktio's adhering to.

#### **Findings and Recommendations:**

**Finding 1.** No display to indicate the total time duration of a video and the real-time indicator of the play time that is left. **Recommendation:** Add information to the seekbar to indicate the total time of a video and time left to play.

**Finding 2.** No progress bar within individual modules. **Recommendation:** Add progress indicator within modules to give users feedback on how far they've progressed within a module.

**Finding 3.** Quiz results and attempts are not clear and understandable. In Contract Fundamentals, feedback on quiz attempts and total score are ambiguous. In Precision Training, there is no prominent feedback to signal that the user has used up their attempts. **Recommendation:** Present accurate information for quiz attempts and results in a location and a way that is easy to notice.

- **Finding 4.** There is a disclaimer that the language in the course may not match the terminology used in law, but this violates the heuristic that the system should match with the real world. **Recommendation:** Update the content to match the users' language and use terminology that is used in the real world.
- **Finding 5.** No ability to seek in the video player. **Recommendation:** Provide more video playback control and allow users to click on the seekbar to jump to specific sections within a video.
- **Finding 6.** Interactive web components (buttons, links) are not styled consistently. Non-clickable components are styled with underlines and shapes that look like buttons. **Recommendation:** Choose standard stylings for links and buttons and use them consistently throughout the courses.
- **Finding 7.** Space bar takes you to the next video instead of pausing and playing a video. **Recommendation:** Make sure that shortcut keys like the space bar follow general standards in video players.
- **Finding 8.** When you click on a module that you have already taken, the system asks if you would like to start over. **Recommendation:** This is good usability practice.
- **Finding 9.** There is no indication on what you are clicking on in the Precision Training course. **Recommendation:** Consider having a hover feature to indicate specific sections of the quiz that are clickable.
- **Finding 10.** There is no option to auto-play videos. **Recommendation:** Add an option to allow users to turn on auto-play of videos. This will give users control and not require them to click on the next button continuously.
- **Finding 11.** There is information overload at the top of the page of the course modules page. **Recommendation:** Reduce the amount of text to show only relevant information and structure/organize it using visual styles to make the text more readable.
- **Finding 12.** When you click on a bad link, the error screen is clear and has a link to go back to where you came from. **Recommendation:** This is good usability practice.

#### Introduction

Praktio (praktio.com) is an online learning platform to teach the fundamentals of contracts mostly targeted to law students and junior law professionals. Professor Michael Bloom from the University of Michigan Law School has developed and designed the interactive learning courses with the concept that offering students an opportunity to "make mistakes" and learn from them will help to solidify their grasp of contract fundamentals quickly and effectively. Praktio currently offers two courses: Contract Fundamentals and Precision Training. The courses consist of videos, visual accompaniments, downloadable contract materials, and interactive quizzes. The course, Contract Fundamentals, teaches about the structure of contracts. Precision Training helps students fine-tune their precision in proof reading of contracts to quickly identify errors (ex. typos).

Through heuristics evaluation, we hope to provide insights on how to improve the usability of Praktio's courses and in doing so, improve the learning experience for students so that the delivery of course material is effective. In our study, we hope to answer the following questions:

- · What heuristics are being violated? How are they violated and with what severity?
- · What recommendations can we give for each violation?
- What heuristics are being adhered to?

Heuristics evaluations are a cheap, fast and easy-to-use method that can identify usability issues in a user interface. We hope to identify some critical issues, provide some useful recommendations and also share some good findings where Praktio is doing well.

#### Methods

#### Scope of the Evaluation

In the initial meeting to decide on the methods of evaluation, we determined that the scope of the evaluation would include both Contract courses on Praktio as well as the functionality of the main landing page of the site. We further chose to establish specific tasks within the courses that we would complete:

- · Complete both courses including all videos and exercises
- Evaluate the Course Module listing page
- Evaluate the landing page for the Praktio courses

#### **Heuristics Used**

For this evaluation, we used the heuristics developed by Jakob Nielsen (1994) in the chapter "Heuristic Evaluation" in *Usability Inspection Methods*. Additional titles were

added to the heuristics for clarification from "6 Tips for a Great Flex UX: Part 5" (Neil, n.d.):

- 1. FEEDBACK: Visibility of system status
- 2. METAPHOR: Match between system and the real world
- 3. NAVIGATION: User control and freedom
- 4. CONSISTENCY: Consistency and standards
- 5. PREVENTION: Error prevention
- 6. MEMORY: Recognition rather than recall
- 7. EFFICIENCY: Flexibility and efficiency of use
- 8. DESIGN: Aesthetic and minimalist design
- 9. RECOVERY: Help users recognize, diagnose, and recover from errors
- 10. HELP: Help and documentation

#### **Individual Heuristic Evaluations**

To begin the evaluation, each member of the team conducted an individual heuristic evaluation of the Praktio courses site. This involved taking multiple passes through the site to determine where there were issues. The issues were then categorized by the heuristic from the list above that was violated and the severity of the violation (see Appendix A).

Severity was judged based on a five-point rating scale taken from Nielsen's "Heuristic Evaluation" chapter, Table 2.3 (1994):

- 0. I don't agree that this is a usability problem at all
- 1. Cosmetic problem only need not be fixed unless extra time is available on project
- 2. Minor usability problem fixing this should be given low priority
- 3. Major usability problem important to fix, so should be given high priority
- 4. Usability catastrophe imperative to fix this before product can be released

#### **Group Debrief and Consolidation of Results**

Once each team member completed their individual evaluation, we met to consolidate the results of our evaluations. To begin, we created a list of the heuristics and each team member took turns listing the issues that they found that violated that particular heuristic. During this process team members helped to re-evaluate the heuristic violated by some of the issues, which resulted in some issues re-categorized to a different heuristic.

Once the list of issues was complete (see Appendix B), the team assessed the list to determine which issues were the most important. As we reviewed the list, there were some issues where the team could not come to a consensus. We decided to mark the issues where there was total agreement as yellow to indicate primary importance. Issues where there was not a consensus were marked blue to indicate

secondary importance. These would be re-evaluated after we had completed a first run at the list if we felt additional items were necessary.

After the initial evaluation of the list, we had 12 items of primary importance. Each item was given a severity rating that was agreed upon by the team. The final list included two items that were given a severity of 0, that we felt were things done well by the Praktio system and were important enough to include as "good examples."

## **Findings and Recommendations**

#### **Summary Results**

Through our heuristic evaluation of the Praktio courses, we came across some instances where Praktio observed Nielsen's heuristics and also some instances where it violated them. Instances where Praktio obeyed the heuristics were, asking a user if he/she wants to start over a previously completed module (Error prevention) and giving a clear error message and also a way to go back to the previous page(Help users recognize, diagnose and recover from errors). But, there were also some issues in the system where certain heuristics were violated. The heuristics that were violated in the system are: Visibility of System Status, Match between system and real world, User control and freedom, Consistency and standards, Error prevention, Flexibility and Efficiency of use, Aesthetic and minimalist design, and Help users recognize, diagnose and recover from errors.

#### **Key Findings**

**Finding 1:** The total duration/time remaining is not displayed for a video.

Severity: 3/4

Heuristic Violated: *Visibility of system status* 

The videos in both the courses in Praktio do not have the total duration and remaining time displayed. This is a violation of Nielsen's first heuristic, "Visibility of System Status". There is not feedback from the system about the status of the video apart from the indication that some part of the video is over. This is not enough amount of feedback for the user.



Fig: No indication of total duration/remaining time for video

**Recommendation:** The total time and remaining time for a video should be displayed as shown in the image below.

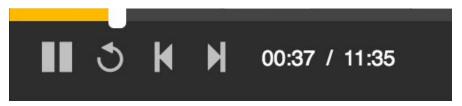


Fig: Total time/remaining time displayed for a video [Lynda]

Finding 2: Absence of Progress bar within module

Severity: 3/4

Heuristic Violated: *Visibility of system status* 

In Praktio courses, there is no progress bar to help indicate, for instance, how many videos are left within a particular module/section. This violates the "Visibility of System Status" since it does not tell the user about the progress made within the course module.

**Recommendation:** There should be a progress bar indicating how much the user has progressed within a module. For example like the one shown below which indicates the number of questions left in the lesson in Duolingo.

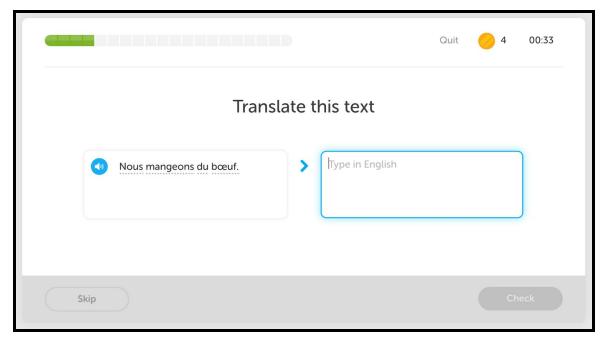


Fig: A progress bar indicating the number of questions left in the lesson [Duolingo].

**Finding 3:** Quiz results and attempts are not clear and understandable

Severity: 3/4

Heuristic Violated: *Visibility of system status* 

There are a number of places in both courses in Praktio, where the quiz results are not clear or the number of attempts left are not displayed. There is no feedback for number of attempts on quiz in the Contract Fundamentals course. The "Total Score" for the exercises is ambiguous because you don't know what it refers to. There is no tracking of the number of answers a user has gotten wrong in Precision Training. Also, in Precision Training, there is no prominent feedback to signal that the user has used up one of their attempts (number of clicks) in the exercise. All these issues violate the "Visibility of System Status" heuristic since they are all related to not receiving feedback either for the number of attempts or the number of questions answered, or number of clicks.

**Recommendation:** The exercise instructions/slide should clearly indicate the number of attempts allowed in Contract Fundamentals. In Precision Training, there should be a progress indicator showing number of questions answered and number of questions that were right/wrong. The course exercise should also alert the user about the number of clicks left to be able to answer a question. This way the user gets proper feedback about the status of the system at each stage and that makes it user for him/her to use the system.

**Finding 4:** The language in the course does not match terminology used in law Severity: 3/4

Heuristic Violated: *Match between system and the real world* 

The Disclaimer says that the language in the course does not match terminology used in law.

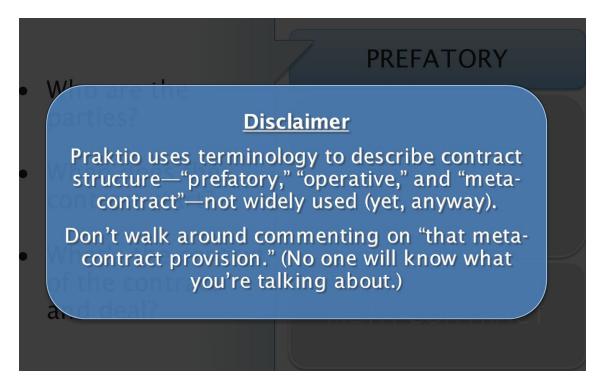


Fig: Disclaimer that appears before the Contract Fundamental course starts

But, the terminology used in the course should match with the actual terminology used by practicing lawyers because currently it violates the "Match between system and real world" heuristic. This was a concern raised in one of our user interviews also. One of the interviewee was a lawyer working at a law firm and he had mentioned that the terminology does not match the real world terminology. And he also said that there were other lawyers in the firm who complained about the same issue. The terminology being different might hinder their ability to relate to and understand the course material.

**Recommendation:** The terms and language used in the course material should match those used in the real world by practicing lawyers. This would make the course material more understandable for the users.

**Finding 5:** Cannot navigate video using the progress bar in the video player.

Severity: 3/4

Heuristic Violated: *User control and freedom* 

The video player in both courses in Praktio does not allow users to navigate forward or backward in the video. This leads to a lack of user control and freedom over the system and hampers the usability of the system. Particularly, it is very important to have allow a user to rewind the video since there are instances when a user misses a part or does not completely understand a part in the video and wants to re-visit it.

**Recommendation:** The video player should have an interactive progress bar in order to provide better user control over the system. A pop up displaying the current time on hovering over the progress bar is a good feedback mechanism and helps user better navigate to the desired point in the video.



Fig: The progress bar on YouTube allows a user to easily navigate to a desired point in the video.

### Finding 6: Consistency and Standards in Buttons and Links

Severity: 3/4

Heuristic Violated: *Consistency and standards* 

Links are styled differently on the course detail page, and differently within the courses. Additionally, 'Exercises PDF' is a good example of link text, because it warns the user that clicking on it will take the user to an external PDF. However, the other link to a PDF, 'Precision Training Checklist' does not do this.

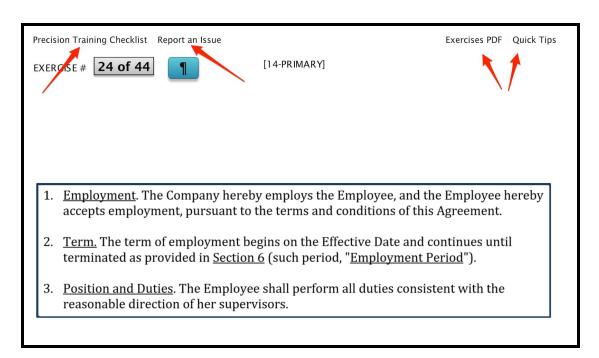


Fig: Links within the course do not follow standards that indicate they can be interacted with (highlighting in a different colour/underlining).

Fig: Links on the Course Details page are styled in a different font colour to set them apart from regular text.

Additionally, the "Total Score" and "Clicks Left" values look like buttons.



Fig: "360" and "2" look a lot like buttons that may mislead the user.

**Finding 7:** The space bar takes you to the next video instead of pausing the video.

Severity: 2/4

Heuristic Violated: *Consistency and standards* 

When the user presses the spacebar on his/her keyboard, it takes him/her to the next video, instead of pausing the video. Pressing the spacebar to pause a video is a standard over all video players. Users have got used to this standard and hence it is universally used for the function of pausing a video. This issue violates the "Consistency and Standards" heuristic and could lead to user dissatisfaction.

**Recommendation:** Standards such as "pressing the spacebar to pause" should be followed in the video player in Praktio. It would improve the usability of the site because the site will function according to what the user expects it to function when he/she does an action.

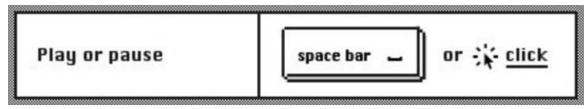


Fig: Wistia Player allows the user to pause using their space bar

**Finding 8:** System asks whether to Start over

Severity: 0/4

Heuristic Observed: *Error Prevention* 

When you click on a module that you have already completed, the system informs you that you have completed this module previously. And asks if you would like to still Start Over with the module. The system prevents a user from doing the error of going over a module he/she has already finished and might not want to go through.

And it also gives the user an option of starting over if he/she wants to re-visit a previously visited module.



Fig: System providing a warning and asking the user if he/she wants to start over

**Finding 9:** No indication of what user is clicking on

Severity: 2/4

Heuristic Violated: *Error Prevention* 

In the Precision Training course of Praktio, the exercise in which you need to find the error in the contract does not clearly indicate where the user needs to click or how precise they need to be while clicking. For example, in the figure below, I clicked on the white space just above the space that is marked in red, which is essentially the same white space, but the exercise needed me to precisely click on the space within the boundary of the rectangle. This issue was also pointed out by a user in the user interviews we conducted. The user complained that he knew where the mistake in the contract was, but because he did not click where the system wanted him to, it was considered as an incorrect answer. The user could get frustrated in such situations.

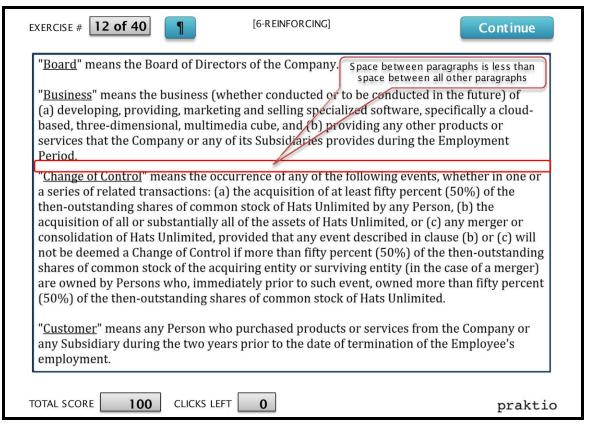


Fig: Indicating the correct answer for a question in Precision Training Exercises

**Recommendation:** Provide some indication of possible targets, perhaps by highlighting targets within bounded rectangles, when a user hovers over them. This would prevent users from making mistakes just because they did not click on exactly the spot that the system wanted them to.

**Finding 10:** Absence of auto-play option for videos

Severity: 2/4

Heuristic Violated: *Flexibility and efficiency of use* 

When one video gets over, and the user wants to move to the next video, he/she has to click the next button every time. Having to click the "Next" button multiple number of times irritates the user, which was one of our findings from the user interviews. It reduces the efficiency of use of the system.

**Recommendation:** There should be an option to set the videos on "autoplay" so that if a user wishes to watch them in continuation without having to click the "Next" button, he/she should be able to do so.

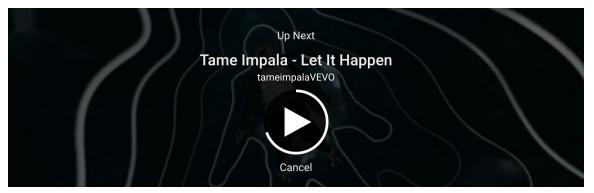


Fig: YouTube starts a countdown to a new video after one gets over. If the user does not intervene before the timer runs out, it proceeds to the next video.

**Finding 11:** Information overload at the top of the page on the modules screen.

Severity: 2/4

Heuristic Violated: *Aesthetic and minimalist design* 

There is a lot of information on top of the modules page in a course. This violates the "Aesthetic and minimalist design" heuristic, since it causes information overload. Jacob Nielsen (n.d.) writes about how excess information could cause a problem, he says "Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility." Therefore, it is important to avoid having so much text on one page.

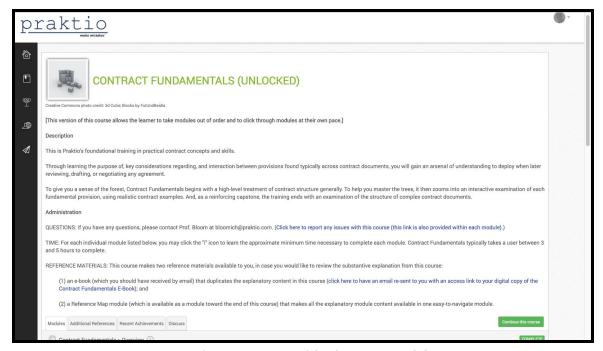


Fig: Excess information on top of the the course modules page

**Recommendation:** The text on the top of the page should be limited to most important content. The rest of the content could be either put in another tab/page if it still needs to remain or could be completely removed.

**Finding 12:** When you click on a bad link, the error screen is clear and it has a link to go back to where you came from.

Severity: 0/4

Heuristic Observed: *Help users recognize, diagnose, and recover from errors* 

If a user clicks on a broken or bad link, the error screen that comes up clearly mentions what happened and also provides a link for the user to go back to the previous page. The system helps the user recognize the error and also tells him/her how to recover from it.



Fig: Error message displayed to users when they click on a bad link.

#### **Discussion**

While we believe that our evaluation produced several extremely useful findings, there are a few limitations that need to be kept in mind while considering these findings. One of our findings with a high severity rating discusses a mismatch between the language being used in the content of the course, and actual terminology used in law, thus violating the heuristic of 'Metaphor: Match between system and the real world'. Most of the examples that spoke about similar issues in the instructional slides seemed to focus on the language used by interface elements themselves, rather than the content being displayed via the interface. However, since Praktio is an instructional tool, we believe that the content plays too important a role in its effectiveness to be excluded from this evaluation, especially since we also heard similar views expressed by interviewees.

It is also important to note that our findings are based on the opinions and perspectives of individuals who do not closely match the intended target audience

for Praktio: those working in and around the field of transactional law, either in an academic, or professional capacity. While we have done our utmost to ensure that we carried out these evaluations while keeping the intended users in mind (based on the understanding of them that we built using our research, interviews and surveys) it still bears mentioning that the mismatch exists. Our lack of legal experience is the most salient aspect of this mismatch between us as evaluators and the intended audience, but other factors, such as demographics (for example, some of the intended users are lawyers in international firms for whom English is not a first language).

We would highly recommend heuristic evaluations in the future that, if possible, are conducted by multiple evaluators who are more experienced with experience in transactional law. This would help not confirm the validity of our findings for the intended target audience, but also potentially uncover issues that our familiarity with information technology may have caused us to miss. We hope to cover at least some of these potential gaps during the upcoming usability tests.

#### Conclusion

The heuristic evaluation of the Praktio course site revealed that there were some issues in the design that are important to be fixed to enhance the user's experience. Some of the issues that violated heuristics were issues that had been determined in previous evaluations of the site. Of the issues of primary importance that we determined, the following changes should be made for the next versions of the courses:

- 1. The total time and remaining time for a video should be displayed for videos.
- 2. There should be a progress bar indicating how much the user has progressed within a module.
- 3. In Precision Training, there should be a progress indicator showing number of questions answered and number of questions that were right/wrong. The course exercise should also alert the user about the number of clicks left to answer a question.
- 4. The terms and language used in the course material should match those used in the field of law.
- 5. The video player should have a seekbar in order to provide better user control over the system.
- 6. Choose standard stylings for links and buttons and use them consistently throughout the courses.

Implementing these changes should significantly enhance the learning experience of the user and lead to a better educational outcome.

# References

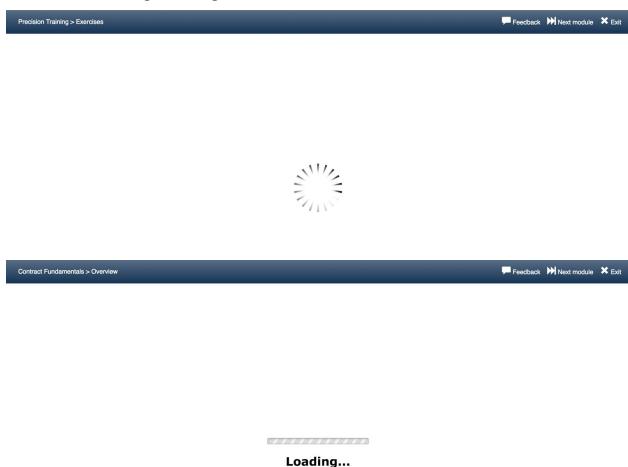
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# **Appendix A: Individual Evaluation Notes**

#### **Rahul Sawn**

There are various different animations to indicating loading.

- Violates "Consistency and standards" (H4)
- Severity: 1, cosmetic problem
- Fix: Pick a single loading animation for entire interface



Links are not styled consistently.

- Violates "Consistency and standards" (H4)
- Severity: 2, low priority
- Fix: Make sure all links are styled to look like they can be interacted with, using highlighting and underlining.

Some links lead to PDFs in a separate tab. While some of these have the word 'PDF' next to them to communicate to the user, what to expect, some do not. This may lead to confusion when the user is taken the another page without expect it.

- Violates "Consistency and standards" (H4)
- Severity: 2, low priority
- Fix: Make sure all external links give some warning to the user that they will be taken to an external page..

#### Buttons are not styled consistently.

- Violates "Consistency and standards" (H4)
- Severity: 1, cosmetic problem
- Fix: Make sure all buttons are styled in a similar manner.

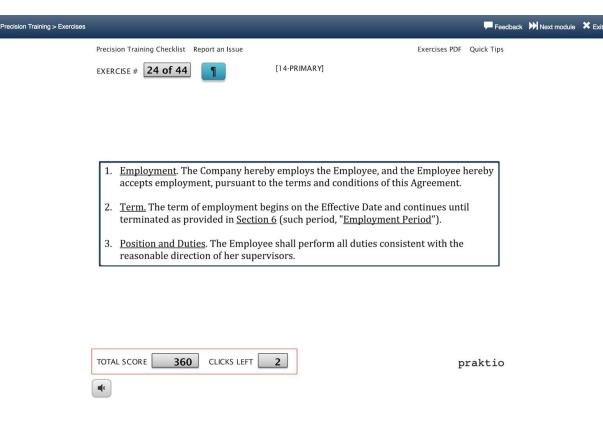
#### Method of dismissing/interacting with pop-ups is not consistent.

- Violates "Consistency and standards" (H4)
- Severity: 2, low priority
- Fix: Make sure that all pop-ups can be interacted with in a similar manner, either only by clicking a button within them or only by clicking on any part of the pop-up.



#### 'TOTAL SCORE' and 'CLICKS LEFT' values look like buttons.

- Violates "Consistency and standards" (H4)
- Severity: 2, low priority
- Fix: Make sure all non-clickable information elements are styled as such.



"Continue" button after 2 wrong responses should be called "Next Question".

- Violates "Metaphor" (H2)
- Severity: 2, low priority
- Fix: Pick a single loading animation for entire interface

Ineffective use of feedback on first click attempt in Precision Training.

- Violates "Feedback" (H1)
- Severity: 2, low priority
- Fix: When decreasing the value of 'CLICKS LEFT', use an animation that draws attention to the fact that the user has lost an attempt.

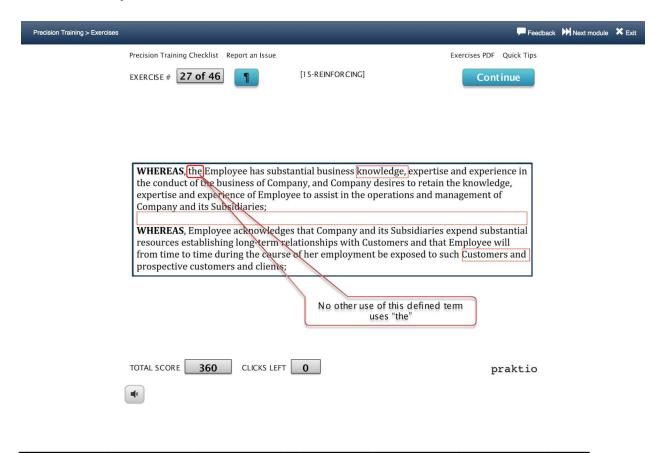
Can't use keyboard navigation to navigate within lessons/modules, or proceed to the next to the next lesson, or module.

- Violates "Efficiency" (H7)
- Severity: 2, low priority
- Fix: Allow user to proceed to the next video within a module, or the next module, via a simple keyboard shortcut.

Unclear where one needs to click, or how precise they need to be when it comes to exercises in Precision Training.

- Violates "Prevention" (H5)
- Severity: 2, low priority
- Fix: Provide some indication of possible targets, perhaps by highlighting targets within bounded rectangles, when a user hovers over them.

[Note: This may make some of the exercises easier.]



#### **Dune Nguyen**

#### 1. Visibility of system status

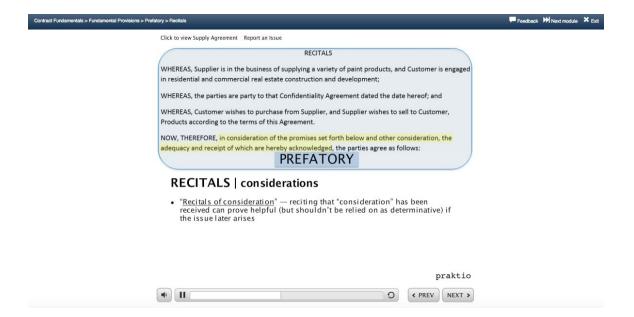
- Keep users informed of system status through appropriate feedback in adequate amount of time
- Give options that are available

# a. Navigation is not clear about where the user is in within the module or how to get to that point directly.

The top navigation breadcrumbs stays the same as the videos change "Contract Fundamentals > Fundamental Provisions > Prefactory > Recitals" It also does not provide information on how much longer it is.

#### Severity: 1/4

**Fix:** Make the navigation breadcrumbs clickable and more accurately reflect the page the user is on



### b. Does not give feedback on number of attempts on quizzes

Click to view Supply Agreement Report an Issue

Severity: 2/4

**Fix:** Add number of attempts left for the quiz in the pop-up window and on the quiz question page

Which of the following would be appropriate to address in Incorrect That is incorrect. Please try again. represent ity limits Try Again background effective date promises story governing law anti-assignment parties praktio ◆ PREV NEXT > SUBMIT

# c. Is not clear what is clickable on this exercise. There is no hover feedback. Severity: 2/4

**Fix:** Add a feature to show indicators when users over their mouse hover over sections of the quiz so users are given enough feedback

AGREEME	NT TO PURCHASE A DOM	MAIN NAME	
This Purchase Agreement ("Agre Cats Corporation, a Delaware corlimited liability company ("Buyename, threecats.com (the "Propedollars (\$5,000) (the "Amount").  Upon Seller's receipt of the Amount.  1. Relinquish all rights (included).  2. Transfer the Entirety of the Amount ("Entirety").  Upon Seller's receipt of the Amount ("Entirety").  The Entirety ("Entirety").  Three Cats Corporation	poration ("Seller"), and H r"), legally transfers sole of rty"), from Seller to Buye unt, Seller shall: uding all-intellectual prop ne Property to Buyer on Ju unt, Buyer shall obtain all	Hats Unlimited LLC, a Delaw ownership of the internet dor in exchange for five-thous.  Term capitalized as though defined but not defined but not defined betty rights) in the Property, une 13, 2014.  I rights (including all intelled the control of the control o	are omain and ugh d

# d. Does not keep track of how many quizzes overall you got right or wrong. Total score seems ambiguous.

Severity: 1/4

**Fix:** Update the "Total Score" to be more reflective indicator of how well the student is doing

EXERCISE # 17 of 42

[9-REINFORCING]

(c) The Company shall indemnify and hold harmless the Employee against all claims arising out of the Employee's actions or omissions occurring during the Employee's employment with the Company to the fullest extent required (A) by the Company's Certificate of Incorporation and Bylaws or (B) under the Nevada General Corporation Law, as each may be amended from time to time. The Company shall maintain a Directors and Officers liability insurance policy ("D&O Coverage") covering the Employee to the same extent as the Company provides such coverage for its other executive officers and directors. The Company shall make such policy available to the Employee within 30 days of the commencement of her employment. The aforesaid indemnification and hold harmless obligations include any costs, expenses (including attorneys' fees), judgments, fines, losses, claims, damages and liabilities incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, by reason of the fact that the Employee is or was a director, officer, employee or agent of the Company or any Subsidiary, whether asserted or claimed prior to, at or after the date of the Employee's termination of employment. This provision shall survive the termination or expiration of this Agreement, and shall require the Company to maintain Directors and Officers coverage on behalf of the Employee, for a period of two (2) years after such termination or expiration.



# e. It is not obvious when you have clicked somewhere and a click has been registered and decremented.

Severity: 1/4

**Fix:** Make the "Clicks Left" to be more prominent. There could be a pop up window or a sound to indicate that something has happened.



# f. "100% is correct" is actually incorrect, as I got questions wrong. Feedback should reflect the correct exercise quiz results.

Severity: 1/4

**Fix:** Make the score for Precision Training quizzes to be correct and reflective of the user's actual score.



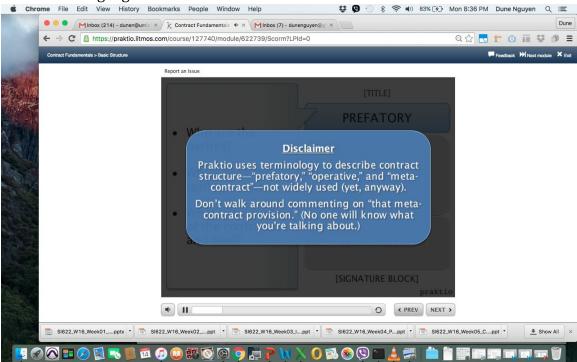
#### 2. Match between system and the real world

- Speak the users' language
- Break down tasks that are familiar to the user
- Use effective metaphors

### a. Need to match users' language

Severity: 4/4

**Fix:** Make sure that the content of the course uses the same terminology and language that is used in the real world



#### 3. User control and freedom

- Support un-do and re-do
- Allow users to do things in the order that they want
- Can users pause or cancel long running tests with impunity
- a. Cannot go back to the last module that was available before clicking on "Exit". Using the back button starts the previous module from the very beginning.

Severity: 1/4

**Fix:** Provide a functional back button

Fix: Provide the users with a back button to see the previous video

# b. At the end of a module, there is no back button to go back to the last video that was watched.

Severity: 1/4

**Fix:** Provide a back button to see the last video

This module has ended.

To exit, click "Exit" in the upper-right comer of the top bar.

To proceed to the next module, click "Next module."

praktio

c. Used the back button to see the previous module, but wanted to go back forwards, but got stuck at the same quiz I had already taken. No way to skip it as the next button is grayed out.

#### Cannot redo this quiz

Severity:1/4

**Fix:** Allow users a way to re-do a quiz or more feedback about no more chances to take the quiz

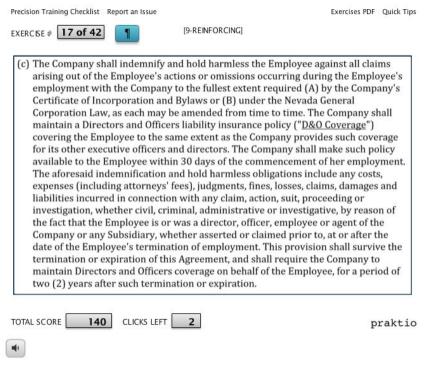
Which of the following should you generally consider specifying in a <u>warranties</u> section?



# d. Not able to go to previous or next questions. Forced to complete the exercise. No way to skip and go back to that specific question.

Severity: 1/4

**Fix:** Provide some flexibility for user to be able to navigate back and forwards from quiz



- 4. Consistency and standards
  - System complies with standards (universal, platform, app category)
  - System internally consistent
    - a. Seekbar is not clickable and has no time duration or typical control features like skip forward or backwards

Severity: 4/4

**Fix:** Provide a clickable seekbar for users to jump to specific sections in videos



b. This looks like a Navigation breadcrumb, but is not clickable Severity: 2/4

Fix: Make the breadcrumbs clickable

Contract Fundamentals > Basic Structure

c. This module does not follow the same format as prior videos that stop and require user to click on next. Instead, it auto-plays to the next video and there is no prev button to see this video after the subsequent video starts.

Severity: 1/4

**Fix:** Make the video behavior consistent throughout the course in regards to auto-play



d. Continue button is at the top right when users are used to seeing a next button at the bottom right.

Severity: 1/4

Fix: Place the continue and next button in consistent locations

EXERCISE # 3 of 35



[2-PRIMARY]

Continue

#### AGREEMENT TO PURCHASE A DOMAIN NAME

This Purchase Agreement ("Agreement"), made this 12th day of June, 2014, between Three Cats Corporation, a Delaware corporation ("Seller"), and Hats Unlimited LLC, a Delaware limited liability company ("Buyer"), legally transfers sole ownership of the internet domain name, threecats.com (the "Property"), from Seller to Buyer in exchange for five-thousand dollars (\$5,000) (the "Amount").

Upon Seller's receipt of the Amount, Seller shall:

Term capitalized as though defined but not defined

- 1. Relinquish all rights (including all intellectual property rights) in the Property; and
- 2. Transfer the Entirety of the Property to Buyer on June 13, 2014.

Upon Seller's receipt of the Amount, Buyer shall obtain all rights (including all intellectual property rights) in the Property.

We, the undersigned, agree to this legally binding Agreement.

By	By	
Three Cats Corporation	Hats Unlimited LLC	

TOTAL SCORE	0

CLICKS LEFT 0

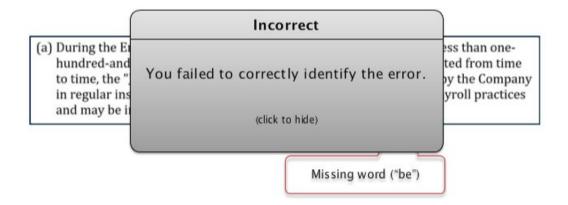
praktio

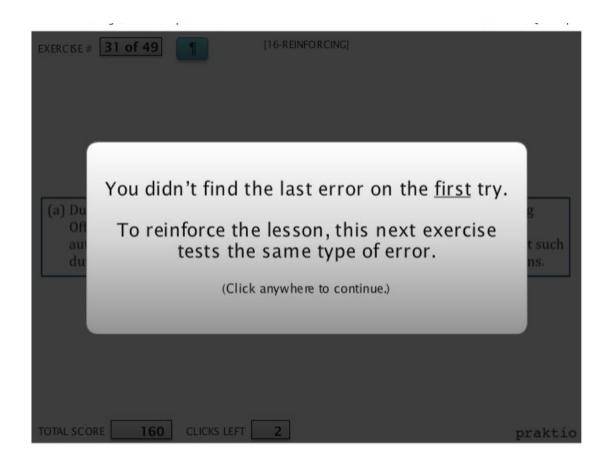
1

e. To hide this pop up, you need to click on hide, but to hide the pop up below, you need to click anywhere. Confusing for the reason in different behavior.

Severity: 1/4

**Fix:** Make the popup requests to be consistent





f. These icons are not typical standard icons and require the user to hover over each one. It also relies on memory load to remember which one is which or slows down the user to wait to hover over each icon to remember what each one means.

Severity: 1/4

Fix: Add appropriate descriptive label below each icon

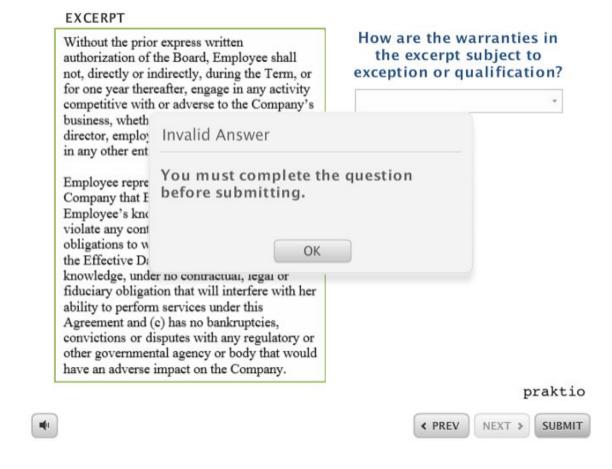


#### 5. Error prevention

- Eliminate error prone conditions
- Present users with confirmation before committing action
- Provide guidance to prevent errors
  - a. Submit button should be grayed out until user selects an answer instead of popping up this error message

Severity: 1/4

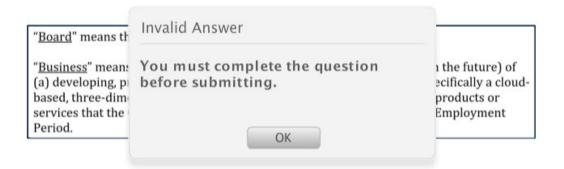
**Fix:** Have a more clear indicator of call to action and/or gray out the submit button until user selects a choice



b. Unsure how I got this error message randomly clicking on the screen.

Severity: 1/4

**Fix:** Do more testing on this quiz



#### 6. Recognition rather than recall

• Minimize user memory load

#### 7. Flexibility and efficiency of use

- Allow users to perform efficient frequent actions
- Keyboard shortcuts, macros
- a. Pressing the space bar when the video seekbar is selected with mouse pauses and plays the video as expected. However, if the seekbar was not selected, somehow using the space bar jumps to the next video.

Severity: 3/4

**Fix:** Space bar is standard to use for pause and play of videos and accidentally pressing space bar and it skipping to the next video can be bothersome. Make sure that space bar is being assigned appropriate actions.

#### 8. Aesthetic and minimalist design

• Dialogues should not contain information that is irrelevant or rarely needed

#### a. Information overload

Severity: 1/4

**Fix:** Instead of putting all this information on one screen, try splitting into a slideshow or video.

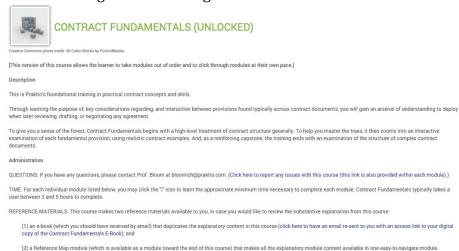
Exercises PDF Quick Tips



b. Too much text - it's hard to focus on relevant information and information that is rarely needed

Severity: 1/4

Fix: Make sure to show most relevant information here. Trv structuring and formatting the text so that it's not so overwhelming.



#### c. Multiple next buttons

#### Severity: 1/4

Fix: Too many calls to action and "Next" buttons.



### 9. Help users recognize, diagnose, and recover from errors

- Express errors in plain language
- Give instructions on how to avoid and recover

#### 10. Help and documentation

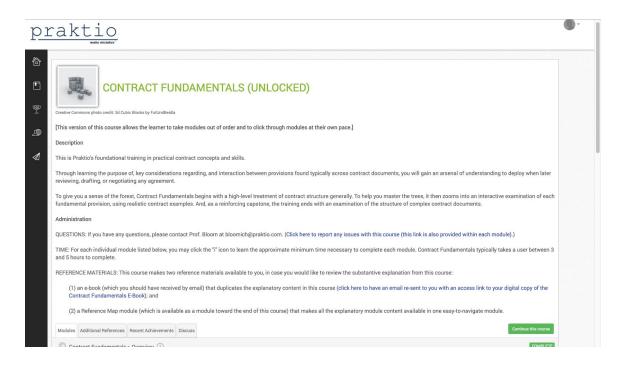
- Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large
  - a. No help documentation

Severity: 1/4

Fix: Create some help documentation for users.

#### **Namita Nisal**

- Too much text on the course page.
  - O Heuristic Violated: *Aesthetic and Minimalist Design*
  - O Severity: 2
  - O Fix: Put only relevant content there



- When user is on Modules tab, the Nav bar gives feedback
  - O Heuristic observed: Visibility of System Status
  - O Severity: 0
- When you click on a module that you have already taken, the system asks if you would like to Start Over
  - o Heuristic observed: Error Prevention
  - Severity: 0



- The videos do not display total duration and time remaining
  - Heuristic Violated: Visibility of System Status
  - o Severity: 3
  - Fix: Display total time and remaining time
- Progress within course/module on video page is absent
  - Heuristic Violated: Visibility of System status
  - Severity: 2
  - Fix: Add a progress bar which shows the user's progress within the module
- The disclaimer in Contract Fundamentals says the terminology may not be widely used
  - Heuristic Violated: Match between system and real world
  - o Severity: 3

• Fix: Use terminology that current law practitioners use

# **PREFATORY**

# Disclaimer

Praktio uses terminology to describe contract structure—"prefatory," "operative," and "metacontract"—not widely used (yet, anyway).

Don't walk around commenting on "that metacontract provision." (No one will know what you're talking about.)

- Some videos have next and previous buttons below them, others only have next button
  - Heuristic Violated: Consistency and Standards
  - o Severity: 2
  - Fix: Keep the buttons/options below videos consistent
- In the Contract Fundamentals exercises, the feedback that the is changing is not evident
  - Heuristic Violated: Visibility of System Status
  - o Severity: 2
  - Fix: Make the question number more prominent, or put a progress bar indicating number of questions completed
- Absence of Seekbar
  - Heuristic Violated: User control and Freedom
  - o Severity: 3
  - Fix: Add a seekbar for every video so that users can play a part of the video again if they miss something they feel was important
- No visual feedback that the video has ended
  - Heuristic Violated: Visibility of System Status
  - o Severity: 2
  - Fix: Some sort of feedback that the video is ended, for example title and thumbnail of the upcoming video

#### **Stephanie Balagot**

- > Too much text at top of Module page.
  - Violates "Aesthetic and minimalist design" (H8)
  - Severity: 2, minor usability problem
  - o Fix: Limit text at the top of the screen to most important content.
- > No way to seek in the video playback.
  - Violates "User control and freedom" (H3)
  - Severity: 3, major usability problem, important fix
  - Fix: Add video playback controls to the video player such as having the ability to seek within the video.
- > There are no hover titles for the video player buttons.
  - Violates "User control and freedom" (H3)
  - Severity: 2, minor usability problem
  - Fix: Add hover titles to buttons to improve usability.
- > The restart button resembles an instant replay button.
  - Violates "Flexibility and efficiency of use" (H7)
  - Severity: 2, minor usability problem
  - Fix: Add a hover title to eliminate confusion over the button type
- > Report an Issue looks like text instead of a link.
  - Violates "Help and documentation" (H10)
  - Severity: 1, cosmetic problem
  - Fix: Underline the text or make the link a button to clearly indicate that it is a link.
- There is no option for autoplay.
  - Violates "Flexibility and efficiency of use" (H7)
  - Severity: 3, major usability problem, important fix
  - Fix: Add autoplay feature.
- The Next button becomes active after the final video module. When pressed, it leads to a page that says press Next Module.
  - Violates "Flexibility and efficiency of use" (H7)
  - o Severity: 2, minor usability problem
  - Fix: Remove the activation of the Next button at the end of the final video in a module and direct users to press the Next Module button.
- > There is no display to show how much time is left on a video.
  - Violates "Visibility of system status" (H1)
  - Severity: 3, major usability problem, important fix
  - Fix: Update the video playback controls to include a timer.
- > Some of the modules briefly show the Next Module screen at the end of the section then redirects to a screen that says "The content has ended. You may close this window." Instead of directing the user to press the Next Module button.
  - Violates "Flexibility and efficiency of use" (H7)
  - Severity: 2, minor usability problem

- Fix: Remove this screen from the module progression.
- > The shades of red and green in visuals may be difficult for someone with color-blindness.
  - Violates "Aesthetic and minimalist design" (H8)
  - Severity: 3, major usability problem, important fix
  - Fix: Change the color scheme of the visuals to one that is more friendly to color-blindness.
- ➤ On the Modules page, the cursor changes to a hand pointer symbol when in a module section, but you can only select a module to play by clicking on the title, not the space next to it.
  - Violates "Visibility of system status" (H1)
  - Severity: 2, minor usability problem
  - Fix: Ensure that the cursor only changes when on the text for the Module to be selected.

# **Appendix B: Group Consolidation**

Yellow highlighting indicates the items determined to be of primary importance. Blue highlighting indicates the items determined to be of secondary importance.

### 1.FEEDBACK: Visibility of system status

- No display to show time left in video. Severity: 3/4
- On the modules page, when mouse hovers over individual module, the mouse turns to a hand, but is only clickable over the text portion
- Navigation is not clear where the user is within the module.
- There is no progress bar within the individual module (for instance, how many videos are left). Severity: 3/4
- Does not give feedback for number of attempts on quiz (CF). Severity: 3/4
  - The "Total Score" is ambiguous because you don't know what it refers to. There is no tracking of the number you have gotten wrong (PT).
  - In Precision Training, there is no prominent feedback to signal that the user has used up on of their attempts (number of clicks).
- There are no question numbers to indicate when a question has changed (CF).
- When the video ends, there is no indication that you need to press the Next button.
- No clear indicator of the difference between Home and Course Library.

#### 2.METAPHOR: Match between system and the real world

- After two wrong attempts for a question, the button label is "Continue." It should be "Next Ouestion".
- The icon on the Next Module button looks more like a Next Video button.
- The Disclaimer says that the language in the course may not match terminology used in law, but it should. Severity: 3/4

#### 3.NAVIGATION: User control and freedom

- Cannot go back to the last module that was available prior to clicking on Exit.
- No way to seek in the video player. Severity: 3/4
- You cannot redo a quiz within a module.

#### 4.CONSISTENCY: Consistency and standards

- There are no hover titles or labels for the video player buttons.
- There are two different indicators of materials loading.
- The links are not styled consistently. Severity: 3/4
  - External links should indicate that they are leading to an external page.
  - Buttons are not styled consistently.
  - The "Total Score" and "Clicks Left" values look like buttons.
  - Underlined text are styled like links

- Method of dismissing/interacting with pop-ups is not consistent.
- Some button names are not consistent with what they do.
- The restart button looks more like a instant replay button (for most video players).
- Some of the modules have a different end message screen than others.
- In the quiz, the Continue button is in the upper right hand corner of the screen instead of at the bottom right as most would expect (PT).
- The space bar takes you to the next video instead of pausing the video.
   Severity: 2/4

#### *5.PREVENTION: Error prevention*

- GOOD: When you click on a module that you have already taken, the system asks if you would like to Start Over. **Severity: 0/4**
- There is no indication on what you are clicking on in PT. Severity: 2/4
- 6.MEMORY: Recognition rather than recall

•

### 7.EFFICIENCY: Flexibility and efficiency of use

- There is not option for auto-play of the videos. Severity: 2/4
- The Next button in the video player becomes active after the last video, but when pressed leads you to a page that tells you to press the Next Module button.
- You cannot use the keyboard within the module to navigate.

#### 8.DESIGN: Aesthetic and minimalist design

- Information overload at the top of the page on the modules screen.
   Severity: 2/4
- Some screens use a lot of red and green, which would be difficult for a person that is colorblind.

#### 9.RECOVERY: Help users recognize, diagnose, and recover from errors

 GOOD: When you click on a bad link, the error screen is clear and it has a link to go back to where you came from. Severity: 0/4

#### 10.HELP: Help and documentation

• No Help documentation on the site.