Members:
Nicole Belbin
Carrie Moran
Anthony Townsend
Darryl Turner, Jr.
Jason Setzer
Table of Contents

Executive Summary ................................................................. 3
Introduction .......................................................... 3
Methodology ................................................................. 4
Limitations and Strengths .................................................. 5
Summary of Results .......................................................... 6
Major Problems ............................................................... 8
Design Recommendations ................................................ 11
Conclusion ........................................................................ 14
References ......................................................................... 16
Appendix A: Individual personas and scenarios .................. 17
Appendix B: Individual heuristic evaluations....................... 26
Appendix C: Individual academic honesty statements .......... 35
Executive Summary

In evaluating the ipl2.org site our team completed a persona/scenario based review and a team based review. This iterative process was very useful. With each review our team highlighted additional issues, further defined discovered issues, provided commentary on what was done well, and on what needed improvement. Through each step of the process we were able to peel the layers back in a well-defined template to quickly get to the heart of issues and identify strengths of the ipl2.org site.

As this project will show the ipl2.org site is doing several things well in addition to accomplishing the daunting task of organizing internet resources into a usable fashion. Alternatively this project will also show some of the areas the ip2.org site can work on. Team Two has collectively determined the items that need improvement, however the core foundation ipl2.org has laid out is sound. With this great foundation the ipl2.org site can be improved over time, however a significant level of effort is needed as our proposed solutions are not simple patches but significant changes to the organization and navigation of the site.

With a great overall foundation, the ipl2.org site is able to considerably assist students of all levels with research, homework, and even peaked curiosity of particular subject matter. Continuing to refine the raw foundation in a more and more finished and adaptable deliverable will allow ipl2.org to become the go to site for verified, trustworthy and usable sources in academia.

Introduction

Project Overview

The Heuristic Evaluation of the ipl2.org website focuses on assessing the major usability problems found within the ipl2 site. The focus of this assessment was to examine the ipl2 site from the perspective of potential users of the site. The assessment focused on five main sections of the ipl2 site and was carried out by a team of five graduate students.

The ipl2

The ipl2 was founded in 1995 and started as the Internet Public Library (IPL). Over the next fourteen years the site was redesigned several times, and new features and sections were constantly added. In 2009 the IPL merged with the Librarians’ Internet Index (LII) to form the ipl2 (ipl2.org). The ipl2’s Statement of Principles outlines its mission as being to “provide services and information which enhance the value of the Internet to its ever-expanding and varied community of users”, to “work to broaden, diversify, and educate that community”, and to “communicate its creators’ vision of the unique roles of library culture and traditions on the Internet” (ipl2.org).

The ipl2 is designed to cater to users of the Internet, and thus its potential user pool is limitless. The ipl2 has developed specific collections that target different user populations including sections “For Kids” and “For Teens”. Some of the ipl2’s most popular general collections include “U.S. Presidents”, “Stately Knowledge”, “Literary Criticism”, and “Research/Writing Guide”. The ipl2’s resource collections are a mix of ipl2 generated content, and links to ipl2 reviewed content from the greater Internet. Thus, users have multiple access points to information and can use the site for a variety of applications.

Goals

The goals of this evaluation of the ipl2 site were to address usability problems within the ipl2 site, and rank these problems based on severity. A secondary goal was to develop potential solutions to these
usability problems. Due to the size of the ipl2 site, each evaluator chose to focus on a different section of the site. The sections used in evaluation were "Newspapers and Magazines", "For Kids", "For Teens", "Stately Knowledge", and "U.S. Presidents".

**Methodology**

**Human Computer Interaction**

Human Computer Interaction (HCI) is "a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them" (Hewett, et al.). In more general terms, HCI studies the way that users interact with information systems. Of great concern to the field of HCI is ensuring the usability of systems. There are several ways to examine the usability of a system. For the purposes of this report, two methods were used. The first was the development of five unique personas and scenarios. The second was the use of heuristic evaluation.

**Personas & Scenarios**

The development of personas and scenarios are two separate tasks that combine to form a powerful tool in usability evaluation. A persona is the description of a fictional person who is a potential user of a system. Grudin and Pruitt (2002) discuss the detailed nature of personas with their statement “They have names, likenesses, clothes, occupations, families, friends, pets, possessions, and so forth. They have age, gender, ethnicity, educational achievement, and socioeconomic status. They have life stories, goals and tasks.” Thus, personas are richly detailed descriptions of potential users. These are often paired with scenarios, or detailed descriptions of the steps the persona takes to complete a task within the system.

According to Sharp, Rogers and Preece (2007), “A scenario is an ‘informal narrative description’ (Carroll, 2000). It describes human activities or tasks in a story that allows exploration and discussion of contexts, needs, and requirements” (p. 505). Therefore, a scenario is similarly to a persona in that it is a highly detailed narrative account. Personas can be paired with scenarios to give the fullest picture of a potential user of an information system. For our purposes, each team member developed a unique persona and scenario focusing on a task within one of the specified sections of the ipl2 site. Each team member’s persona and scenario can be found in Appendix A of this report. These personas and scenarios were then swapped amongst the team members. Each team member used their assigned persona and scenario in their heuristic evaluation of the ipl2.

**Heuristic Evaluation**

Heuristic evaluation (HE) is a usability inspection method typically used in situations where a quick, cheap, and easy evaluation of a user interface design is needed (Nielsen, 2005). Heuristic evaluations are typically carried about by groups of evaluators who may later come together to discuss and share their results. The evaluations are based on a set of ten usability heuristics or general principles for user interface design. These principles outline the common properties shared by usable interfaces. According to Nielsen (2005) “The output from using the heuristic evaluation method is a list of usability problems in the interface with references to those usability principles that were violated by the design in each case in the opinion of the evaluator.” This output from individual evaluators can then be compared
with output from other individual evaluators to develop a more comprehensive picture of the usability problems found within that interface.

A further component of the HE process is to rank the problems on a severity scale ranging from not a problem at all to a usability catastrophe which must be fixed immediately. This severity rating enhances the evaluation process by giving evaluators a concrete way to communicate the depth of the problem and its impact on usability. Although HE does not provide a structured way to develop solutions to usability problems, the depth of analysis often makes it easier to develop potential solutions.

Method

As previously stated, team members developed unique personas and scenarios for potential users of the five identified sections of the ipl2 site. Team members swapped personas and scenarios, and each team member performed the tasks outlined in the scenario from the perspective of their chosen persona. The team members carried out individual heuristic evaluations of the ipl2 site from the perspective of their chosen persona. The results of these heuristic evaluations were recorded in a table format listing the problem, the corresponding usability heuristic numbers, and a severity rating. Each team member’s individual heuristic evaluation can be found in Appendix B of this report.

Upon completion of the individual evaluations, the individual evaluations were shared amongst the team. The team reviewed each member’s heuristic evaluation and developed a list of the top usability problems found within the ipl2 site. The team met to discuss these problems in detail, including how the problems violated usability heuristics, the severity of each problem, and potential solutions to each of these problems. The results of this team discussion and evaluation are presented within this report.

Limitations

Combining several information gathering methods is the best way to discover the largest number of problems. Personas are only as good as the research put into them and scenarios are not meant to discover a full set of requirements (Sharp, Rogers, & Preece, 2007, p.506). Research-Based Web Design & Usability Guidelines states that projects need at least four different sources of information to be successful ("Design Process"). In addition, the more complex the site, the more likely it is that evaluators will miss a problem. Due to time constraints, it was impossible for our team to evaluate the entire ipl2 site. The five sections our team evaluated is a small sample of the information available on the ipl2’s site. Our team of five left us only one evaluator for each section. Nielsen (1992) found that evaluators discover about “75% of the total usability problems” (Sharp, Rogers, & Preece, 2007, p.688). According to Bailey (2001), HE results in some false alarms (Sharp, Rogers, & Preece, 2007, p.702). In order to minimize the chance of basis or missing a problem, our team focused on common problems we found across the different sections we evaluated.

Strengths

Although user involvement is important in order to discover users’ expectations, there is a considerable amount of cost associated with that method. One benefit of HE is the ability to reduce costs of user involvement in terms of organizing, managing, and controlling the test environment (Sharp, Rogers, & Preece, 2007). Many of the sections our team evaluated are geared toward children. There are many variables of working with children that are avoided by using appropriate personas and scenarios, such as varying levels of concentration (Bruckman, Bandlow, & Forte, 2007).
HEs can take place in as little as a day and heuristics can be tailored to each site’s purpose (Kalback, 2007). Different evaluation methods are beneficial during different phases of the development process and HE is best used to analyze and test a website that is fully functional (“Design process”). Although there is no set perfect number of personas, usability.gov suggests three to five, which is the number of personas used by our team to evaluate the site.

Summary of Results

The ipl2.org website has a lot of content to offer in a format that many can relate to. Its structure is similar to other types of popular sites on the Internet. The content and information found within the site is relevant to a wide audience, ranging from elementary school students to adults. The site provides information and resources that can benefit just about anyone. While the overall site is functional and free from many common errors, our team’s evaluation found some areas of concern that should be addressed. Each major section of the ipl2.org website was represented in our evaluation and therefore the findings can be considered a comprehensive view of the entire ipl2 site. General issues and concerns are stated below and the major findings will be explored in more detail in the sections to follow. We will also detail some of the positive observations that were made by the team.

Strong points

Overall the ipl2 website has many strong points that make the user experience painless and rather simple and easy to facilitate learning. This can be seen in the way the data is structured and organized in the sub-sections. A user can easily identify or find useful information. Navigation within the site is also straightforward in situations where a user would need assistance; links to applicable help information is found very easily. The site also has good immediate feedback. When a user clicks a link or does a search, a timely response is provided with the results of the user’s action. Below are some other comments taken from the heuristic evaluation reports.

Strong Design Feature Comments

1. “Alvin found the overall navigation of the site easy to use and not tedious like some other sites he has used in the past.”
2. “Jenny easily finds the "For Teens" button because it is prominently displayed on the ipl2’s main page. She knows the minimalist design, will help her students stay focused on their assignments and not get distracted by other links.”
3. “Emily’s mother is able to easily bring up the ipl2 site as the keyword has been properly indexed into the search engine Google. There is no complex website address or quirky names that can be misspelled. Emily’s mother is able to get her to the right site on the first try.”

Concerns

The top Heuristic categories were compiled in the table below to show where the general areas of issues were found on the ipl2.org website. This table is meant to serve as an indication of where the site is lacking in usability from the general user perspective. The table data represents only the team comments that were in regards to areas of concern. All other “no issue” comments that were in the individual user reports were omitted from the calculation. Overall, the focus areas for the site should be in the “Consistency and Standards” and “Match between system and the real world” Usability Heuristics. The ipl2.org website was found to have missed some proper labeling and the evaluators had difficulty
understanding the breakdown of sub-areas. Also, there was a lack of understanding for some of the area’s content and the audience it was implemented for. Each of the individual team member’s Heuristic Evaluations can be found in Appendix B.

<table>
<thead>
<tr>
<th>Heuristic Evaluation Team Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of Issues</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Usability Heuristic</th>
<th>Total by Usability Heuristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency and standards</td>
<td>12</td>
</tr>
<tr>
<td>Match between system and the real world</td>
<td>11</td>
</tr>
<tr>
<td>Flexibility and efficiency of use</td>
<td>7</td>
</tr>
<tr>
<td>Aesthetic and minimalist design</td>
<td></td>
</tr>
<tr>
<td>User control and freedom</td>
<td>6</td>
</tr>
<tr>
<td>Error prevention</td>
<td></td>
</tr>
<tr>
<td>Help and documentation</td>
<td></td>
</tr>
</tbody>
</table>

Some of the comments made by team members for the top two categories include:

1. Consistency and standards
   a. “While the main pages use friendly icons assisting those perhaps learning to read, the icons are no longer present in once searches are done. Emily is able to navigate successfully until she got stuck on the “Reference” links. They all started to look alike because there was no picture content. Perhaps inserting image previews from the websites these links take you to will help direct students of a younger age better.”

2. Match between system and the real world
   a. “Jack being someone who understands tween dynamics feels the site does not offer a middle ground. The Kids section has a younger child-like design which an average middle school student might find to be “babyish” driving them to the “Teens Space” and materials that are not suited for them making it harder to do their homework or gain understanding on an assignment.”

Specific Major Problems Identified

In addition to the above general evaluation, our team identified several specific components of the ipl2.org website that have significant design issues that need to be addressed. These areas that were found may cause confusion or issues for the general users of the site, which is why they should be dealt with first. The issues were ranked using the Nielson Heuristic Evaluation Severity rating and can be categorized from major to no concern based on the input from the evaluator. These issues will be
explained in the following sections in detail and we will make recommendations to remediate the problems.

### Major Findings

<table>
<thead>
<tr>
<th>Issue Discovered</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of a Section between “Kids” and “Teens” for Middle School aged children</td>
<td>Major</td>
</tr>
<tr>
<td>Navigation internal to the site versus external to another resource</td>
<td>Minor</td>
</tr>
<tr>
<td>Lack of Search history available in the internal site/Save Progress</td>
<td>Minor</td>
</tr>
<tr>
<td>Inadequacies on Stately Knowledge Page</td>
<td>Minor</td>
</tr>
<tr>
<td>Search results ranking and review missing</td>
<td>Major</td>
</tr>
<tr>
<td>Lack of a Sufficient Help Section</td>
<td>Minor</td>
</tr>
<tr>
<td>Non-relevant Links in footer and other locations</td>
<td>Minor</td>
</tr>
</tbody>
</table>

### Major Problems

**No Middle School Age Section**

The ipl2 digital library does not account for the entire school aged population. There is “For Kids”, which appears to be most appropriate for student user’s grades K-4 and “For Teens”, which appears to be most appropriate for student user’s grades 9-12. The subject matter of both content areas does not appear to be appropriate for middle school students (grades 5-8). “For Kids” design appears to be
constructed to appeal to younger children. A typical middle school student might find the design of the interface to be infantile. This may drive this faction of users to “For Teens”, and some of the content of this area does not appear to be suited for this age group. The middle school aged user could benefit from the resources a digital library has to offer just as much as younger children. Incorporating a middle ground to account for users’ grades 5-8 will increase the libraries popularity and usability.

Difficulties Navigating Within the ipl2 Site and to External Sites

There are various issues regarding navigating through the ipl2 digital library. There is a recurring theme in many sections of the website of not having a back button or recognizable home button (the ipl2 world image does not appear to be a home button) due to external and some internal resources opening in a new page. This issue can be deceiving to a user because they may believe they are still on the ipl2 website, and may actually have entered another website. This does not provide for visibility of system status. When a user clicks a link to a resource there is not appropriate feedback within reasonable time that they have left the ipl2 website.

The lack of a frame for the webpages containing the links does not allow for the user to view external resources opened on the same page, and utilize a back and forward button to view previously viewed pages. This may also lead to errors by the user, such as accidentally closing a page that contains a needed resource. This problem leads to issues in error prevention. It can become difficult and frustrating for a user to navigate through numerous opened web pages, as opposed to ease of use that comes with navigating with back and forward buttons within a frame. Addressing this issue can help prevent errors and improve usability.
Inability to Save Progress

Inability to save searches or frequently used resources does not maximize ease of use. The lack of the ability to bread crumb searches or to view a search history leads users to utilize more primitive methods to revisit content that has been viewed or worked on, or having to start over again. This issue does not favor flexibility and efficiency of use. The ability to preserve a session of visited and viewed content areas allows a user to access completed areas of the website, which would increase the ease of use and efficiency for ipl2.

Inadequacies on Stately Knowledge Page

There are issues in the area of functionality for the Stately Knowledge page. Once you click on a state the image of the country is grayed out, and you have to click on the back button and click on another state to continue. This forces users to rely on recall rather than recognition increasing the user’s memory load by forcing them to remember this action to progress, instead of there being a visible option to continue. This can be time consuming and frustrating for a user. This also creates an unnecessary difference between different sections of the site, which makes it harder to navigate. This significantly decreases the functionality of this webpage, and requires unnecessary learning and does not provide for ease of use.

Another issue with the Stately Knowledge webpage is there is no representation of the capital on an image displayed of the state. This is a common feature that is missing, which may make this aspect of the website inferior to comparable sites.
Long Lists of Links with No Ranking or Explanation

Resources listed as an annotated list of links may deter students from searching for resources from the list. The links within the list all look very similar due to the layout of the page and format of the list. Descriptions of links to resources need to be provided. Due to the level research experience of some of the users may have difficulty interpreting the content contained within the link without some explanation of the link/resource. This will decrease search time and efforts, reduce confusion, and increase ease of use. The resources also do not appear to be ranked in any way which makes it more difficult for users to locate appropriate resources.

Lack of a Sufficient Help Section

There does not appear to be information on how links work and how to navigate back as the link is clicked, which may help mitigate the various navigational issues that cannot be corrected in a timely manner if at all. The ipl2 lacks immediate feedback or tips. There is no guarantee of getting an immediate response from an email message, and despite there being FAQ and Library Help Module sections, there isn't much to guide a user when problems occur. This can be a significant deterrent for users that have a time constraint, which is the case for many individuals doing research and other potential users of the ipl2 digital library.

Design Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issue</strong></td>
</tr>
<tr>
<td>Lack of a Section between “Kids” and “Teens” for Middle School aged children</td>
</tr>
<tr>
<td>Navigation internal to the site versus external to another</td>
</tr>
<tr>
<td>Problem</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>resource</td>
</tr>
<tr>
<td>Lack of Search history available in the internal site/Save Progress</td>
</tr>
<tr>
<td>Inadequacies on Stately Knowledge Page</td>
</tr>
<tr>
<td>Search results ranking and review missing</td>
</tr>
<tr>
<td>Lack of a Sufficient Help Section</td>
</tr>
<tr>
<td>Non-relevant Links in footer and other locations</td>
</tr>
</tbody>
</table>
No Middle School Age Section

As stated in the ipl2’s collection policy, the “For Kids” section was created so that children in grades three to seven could find reliable, age-appropriate information. Similarly, the “For Teens” section was created to help teens find information and to deal with issues they routinely face. Our team found a gap in coverage for middle school-aged children. In order to minimize the possibility that middle school-aged children will get bored with the “For Kids” section and turn to the “For Teens” section, a school page should be created that is divided by grade levels, such as K-4, 5-8, and 9-12.

Difficulties Navigating Within the ipl2 Site and to External Sites

As is the case with most digital libraries, the resources available on the ipl2 are contained on both internal and external pages. We understand that this makes it difficult to keep pages consistent across the entire site. At this time, the ipl2 does not offer feedback to users when they link to an external page. Perhaps a warning message could be added to alert users to this fact, as the likelihood that users may encounter inappropriate material will increase when using sources outside the ipl2 because it has no control over the content on other sites. A message that alerts users that a new window will open, or an option to have content open in a new window would provide useful feedback that would diminish the possibility of accidentally closing out of the ipl2.

Experiencing user lostness or disorientation can also discourage users (Jeng, 2005). One way to minimize the likelihood of this happening is by adding forward and back buttons. Referred to as paging, this format involves “clicking hyperlinks to go back and forth between pages” (Heim, 2008, p.268). Another option is to use frames during coding. The top frame could contain the search box and contents, while the bottom frame could be reserved for the forward and back buttons, as well as the footer.

Inability to Save Progress

Once users have formulated a successful search, they should have the option of saving that search. This could be accomplished by either adding a log in feature that would enable users to create a page of favorite links (Ashman, et al, 2004) or via the use of cookies that track search history. This would enable users to save a record of their search to their computer in order to print it out at their convenience.

Inadequacies on Stately Knowledge Page

While navigation options are similar across most of the site, the “Stately Knowledge” section stands out due to the limitations placed on users when navigating the state map. Allowing users to click
one state after another would make this section more consistent with other maps that are available on the site. Another common feature that should be added to this map is a representation of the state capitals.

**Long Lists of Links with No Ranking or Explanation**

Several of the pages we evaluated consisted of lists of links, with no apparent organization. Students expect results to be ranked by relevancy, similar to the major search engines they use. By utilizing a rating system or user rankings and reviews, these ipl2 pages will mimic the results that are familiar to students. In order to reduce the number of pages with long lists of links, the rating system could be used to show a certain number of most relevant links, but still give the user the option of showing all the results. Another option that could be used to supplement the rating system is to give users the ability to mark pages as relevant or non-relevant. Citation based metrics is another tool that can supplement traditional algorithms, which are based on term frequency (Ashman, et al, 2004, p.567). This method ranks pages based on how many other pages link to it.

**Lack of a Sufficient Help Section**

The ipl2 should consider creating more topic guides, modeled after the A+ Writing Research Paper Guide. These guides serve as a starting point for students when they do not know much about their topic. In addition to topical guides, scheduled chat reference would be beneficial to students doing homework assignments. “Study sessions” would help reduce the time lag associated with the “Ask A Librarian” feature, while adding personalization that is lost when using the FAQ page. As Ashman, Brailsford, Burnett, Goulding, Moore, Stewart, & Truran, (2004) pointed out, a lack of knowledge often leads to irrelevant results, which in turn can discourage users from using a site (p.565).

**Non-relevant Links in footer and other locations**

Our team found that the addition of the partner schools in the footer of each page was not essential and added to the fragmentation of the pages. It also distracted users from helpful information, such as the social media tools. Students are more likely to click on social media tools, such as YouTube, than they are to click on the partner schools. The “Rule of Target Size” states that the size of the button “should be proportional to the expected frequency of use” (Hale, 2007). Removing the links to the partner schools from the footer and placing them only on the ipl2’s homepage will help emphasize the social media tools by creating empty space around them. According to Fitts law, one way to increase the size of an object is by separating it from other objects (Tognazzini, 1999).

**Conclusion**

The ipl2.org site has many positive design and organization elements, and a few issues worth fixing regarding organization and navigation. In the design of the site one can imagine a page from Google’s playbook was used in that there is a single search box given a prominent spot on the main site and as you click through. This search box acts as a constant reminder that resources are just a search away. By having specialized links in addition to the “Googlesque” search box, the ipl2.org site is affording constraints in order to get users to the right spots immediately. The need to learn the site is removed almost immediately. (Norman, 1990, p. 62)
Capitalizing on one of the world’s largest and most often used search engines is a great way to get people to information quickly. Couple that with a well maintained, organized, and verified collection of sources and it is easy to see why the ipl2.org site’s tagline is “Information You Can Trust”. Acting as a conduit to librarians much like what is done in a brick and mortar library via the “Ask an ipl2 Librarian” also allows a great rapport of trust to be built between the user and the ipl2.org site. The use of feedback and constraints affords a straightforward and consistent approach to user-centered design. (Norman, 1990, p. 188)

While the ipl2.org site is well organized and arranged in such a manner that one can easily begin consuming and relying on the site for trusted sources, keeping the momentum of this design begins to fall short when you really use the site for work. As the heuristic evaluations have shown, the two key areas where the site begins to fall behind other collections of data have to do with organization and navigation. The site feels very split between providing access to verified trusted resources via a collection of links and original content designed, built and maintained by the ipl2.org site. Because neither is made absolutely clear it is easy to get navigate away from a collection of sources and believe you are still on the ipl2.org site. Informing users where they are going and clearly identifying what they are accessing needs to be made a strong focus area. The concept of source creep (much like creep featurism) comes up as you are given so many options with no discernable way to figure out which is the best option to access save clicking them all. (Norman, 1990, p. 172) The result of the organizational challenges is that navigation quickly becomes an issue.

In navigating the site, it is very simple to get around and start accessing resources. It is so simple that it is very easy to get lost or overwhelmed by the sheer amount of data when it comes to looking for sources. You can go for original ipl2.org content designed and targeted for a specific area of research or you search for sources via keywords. Much like Hansel and Gretel of The Brothers Grimm storytelling you are given a vast forest to explore, but no breadcrumbs to find your way back. Collectively the team has come to the conclusion that this area would be most impactful as the ipl2.org site can easily organize your search history and make the use of the site more about research and less about maintaining a personal collection of target links and sources.

Overall the ipl2.org site has no significant issues. The site is very well organized and really shines when it comes to providing all users with a sense of trust and reliable resources. Students, teachers, and parents alike can all use the site to assist in learning, exploration or further enhancing knowledge about a particular subject. To use a runner’s analogy, the ipl2.org site has had a great start out of the runner’s box and into the race, some of the hurdles around navigation and organization weren’t cleared as well as they could have been, but by no means is the race lost. With some additional work and refinement the ipl2.org site can be improved and afforded to meet the needs of its users in keeping them always coming back. These changes can make the ipl2.org site not only a source for "Information You Can Trust", but more importantly the first source a user consults for their information needs.
References


Appendix A: Individual personas and scenarios

*Nicole Belbin*

Persona- Emily Smith

Emily Smith is a third grader at Blueberry Hill School in Longmeadow, MA. She lives in a single family home with her mother, father, baby brother and cat Abbey. Both of her parents work outside the home, with an average commute of 20 minutes. Their annual household income is $87,000. The family owns a desktop and a laptop that her parents use for work purposes.

For extracurricular activities, Emily participates in dance, soccer, and is a brownie in her local Girl Scout troop. She is allowed to use the computer with supervision for her Webkinz stuffed animal. She also enjoys playing educational games, such as Jump Start 3rd Grade. Emily is allowed to watch one hour of Nickelodeon each night before her 8pm bedtime during the week. She DVRs other shows to watch on the weekend when she is given longer television time.

**Scenario**

Emily’s mother picked her up from soccer practice and drove the ten minutes home. Emily excitedly told her mother about the assignment Mrs. Johnson, her teacher, gave them that is due tomorrow. Each member of the class was assigned a president to research. Mrs. Johnson gave them each a sheet of questions that they need to answer about their president. Emily was assigned Abraham Lincoln. The students need to find the president’s name, birthdate, place of birth, marital status, any children, and at least three notable events during presidency. They also need to include a picture. In order to improve students’ computer literacy, Mrs. Johnson worked with the school librarian to provide appropriate internet resources, with the ipl2 listed first on the sheet. Emily’s mother brought the laptop out and placed it on the kitchen table so that she could make dinner and still supervise Emily while she was on the internet. Mrs. Smith typed “ipl2” in the Google search box on the tool bar and chose the first result. While she tended to the food on the stove, Emily clicked on the “For Kids” button. Emily’s attention is immediately drawn to the collections in the middle of the screen and does not see the “U.S. Presidents” link on the right side of the screen. She clicks on the first link, “Reference” because she sees the words “homework help.” She quickly scrolls up and down the screen to see if anything catches her eye. Nothing catches her eye, as every result looks the same. She asks her mom for help finding the right link. Her mom scans the results and does not see anything helpful, so she tells Emily to hit the back button, but Emily does not know what that is. Her mom points to the arrow button on the top of the screen. While standing in front of the screen, Mrs. Smith notices the “U.S. Presidents” link on the right side of the screen. Emily clicks on it while her mom returns to preparing dinner. Emily scrolls down, looking for the 16th president. She clicks on the appropriate link and starts filling in the answers to her homework sheet. She asks her mom how to print the page so she can cut out the picture to paste onto her homework. Emily can only find two notable events, so she decides to click on the first link under “Internet Biographies.” A new window opens to a
.gov resource that provides a lot of text. Emily notices Garfield among the other presidents listed on the left side and laughs because she thinks of the Garfield comic strip. This site does not appeal to Emily, so she asks her mom how to get back to where she was. Her mom points out the red x at the top of that window. Emily states that she still needs one more event. Her mom scrolls down the screen and scans the “Historical Documents” section. She clicks on the “Gettysburg Address” link. A new window opens with the text of the speech, but it is not clear who sponsors this resource. Trying to get dinner on the table, she tells Emily to write that down as the last event.

Carrie Moran

Persona - Jenny Wilburn

Jenny Wilburn is a 46 year old library media specialist at Niskayuna High School in Niskayuna, NY. Jenny has her MLIS degree from SUNY Albany, and has worked in a high school setting for her entire library career. Jenny likes working in a high school because she enjoys working with the teen population. She feels that teenagers need more guidance than students at any other point in their education, and she likes to help teach them the skills they need to be successful in college and in their adult lives.

Jenny is in a committed relationship with her partner Marie, and they have been together for 20 years. They have a 10 year old son named Liam, and an 8 year old daughter named Angelica. Jenny and Marie live in a smaller house in the countryside of New York, and prefer to spend time outdoors with their children.

Jenny loves taking continuing education classes and attending conferences for the various library organizations she belongs to. She feels that she cannot be a successful high school library media specialist if she does not keep current on technology and trends. Jenny pushed her district to provide more computers for the library, and has tried to modernize their collection of physical materials. Jenny believes that teenagers will only become more reliant on the Internet as access becomes easier, and she tries to teach her students about the difference between good and bad sources on the Internet. She also assists classes with traditional research projects, and makes sure to emphasize the use of physical materials to complement digital sources.

Scenario – Using the A+ Writing Research Paper Guide from the ipl2

At one of her conferences, Jenny learned about the ipl2. After the conference, she decided to browse the site for materials of interest to her students. Upon accessing the main ipl2 page, Jenny's attention is drawn immediately to the “For Teens” button. She clicks this link first without navigating through the other pages because she knows her focus is on educating teens. Jenny likes the way that the teen space is broken into sections, but she thinks her students might find some of the clip art outdated.

Jenny decides to browse several of the topics, and is frustrated because she had trouble finding a link back to the main teen page on each satellite page. She also notes that some pages are set up to be interactive (ex. Graphic Novels, TeenSpace Poetry, and Procrastinator) while others are long lists of annotated links with topical links on the side (ex. Reading & Writing, Clubs & Organizations, and Handle Your Finances). Jenny knows that her students prefer pages that are short and highly graphical. She decides to focus on a page that is more appealing to her students and to her personal goals as a library media specialist; the A+ Writing Research Paper Guide.

Jenny always struggles with presenting the steps of a research paper to her students due to the varying nature of their assignments, and of their skill levels. Jenny loves the guide, and decides to implement it in
Jenny likes the Step by Step page, and decides to bookmark this page on every library computer. She also prints the list of steps to make handouts for her classes, although she wishes there was a complete list of steps at the end of the presentation. Jenny starts directing students right to the A+ Writing Research Paper Guide and encourages them to start with the Table of Contents section because it is a familiar format, and it makes the topic less scary. The first time she used it students were a little confused by the extra icons on the Table of Contents page because they look like the icons used for linking at the bottom, but were not clickable.

Jenny likes the Info Search pages, but finds that her students don’t have the patience to read long narratives directly from the website. She decides to print the best parts to include in handouts. Her students reported that they like having the ipl2 search bar at the top of each page because they can easily search for a topic if they get a good idea while looking at the research guide. Some students were frustrated though because their searches load in the same page, and they would lose their place in the research guide. Jenny feels that the A+ Writing Research Paper Guide is a great tool for use with her students, and hopes that the ipl2 continues to maintain the page.

Anthony Townsend

Persona - Jack Wellington III

Jack is a 48 year old transplant from England. While Jack grew up largely in England he spent the last 20 years here in America teaching English Literature to middle school students grades 6-8. Jack grew up always having a love for words and their meanings. This naturally transcended into a love for the written word. Jack is a highly meticulous person as well, growing up in a affluent family contributed largely to that. Jack attended The University of Oxford and in an effort to broaden his horizon he took an internship at the prestigious William Penn Charter School in Pennsylvania. Here is where Jack met his wife Alice thus turning his internship into a 20 year career. Jack and Alice reside in Chestnut Hill with there two children Elizabeth age 14 and Thomas age 7.

Jack’s love for books is definitely shown by his 10,000 book collection occupying a large part of his home much to his wife Alice’s chagrin. His love for books contributes to his aversion of technology. Jack believes highly in lifelong learning and sees technology as a valuable tool, but one that should not have too much faith placed in it given the issues he has experienced at inopportune times. Jack prefers to visit a library and find books, feel the pages, and the musky smell they are often accompanied by. Jack can appreciate the speed at which a well designed system can provide results and insight not easily
afforded through “manual” searching. Jack sees technology as an evolve or die scenario. He would much prefer the ability to consume and engage his students with technology at his own pace and design.

Jack recently received a Kindle for his birthday; currently this is collecting dust as Jack hasn’t found anything he wants to read on the device. The aversion to technology is one more of apathy versus unwillingness here. Jack in being meticulous pursues technology when necessary and when all the kinks have been worked out. Jack would not be classified as an early adopter. However, The William Penn Charter School is evaluating the use of the ipl2 website and potentially a partnership leveraging and contributing to the site extensively. This evaluation and requirement to include this resource into the design of the curriculum and classroom is being directly tied to funding. As a result with this vested interest Jack is taking the time to use and see how he can apply the site thoroughly into his class as he could use an update to some of the books and perhaps divert some of the funding to the use of technology in the classroom in order to engage the students more.

Scenario - Organizing Resources/Searches & What About Tweens?

Jack has found the site to be very intuitive with a search box similar to Google (one of the sites Jack feels is not very intimidating). Immediately Jack has found a great site via the search box that organizes a lot of information and activities he can relating to Shakespeare. William Penn Charter School places a direct emphasis on Shakespeare studies for their 8th graders to prepare them for the 9-12 literature classes. While Jack already had some great material found at a few conferences through the years, this material is new and fresh and can really engage the students. Immediately Jack’s response to the site is positive and welcome given the ease of use and well designed search engine. Jack feels as though he is getting immediate results and does not have to wade through tons of data, books or materials to get some new resources.

![ipl2 website search results for Shakespeare](image)
Jack’s impression of the layout is positive as well. It’s simple and not overwhelming. Jack has used Amazon.com, Wikipedia, and the William Penn Charter Intranet and Website. He has found the options to be overwhelming and the search engine never bringing up what he is looking for easily. He often has a colleague email him where he needs to go and he has already become great friends with the local student IT department particularly Jacob. While Jack has found workarounds and means to access data via familiar folks, he would prefer to figure it out himself. The ability to be engaged immediately with the site is well received. Jack has been clicking through several links, but he’s notice he can’t go “BACK” to the beginning of the site before he can search again as the back button is grayed out. Jack has retype “ipl.org” as the site is launching in a separate window, for the external resources.

Jack has found this very frustrating to keep doing the same thing over and over again, then could not figure out why he had so many open windows to close when he was shutting down the computer. He thought he might have a virus and ran McAfee just in case which found nothing. Perhaps some information on how links work and how to navigate back as the link is clicked would be helpful, especially relating to opening in a new window and that if you close that it will take you back to the original window.

Jack happens to deal with middle school students. Jack as found he needs to search both in the “Kids Space” and the “Teens Space” to find materials. He has to do additional validation on the resources to make sure the content is age appropriate. Jack has found several resources that are way to advanced but seemed promising and vice versa. Jack being someone who understands tween dynamics feels the site does not offer a middle ground. The Kids section has a younger child-like design which a average middle school student might find to be “babyish” driving them to the “Teens Space” and materials that are not suited for them making it harder to do their homework or gain understanding on an assignment. It would be great if the site had an age selection like the homework helpline has this way the students or parents could pick their age brackets and not be steered into the two extremes. This would also allow the
resources to more clearly target their audience properly. Something as simple as “K-4, 5-8, 9-12” or “Kids, Pre-Teens, Teens” would go a long way.

Another drawback Jack is noticing is the lack of the ability to save things for later. One of the things Jack loves about Amazon is that he can very easily create a wish list of items he might be interesting in buying. Then he can easily pull up his account and this wish list for later review. While Jack does know how to make favorites, he ended up making all of them at home. Jack appreciated the ability to just going to the site to get access. The William Penn Charter Intranet has a special website he needs to go to and always forgets the need for the “s” in “https”. Plus it requires a password and login. This site is very easy to get to and use immediately. In attempting to save links for later Jack thought a favorite was tied to the site and wherever he went he could retrieve them. Jack was quite proud when he organized all his favorites at home to share with his colleagues and to use in preparation for materials in class the next day. Jacob was the bearer of bad news when he informed Jack the favorites do not transfer and they were only on his machine at home.

Jack thinks it would be great if he could store his favorite resources along with some personal notes on the site. It would allow him to access the materials without the need to search for them again and again on the site. While “ipl.org” is easy to remember; some of the sites are not so easy. Jacob who had to run to catch the bus mentioned something about “delicious bookmarks” but Jack could not find this when searching the ipl2 site. Overall Jack finds the site very helpful and is beginning to reshape his thoughts on technology and it’s place in the classroom. With a few scheduled “lessons” from Jacob and asking questions of his own children he feels the “ipl.org” site can help his students quickly disseminate information from the web to use in the classroom, help them with homework, or even help them to pursue additional fun materials outside of the course requirements.

Darryl Turner, Jr.
**Persona:**
Alvin Kaufman is a 28 year old Associate History Professor and Assistant Football Coach for James Madison University (JMU). Alvin currently lives in Harrisonburg, Virginia, approximately two miles south of the JMU main campus. Alvin is a single, male that spends most of his recreational lifting weights, playing basketball at a local men's recreation league, bowling, watching the History Channel, and thoroughly following the news/current events. Alvin is originally from Lisbon, Connecticut. Alvin was recruited to JMU to play football and basketball right out of high school. Alvin excelled as a student and athlete at JMU. He maintained a 3.9 GPA, made All-Conference as a wide receiver his final two years as a football player at JMU, and was a starting shooting guard for JMU his final year at JMU for their basketball team. Alvin remained in Harrisonburg after graduating, and became a Graduate Teaching Assistant (GTA), and volunteer wide receiver coach for JMU. During Alvin's two years as a GTA he excelled in many areas. Alvin's research skills were considered superior to his peers. Alvin has extensive experience using digital libraries, and became very effective at finding resourceful material. He often used digital libraries for many forms of research, analysis, evaluations, assessment tools for courses, and locating resources for classes he was assisting to instruct. Student evaluations indicated that Alvin’s assistance to the professor was exemplary. Approximately half a year after receiving his Masters in Historical, Social, and Cultural Studies he was hired to be an Associate History Professor at JMU. Alvin also excelled in his responsibilities as a volunteer coach. Alvin is known for applying his exceptional research abilities to his coaching position, finding the most effective techniques for his wide receivers success. In two seasons Alvin improved the JMU the wide receivers average receptions per game by 27%, the receivers accounted for 67% of the offenses total yards, as compared to 53% the previous season. Alvin also assisted the coach with recruiting some very reputable players in the region, which he located through web based resources. Alvin was promoted as one of the Assistant Offensive Coaches, in charge of wide receivers, and made Head Recruiter. Alvin continues to apply his skills and knowledge in academia and coaching.

**Scenario:**
As the Head Recruiter, Alvin Kaufman was given an assignment by the Head Coach of JMU to scout and recruit as many mid to top ranked high school football players as possible and unranked high school players with exceptional stats compared to other players of the same position in their own conferences and divisions. This assignment required Alvin to expand his scouting and recruiting efforts to cover the entire country. Alvin knew that local newspapers are a good source for identifying stand out stars, and player rankings. Alvin had recently used ipl2 to locate reading material on World War I for the students in the World History course he instructs, and remembered their being a section for newspapers and magazines. Alvin had not explored this aspect of the ipl2 before, and had only used the ipl2 once before for the assignment for his World History Course. Alvin realized he may save time by using the ipl2 to locate newspaper websites for his recruiting assignment compared to sorting through many irrelevant results from some of the more common search engines (Google, Yahoo, etc.). Alvin found it convenient that the icon for the Newspapers and Magazines link was easy to recognize and find. He has stumbled across other comparable sites that place the link for commonly used resources in difficult to find menus or surround them with text and images that make them difficult to locate, yet he did find the appearance of the page to be somewhat tedious. Once entering the Newspapers & Magazines page his attention was immediately drawn to the open tab with links to newspapers for virtually every state in the U.S., as well as the rest of the world, even though he would not need a world wide array of newspapers for this assignment. Alvin begins to search various states. As he would click the link for a particular state he was brought to a page describing the website for the newspaper. Initially Alvin was confused by the cities.
listed on the left navigation bar of the page because his first search was of Nebraska, which he was completely unfamiliar with and did not recognize the cities. It did not take him long to notice Omaha and realized the list was a navigation bar for newspapers by city. As Alvin became more involved in his search for newspapers he began to wonder if the newspaper websites listed for each state were all the newspapers websites the state had to offer, as well as newspapers. Alvin submitted a question to the librarian by selecting the *Have a question? Ask an ipl2 Librarian* link. Alvin was relieved he did not have to search the page for a small help tab or link, which has led him to become very frustrated with other comparable sites he has used.

*Jason Setzer*  
*Persona*

Amber Jones is a 29 year old single mother of two children and about 2 years ago moved to the Columbus Ohio area. For most of her life, Amber grew up in Grand Rapids, Michigan. Her oldest child is Grant. He is 12 years old and currently in the 6th grade. Her youngest child, Ashley, just turned 4 years old last month.

Amber was pregnant with her first child in high school. Because of the situation, she was forced to stay at home at her parents in Grand Rapids, Michigan, where she studied and was able to obtain her GED. After the baby was born she was able to rely on family to assist with the care and needs of the child so that she could work part-time and pursue a degree in finance from the Grand Valley State University. Amber values the opportunity that her parents gave her by pitching in and helping with her situation so she was able to follow thru on her dreams of going to college and becoming a professional. Amber values education and spends a lot of time with her children practicing new learning skills. She wants them to succeed and do well with school and life. After college, Amber stayed local to the area for several years and eventually got a job with JP Morgan in Lansing, Michigan doing tax preparation and business auditing. The commute to and from work was a lot (1 hour round trip) on Amber and after about 2 years she saved enough money to move out of her parent’s home and into her own apartment. At this time her son was 7 years old. The move allowed her to be closer to her job but Grant had to be put into an after-school care program until Amber got out of work. While working at JP Morgan, Amber met her future
husband, James Harvey, who was working in the same department as Amber at the time. One year later they had a child, Ashley, and James received an opportunity for promotion but this required the family to move to the Columbus area. They had talked about moving to another location before and thought this was a possibility. Amber and James decided the move was a good idea so they left Michigan and moved to Ohio. At this time Amber was staying at home with the children. After living in the area for 6 months or so James was coming home from work and was in a head on collision with the another motorist. The accident was caused by a deer running out in front of the other person’s vehicle. The individual turned their wheel and hit James. Unfortunately, James did not survive. Amber was faced with a horrible situation. Amber decided to stay in Columbus and she was able to use some of the life insurance money to live for a while but had to go back to work. Her daily schedule is quiet hectic now as all of the responsibilities fall on her and she doesn’t have a lot of time to get everything she needs done. With two children and a job and in a city with no family, she finds herself always doing something. She is devoted to her children and wants them to do well but doesn’t all ways have the time to help with homework the she would like to.

Scenario

Stately Knowledge (Quiz feature/Links to US images not active)

Amber’s son Grant is in the 6th grade and one of the classes he is currently taking is American Geography. Unfortunately, Grant did not do well on the first quiz on the states and capitals. In fact, Grant has not been doing well this quarter at all and his teacher sent a poor performance report home to his mother. Amber feels bad about this because she knows with everything she needs to get done she can’t always give the children the level of attention they need. Grant’s mother contacted the teacher about the situation and the teacher recommended the ipl2.org site; specifically the section with information about the states called “stately information”. Amber went to the site from the family computer to check it out during a recent homework session with Grant. She thought the recommendation was great because it offered the information Grant needed to learn. Many other websites Amber found on her own would just have state and capital information; but the recommended site had a lot of detail about each state. The teacher offers extra credit if a student can also include more details about each state during the quiz and Grant needs this to do better in the class and bring his overall grade up. Because of Amber’s current situation of a lack of time, she was hoping the site would have some type of quiz feature that would allow her to watch over her son and get other tasks done at the same time. The site appears to lack this ability. For Amber, it would be invaluable to be able to have Grant use the site in this way and then get a report on his progress. So instead she has to navigate to the site, click on each state, and ask her son questions. The other problem is that once you click on a state, the image of the country is grayed out. You have to click on the back button and click on another state to continue. This is annoying and a hindrance when Amber wants to quiz Grant fast before he goes to school in the morning when time is tight. Amber reviewed the help section to make sure they were using the site correctly and found she wasn’t using the quick state feature. She tried using this feature but felt this was just as time consuming and felt it was easier to locate the state from the visual map. Another feature Amber noticed on some of the other websites she found and would have liked to use in the stately knowledge section of ipl2 was the representation of the capital on an image displayed of the state. This would allow her son to not only memorize the state but also be able to visually locate the capital on a map. This would further reinforce the information state by state. This section currently only highlights the state that they are currently studying and is difficult to visually see the smaller states in the north east region.
Nicole Belbin evaluation of A+ Writing Research Paper Guide

<table>
<thead>
<tr>
<th>Description of Problem</th>
<th>Heuristic number(s)</th>
<th>Severity* (circle 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jenny easily finds the &quot;For Teens&quot; button because it is prominently displayed on the ipl2's main page. She knows the minimalist design, will help her students stay focused on their assignments and not get distracted by other links. The central location of the buttons diminishes the need to memorize where the resources are located. &quot;For Teens&quot; is language they are used to looking for to find content that interests them.</td>
<td>2,5,6,8</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
<tr>
<td>The teen space is broken into sections, keeping with the minimalist design of the main page, but there is no immediately recognized organization of the resources. Jenny's students are used to looking for things in alphabetical order or by relevancy. Since her students will be accessing the resources directly from the &quot;For Teen&quot; button and not by search terms, she is afraid that her students will automatically choose the first resource. Jenny also feels that her students will find the clipart too outdated. The likelihood of students choosing the first resource by mistake is increased by the pencil and paper graphic. Students may associate this with writing a paper and may not recognize the writing resource guide underneath because of the A+ graphic.</td>
<td>2,4,5</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
<tr>
<td>Jenny clicks on the first resource to see if students will be able to find the A+ Writing Research Paper Guide if they click on the wrong resource. The first thing she notices is that the resources are listed as an annotated list of links. She knows her students will quickly get bored with this display. She also notices that A+ Writing Research Paper Guide is not one of the links listed on the left hand side of the screen. Her students may give up after scrolling down the page and not finding any relevant links or after they have wasted time clicking into the first few links because they are used to finding the relevant Information at the top of the results.</td>
<td>9,2,3,5</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
<tr>
<td>It is difficult to find a link back to the &quot;For Teens&quot; main page. If students get off track or click into the wrong links, it may be difficult for them to find their way back to the main page.</td>
<td>5,9</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
<tr>
<td>Jenny notices that some pages are designed to be interactive, while other pages are formatted as lists of annotated links. Students are used to pages that incorporated Web 2.0 technology.</td>
<td>4,8</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
<tr>
<td>Once Jenny clicks on the A+ Writing Research Paper Guide she again finds the minimalist design, with more outdated clipart. Students have the option of going through each step or jumping to</td>
<td>4,8,7,2</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
</tbody>
</table>
### Heuristic Evaluation Worksheet – Amber Jones

<table>
<thead>
<tr>
<th>Description of Problem</th>
<th>Heuristic number(s)</th>
<th>Severity* (circle 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because of Amber’s current situation of a lack of time, she was hoping the site would have some type of quiz feature that would allow her to watch over her son and get other tasks done at the same time. The site appears to lack this ability. This is a problem because quiz features are a traditional feature of study websites, and it decreases the functionality of the site.</td>
<td>6, 7</td>
<td>0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe</td>
</tr>
<tr>
<td>The other problem is that once you click on a state, the image of the country is grayed out. You have to click on the back button and click on another state to continue. This is annoying and a hindrance when Amber wants to quiz Grant fast before he goes to school in the morning when time is tight. This is a problem because there is an unnecessary difference between different sections of the site, which makes it harder to navigate.</td>
<td>1, 3, 4, 7, 8</td>
<td>0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe</td>
</tr>
<tr>
<td>Amber reviewed the help section to make sure they were using the site correctly and found she wasn’t using the quick state feature. This is a problem because the quick state feature is easy for users to miss, and users should not have to rely on the Help section to use the site.</td>
<td>5, 6, 10</td>
<td>0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe</td>
</tr>
<tr>
<td>She tried using this feature but felt this was just as time consuming and felt it was easier to locate the state from the visual map. This is a problem because the supposed helpful feature is not providing a noticeable advantage to the user.</td>
<td>3, 7, 8</td>
<td>0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe</td>
</tr>
<tr>
<td>Another feature Amber noticed on some of the other websites she found and would have liked to use in the stately knowledge section of ipl2 was the representation of the capital on an image displayed of the state. This would allow her son to not only memorize the state but also</td>
<td>2, 4, 6, 7</td>
<td>0 no problem 1 cosmetic</td>
</tr>
</tbody>
</table>


be able to visually locate the capital on a map. This is a problem because it decreases the functionality of the site for users interested in geography, and it is information that could be easily incorporated into the current visual display.

This section currently only highlights the state that they are currently studying and is difficult to visually see the smaller states in the northeast region. This is a problem because it makes the site more difficult to use, and may prevent some users from obtaining the information they need.

<table>
<thead>
<tr>
<th>Description of Problem</th>
<th>Heuristic number(s)</th>
<th>Severity* (circle 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily's mother is able to easily bring up the ipl2 site as the keyword has been properly indexed into the search engine Google. There is no complex website address or quirky names that can be misspelled. Emily's mother is able to get her to the right site on the first try. The sites icons and layout are designed to give Emily and her mother the impression that this is the right site and that it will be helpful for her homework.</td>
<td>7</td>
<td>0 no problem</td>
</tr>
<tr>
<td>Emily immediately associates with the “For Kids” button but the special collections on the right hand side are easily missed. The font is orange used in conjunction with an orange background. This enhances the unwanted ability for this material to get lost to the eye. In addition the icon focus in the middle of the page is where the reader is drawn to. Making the side content larger and stand-out more through different colors will draw people to it more frequently.</td>
<td>8</td>
<td>0 no problem</td>
</tr>
<tr>
<td>While the main pages use friendly icons assisting those perhaps learning to read, the icons are no longer present in once searches are done. Emily is able to navigate successfully until she got stuck on the “Reference” links. They all started to look alike because there was no picture content. Perhaps inserting image previews from the websites these links take you to will help direct students of a younger age better.</td>
<td>4,2</td>
<td>0 no problem</td>
</tr>
<tr>
<td>Emily not is not savvy with a internet browser and does not understand the concept of the back button. While her mother was able to assist her, perhaps leaving the top half of the page in a frame so it is always available, and placing “Back” and “Forward” arrows that allow those who have internet browsers that don't make it immediately clear or do not possess the knowledge yet.</td>
<td>2,3,9</td>
<td>0 no problem</td>
</tr>
</tbody>
</table>
Emily cannot figure out how to print from the site. Once again relying on something to be present in an Internet Browser is not always ideal especially if the settings can be different from user to user. Putting in the ability to print certain materials, certain formatted items or just the picture will allow folks to self service themselves and easily as in Emily's case print out the materials she needs without assistance from her Mother.

| 6, 10 | 0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe |

When Emily navigated to an external resource "she decides to click on the first link under 'Internet Biographies.' A new window opens to a .gov resource that provides a lot of text" she is presented with another site but no indication that this has happened. Emily is led to believe the site is boring as it is probably not age appropriate or geared towards her needs. Clicking “For Kids” should result in consistent age appropriate materials which links can be provided when the need for more in depth material is needed.

| 4,9 | 0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe |

Emily in looking for additional event information has a hard time navigating but enlists the help of her mother to find a link on the Gettysburg address. There is no information about this source or what it is. Emily and her mother are relying on the links to be correct and provide the correct information. Perhaps developing specific sections where common data often requested internally to the ipl.org site is needed to ensure the data consistency.

| 2, 4 | 0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe |

With the ever decreasing amount of time to focus on school work and denoted by Emily’s mother to get her to eat dinner, there is no easy way to save your session or the ability to breadcrumb what you were looking at. Emily would need to write down several long links or start over each time. Having the ability or option to setup a quick profile with say a unique code to preserve your session of what you clicked on or viewed would allow Emily to easily go back and continue where she left off.

| 2, 3, 7 | 0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe |

---

**Darryl Turner, Jr.**

**Ipl2 - Kid Spaces Heuristic Evaluation**

<table>
<thead>
<tr>
<th>Description of Problem</th>
<th>Heuristic number(s)</th>
<th>Severity (circle 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack Wellington’s scenario states, &quot;Jack has been clicking through several links, but he’s notice he can’t go “BACK” to the beginning of the site before he can search again as the back button is grayed out. Jack has retype “ipl.org” as the site is launching in a separate window, for the external resources. Users may not notice that external resources are launching in a new window. Causing delayed learning for operating the ipl2 Kids Space search engine. This does negatively impact inherent usability in the areas of ease of use and learnability, and this affects overall functionality.</td>
<td>5</td>
<td>0 no problem 1 cosmetic 2 minor 3 major 4 catastrophe</td>
</tr>
<tr>
<td>Jack Wellington’s scenario states, &quot;Perhaps some information on how links work and how to navigate back as the link is clicked would be</td>
<td>10</td>
<td>0 no problem</td>
</tr>
</tbody>
</table>
helpful, especially relating to opening in a new window and that if you close that it will take you back to the original window."

- There is an option to send a message to an ipl2 librarian for help, but this response may not be immediate, and information on navigating the ipl2 website would be helpful.

Jack Wellington’s scenario states, "Jack being someone who understands tween dynamics feels the site does not offer a middle ground. The Kids section has a younger child-like design which an average middle school student might find to be "babyish" driving them to the "Teens Space" and materials that are not suited for them making it harder to do their homework or gain understanding on an assignment."

- The ipl2 digital library does not appeal to a large audience that could benefit from its services. Incorporating a middle ground to account for this audience will increase the libraries popularity, and usability.

Jack Wellington’s scenario states, "Jack being someone who understands tween dynamics feels the site does not offer a middle ground. The Kids section has a younger child-like design which an average middle school student might find to be "babyish" driving them to the "Teens Space" and materials that are not suited for them making it harder to do their homework or gain understanding on an assignment. This would also allow the resources to more clearly target their audience properly. Something as simple as “K-4, 5-8, 9-12” or “Kids, Pre-Teens, Teens” would go a long way."

- The ipl2 digital library does not appeal to a large audience that could benefit from its services, and could benefit from better labeling the targeted audiences. Incorporating a middle ground to account for this audience will increase the libraries popularity, and usability.

Jack Wellington’s scenario states, "Jack thinks it would be great if he could store his favorite resources along with some personal notes on the site. It would allow him to access the materials without the need to search for them again and again on the site. While “ipl.org” is easy to remember; some of the sites are not so easy."

- The ability to store favorite resources and create personal notes will increase ease of use, especially for a frequent user (such as a teacher). Searching for materials once found repeatedly may frustrate a user and discourage use.

**POSITIVES:**

1. Jack Wellington’s scenario states, “Jack has found the site to be very intuitive with a search box similar to Google (one of the sites Jack feels is not very intimidating).” The Search box is similar to the most popular and used Google. This familiarity allows a user to use previous knowledge/recognition and not rely on recall, resulting in prompt learning, and ease of use. In the area of inherent usability the ipl2 search engine appears to have sufficient learnability and memorability based on this statement from Jack Wellington’s scenario.

2. Jack Wellington’s scenario states, “Immediately Jack has found a great site via the search box that organizes a lot of information and activities he can use relating to Shakespeare.” This indicates the search engine has high “precision” (a measure for information retrieval effectiveness). In the area of inherent usability the ipl2 search engine has high satisfaction in the areas of ease of use, organization of information, and content based on this statement from Jack Wellington’s scenario.

3. Jack Wellington’s scenario states, “Immediately Jack’s response to the site is positive and welcome given the ease of use and well-designed search engine. Jack feels as though he is getting immediate results and does not have to wade through tons of data, books or materials to get some new resources.” This indicates the search engine has a sufficient page rank system/algorithm and a sufficient sized search index. In the area of inherent usability the ipl2 search engine has high efficiency based on this statement from Jack Wellington’s scenario.

Jack Wellington’s scenario states, "Jack’s impression of the layout is positive as well. It’s simple and not overwhelming. Jack has used Amazon.com, Wikipedia, and the William Penn Charter Intranet and Website. He has found the options to be overwhelming and the search engine never bringing up what he is looking for easily.” The layout of the web page does not appear to contain irrelevant and rarely used search options. In the area of apparent usability the Kids Space webpage appears to have a sufficient visual appearance.

*Jason Setzer*

**Persona/Scenario “Alvin Kaufman” from team member Darryl Turner Jr.**

**Heuristic Evaluation Worksheet**

<table>
<thead>
<tr>
<th>Description of Problem</th>
<th>Heuristic number(s)</th>
<th>Severity* (circle 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alvin found that the &quot;Newspapers and Magazines&quot; link was easy to recognize and find. Alvin was able to quickly adapt to the menus located on the ipl2.org site.</td>
<td>4,6</td>
<td>0 no problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 cosmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 catastrophe</td>
</tr>
</tbody>
</table>
Upon searching for a particular newspaper for a city within a state, Alvin was confused by the left hand list of other cities in the state.

Upon seeing the list of additional cities on the left hand window, Alvin questioned whether this was a comprehensive list of cities in the state he wished to search.

Alvin decided to submit a question to the ip2.org librarian about the city listing question. He was able to quickly find and send his comment without any issues.

When you click on a state and view the left hand window there is no header stating was the following fields represent.

Alvin wanted to know if the city newspaper listing was just for linkable state specific websites or if there were more cities with newspapers that he could contact with other means.

Alvin found the overall navigation of the site easy to use and not tedious.
like some other sites he has used in the past.  

<table>
<thead>
<tr>
<th></th>
<th>1 cosmetic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 minor</td>
</tr>
<tr>
<td></td>
<td>3 major</td>
</tr>
<tr>
<td></td>
<td>4 catastrophe</td>
</tr>
</tbody>
</table>
Appendix C: Individual academic honesty statements

I certify that:

This paper/project/exam is entirely my own work.

I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.

I have not submitted this paper / project to satisfy the requirements of any other course.

Signature Anthony Townsend (typed signature is suitable for online courses)

Date 12/5/2010

=================================================================================================

I certify that:

• This paper/project/exam is entirely my own work.

• I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.

• I have not submitted this paper / project to satisfy the requirements of any other course.

Name: Carrie Moran

Date: December 5, 2010

=================================================================================================

I certify that:

• This paper/project/exam is entirely my own work.

• I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.

• I have not submitted this paper / project to satisfy the requirements of any other course.

Name: Nicole Belbin

Date: December 5, 2010

=================================================================================================
• This paper/project/exam is entirely my own work.

• I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.

• I have not submitted this paper / project to satisfy the requirements of any other course.

Name: Jason W. Setzer

Date: December 2nd, 2010

================================================================================

I certify that:

☐ This paper/project/exam is entirely my own work.

☐ I have not quoted the words of any other person from a printed source or a website without indicating what has been quoted and providing an appropriate citation.

☐ I have not submitted this paper / project to satisfy the requirements of any other course.

Name: Darryl Turner Jr.

Date: December 5, 2010

==============================================================================