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**"Proposal for IMLS Collection Registry and Metadata Repository"**

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# **Usability Analysis of the IMLS Digital Collections Registry**

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## ***Introduction: The Usability Analysis Approach***

The usability of the collections registry has been reviewed at different periods during the project, and continues to be revisited in the continuation of the project. Usability analysis and interface redesign should be a continuous activity rather than a one-shot process at a single point in the systems development lifecycle. To make it feasible to incorporate continuous usability improvement in to the development process, it is important to use methods that are fast, lightweight and do not consume large amounts of resources. The project has drawn on existing work at UIUC on the design and deployment of high-speed low-cost usability analysis methods and the generation of ranges of redesign recommendations that can be integrated into ongoing versioning activities (Twidale 1993, Marty & Twidale 2004, 2005a, b, Twidale & Marty 2005). These methods involve techniques for testing without users including competitive analysis, heuristic evaluation (Nielsen 1994), cognitive walkthrough (Wharton et al. 1994) and expert reviews. They techniques are combined with a certain kind of user testing which involves a detailed qualitative analysis of the behavior of a small representative sample of certain classes of users, coupled with an exploration of possible causes of confusion resulting from the interaction of the interface design and users' prior experience with other systems. This approach has proven to be particularly effective for formative evaluations required to provide feedback to ongoing system design. Iterative systems development is all about creating an evolving stream of design recommendations that are progressively incorporated into the redesign process as opportunities arise.

The method is not appropriate for validating that a particular system is 'usable' according to some objective standard – its purpose is to quickly catch flaws and enable continual improvement of a work in progress. Validation requires more time-consuming and expensive methods and is most useful in informing purchasing decisions between competing products, or to serve as strong proof of a research hypothesis.

The usability work was also integrated into the teaching mission of the Graduate School of Library and Information Science, with presentations, discussions, analyses and findings from user studies acting as case examples for classes on interface design.

## ***Caveats***

Any formative usability analysis and report necessarily has to focus on problems with the interface. A part of the interface that is working well is not of interest because little can be said about making it better. By contrast, a problematic part can generate a

disproportionate amount of attention, discussion, analysis and multiple design recommendations. This is of course the most efficient mechanism to work towards overall quality improvement, but a superficial examination of the process and its reporting can yield a highly biased perspective. The disproportionate allocation of time and space to discussing problematic aspects and the relative ignoring of successful aspects can lead to the impression that the interface in question is appalling, and doomed to remain so. Nothing could be further from the case. A project willing to undertake ongoing iterative formative evaluation is moving up a quality curve far faster than a project that employs one-shot summative evaluations. However formative evaluations and particularly their reporting can seem very much like washing one's dirty laundry in public.

This report should therefore not be judged as reflecting poorly on the quality of the collections registry or its overall success. The Collections registry is part of a highly significant product that will be of great benefit to a wide range of users. Assembling these resources and managing to harmonize the very different formats and different conventions for applying the same formats is a significant achievement. The underlying resource is exceptional. There would be no point even bothering to improve the usability of an inadequate resource of dubious value.

Many of the issues identified in the early rounds of analysis have already been incorporated into the interface. Similarly some of the issues reported in this document have been solved or ameliorated by ongoing redesign efforts. It is inevitable that a usability report of an ongoing iterative redesign project is always out of date. The report contains screenshots to illustrate some of the issues, but some of these are now solely of historic value and others will be incorporated into redesigns in the near future.

## **Usability Analysis Methods**

We include a brief outline of the different methods employed. Fuller details are available in the papers cited above. With any method, and particularly with discount methods, it is important to acknowledge the scope and focus of the approach, and not to create the impression that a comprehensive evaluation is being reported. The aim of iterative evaluation is to move towards comprehensiveness by addressing slightly different issues in each iteration. With respect to iterative usability (Medlock et al. 2002), part of the success of the method is to first remove the more blatant usability flaws so that it becomes possible to detect the more subtle flaws that hitherto have been masked.

## **Intended Users of the Collections Registry**

As stated on the Collections Registry About page ([imlsdcc.grainger.uiuc.edu/collections/about.htm](http://imlsdcc.grainger.uiuc.edu/collections/about.htm)), the intended users of the IMLS Digital Collection Registry are:

- The general public to discover and access interesting and innovative digital collections.
- Institutions and organizations to seek potential collaborators based on the content of their digital collections.
- Educators to find high quality digital collections for use in the classroom.
- NLG applicants to understand the types of digital collections funded by the NLG program.
- IMLS staff.

Given the complexity of the design challenge, the approach has been to provide a progressively more accessible site. Initially it has been developed to support the needs of the more expert kinds of user, who can be assumed to be familiar with web based applications and museum resources in general. These simplifying assumptions will be progressively relaxed, requiring catering to an ever broader user base with a greater diversity of skills, interests and backgrounds.

For the initial round of usability work reported here, we chose to focus on improving the usability for people at IMLS and people who are part of IMLS funded projects or interested in the projects precisely because they are IMLS funded (perhaps for purposes of future collaborations). They will use the resources in a very different way from other kinds of end users such as educators or members of the public. We next extended out to consider librarians acting as intermediaries using the registry as a resource to inform recommendations to patrons. All these user types have their own unique background interests, goals and prior knowledge but share a far greater expertise in information navigation than ought to be assumed for more general users. In line with the process of incremental improvement, we aim first to remove existing usability barriers that make the interface confusing for these kinds of users. Such confusions are highly likely to be at least as confusing for less specialist users and so need to be addressed in any case. Once these major confusions are mostly addressed we can move on to also considering the needs of users who have less sophisticated skills.

## **The Overall Design Challenge: “What IS a Collections Registry?”**

The interface to the collections registry presents one particular overall design challenge: explaining to potential users what exactly it is. Since it is a significant research project, there is much about it that is unique. People may not have any idea of what a collections registry is, and what it might be for, let alone how to use one. The idea that it is a resource giving access to a variety of

very different collections may not be clear. People may expect it to provide direct access to actual digitized records from a variety of sources. This is a perfectly reasonable assumption – it is of course what the item level repository now provides (but this was not publicly available at the time of this first round of testing). Some users may not realize that the collections registry brings together only IMLS-funded projects. Rather they may think of it as a generic resource, or one with a particular content focus.

This design challenge is one shared with many novel kinds of software. It means that an additional criterion is added to the usability challenge. Not only must the interface give a novice clues about how to do what she wants, but also give her clues about what she might want to do. As well, the system must allow the more frequent user to use it more efficiently and permit more sophisticated use.

## Testing Without Users

Appendix 1 includes an illustrative extract from a combined heuristic evaluation and competitive analysis of the collections registry, comparing it with two other sites facing similar design challenges: EnrichUK and the National Science Digital Library. Analyses such as these are relatively fast to perform and can serve as a powerful basis for guiding the design of user testing, informing which aspects of the interface to concentrate on in the testing process. For example, a heuristic analysis or cognitive walkthrough may reveal particular areas of concern that warrant a more detailed analysis based on the power of user testing to provide a fine grained understanding of not just what might be problematic but why. With this richer understanding it becomes much easier to propose design fixes. By contrast, some errors uncovered in a heuristic analysis or cognitive walkthrough can be so obvious, that it is not worth allocating resources to validating them by more systematic but slower and more expensive user testing. Instead, redesigns to the interface can be proposed and implemented immediately. Naturally this applies to blatant errors detected but it can also apply to potentially confusing or ambiguous language. This is especially so when an alternative wording can be devised quickly in the light of acknowledging the existence of the possible ambiguity, even when there is no hard evidence that real people have actually been confused.

## User Testing

Two rounds of user testing were completed in Spring 2005:

- 1) With representatives from IMLS during the WebWise conference in February 2005 in Washington DC.
- 2) With librarians at UIUC in March 2005.

Subjects were asked to try a number of specific tasks highlighting particular issues and uses that we were interested in. They were also invited to explore and talk about their own particular information needs and interests.

Camtasia was used to record the interactions with the system, and the participants' comments. A laptop was used for the testing. This permits substantial flexibility in user testing compared to using a desktop machine or even a usability lab. It becomes possible to take an application to be tested to various locations including the context in which the tool under development might be used, such as a person's office or a public space such as a museum. However, care must still be taken with the impact of the setup on the results of the study. One issue that was discovered was that bringing a laptop to a volunteer rather than a volunteer to the system can substantially reduce 'test anxiety' in volunteers (exacerbated by referring to them as subjects). However, it was found that some volunteers were unused to the operation of a touchpad on a laptop and so had far greater difficulty with moving the cursor than if a mouse had been provided. Our recommendation is to continue using a laptop for user testing, but to ensure that a mouse is always provided.

## Results

The following subsections present a sampling of the results obtained from the interaction of the analysis activities outlined above. They are organized by the webpages that embody the issues under consideration.

### Initial Impressions of the Collections Registry

The design of the registry home page (figure 1) attempts to explain what it is and what it is for. As with much design for the web, the design challenge is that while it is entirely possible to include a lot of explanatory text, the more text that is provided, the greater the likelihood that users will ignore it all. The current design is spare and functional, and users were able to get from the home page to the most likely place to address their needs and interests.

However it must be acknowledged that perhaps the home page is not too inviting, looking more like a work of engineering or a reference tool than a work of marketing. One user remarked that it looked "too legal". The aesthetics of website design are very

important. In many sites, aesthetic considerations overwhelm usability, resulting in pages that look very appealing but where users have great difficulty in actually using to obtain information. The appearance of quality embodied in the design then leads users to blame themselves for their failure to use the site productively – since the site looks so gorgeous, any problems must lie with the user rather than the site. It is generally advisable to consider aesthetics *after* considering good information architecture, and clear functionality and alternate means of access. This is very much the approach embodied in the current design and is to be encouraged. Future planning can consider whether it is cost-justifiable to allocate scarce resources to making an effective and usable interface also more visually appealing. This is substantially less expensive than retrofitting a beautiful interface with basic usability.

## **Navigating within the Collections Registry**

By contrast to the other aspects of the site, relatively few navigational difficulties were identified. The overall information architecture of the website is logical and small (despite the number of collections covered), greatly enhancing usability. In website usability, navigation is often a major area of weakness. It is to the credit of the initial design work on the registry that so few problems were observed. Of course it is in the nature of high speed formative evaluation methods that their negative findings are stronger than their positive findings. We are confident that the problems that we have identified are indeed real. We are far less confident that our failure to find problems with particular use contexts means that there are indeed none to be found.

Despite the relative ease of navigation, some users remarked on the absence of ‘breadcrumbs’: the widespread navigational feature of indicating to the user where they are in a navigational hierarchy. Familiarity with navigational resources in other sites means that some users come to expect them in other sites and to rely on them as comfortable ways to orient in an unfamiliar landscape. This applies especially when the user encounters a difficulty, such as guessing what to click on to get to what they want but for once unfortunately guessing wrong. There are now several navigational conventions and styles of use that can be provided, and well organized and well resourced sites should consider providing as many as possible. These include basic support for browsing (often across the top and down the left column), breadcrumbs, a site map, search, alternate routes or representations for certain kinds of users, and accelerated access to certain kinds of often used or critical information. The collections registry currently only lacks breadcrumbs and a site map. The relative simplicity of the site may mean that these are unnecessary, but some users will still expect them.

Another issue that arose that the design team were already aware of in their initial planning was the integration of the site into the overall IMLS website. At the moment it is a standalone website that links to the IMLS site but is clearly distinct from it. Is that understandable by users? Does it make sense? And is it the best way to proceed? These higher level strategic issues have implications for more tactical usability issues. For example, throughout the site all pages have a consistent banner and left navigational column. Clicking on the green IMLS logo on the top left of each page takes you back to the collections registry home page. Users employed that a lot, just guessing what it did and finding their assumption confirmed, by analogy with many other sites that use this navigational resource. But should there also be an equivalent logo-link to the IMLS home page ([www.imls.gov](http://www.imls.gov))? How much will that help and how much will it add confusion about the distinction between the two? Worse, when the item level repository becomes publicly accessible, how should navigation within that be organized? And what about navigation between the two repositories? These will be active design concerns in the next phase of the project. In this phase the focus was just on the collection repository, for which the current design solution works well.

The site may also need to address certain user misconceptions about its overall design. Typical informational web sites contain a large amount of data that is organized in a hierarchical tree structure with each branch providing ever more detailed ranges of options until actual values are reached. In one sense that is how the collections registry site is in fact organized, enabling users to drill down to see one of the over 130 particular collections. However choosing one of the six main browse options on the home page (figure 1) does not mean breaking off from the set of 130 to a smaller subset. It just means choosing a different way to undertake a browsing of the entire set, employing a different (perhaps hierarchical) narrowing-down process. This has the potential to be highly confusing, but at least for the relative experts studied to date, it does seem to work reasonably well. However this issue will be revisited in future usability analysis on other user types.

## **Browse Collections By Subject**

This option (figures 2 & 3) was a major focus of our user testing and analysis, based on previous work that had identified Subject as a major access route. The design challenge is that there are many collections on many different subjects, but since they are museum collection, with a concentration on historical topic. Subject level access can be provided via pre-existing sophisticated hierarchies, but these can impose an unacceptably large number of substeps to be considered and navigated as the user works down a hierarchy. The Dewey Decimal system and the Library of Congress Subject Headings are two classic thorough and extensible subject hierarchies, but each can be problematic in providing fast easy access in a website environment.

The current design of the browse by subject interface is far simpler than those more generic solutions, but even so can be rather daunting in the amount of text it presents to the user. It uses a directory structure similar to that found on many websites, but as a trade-off for being able to fit all the main categories into a single page, it can appear dauntingly cramped. That can be highly efficient for an expert, but intimidating for a novice. For example, one user was initially asked to explore collections about US history – an extremely broad topic, but even so it was somewhat buried as one of 21 options within the subsection of Social Studies. The United States history link clearly indicates that there are 103 collections relating to the topic (unsurprising that there should be so many given the nature of the project). Unfortunately, clicking on the link results in a very long list (figure 4) of each related collection, consisting in each case of the collection's name, links and a brief description. There is no organization of that large set into other smaller more manageable subsets. This means that the ability to browse, which is at least feasible on the subject page, degenerates into a scan - pick/reject activity on the US History list page of 103 items. Also, the results page fails to remind the user that there are 103 items to consider, even though that information is available on the Subject page. This is a simple error, relatively easy to fix by replicating that information at the top of the list. We consider the results list and selecting individual collections in later sections.

## Lists of Results

Several of the different ways of browsing lead to a list of collections that has the same structure (figures 4 & 19). Users noted that within the list it is not immediately apparent how it was ordered (it is not by alphabetical order of project names). This can be disconcerting and makes certain types of scanning more problematic.

The heading for each collection in the list is in dark green on a light green background. This is still readable given its relatively large font, but some users expected the title to be a clickable link as well as a heading, based on experiences with this convention in other websites. This seems a desirable addition, but what should that title link to? The collection's home page at its hosting institution (figure 8) or the Full Description (figure 5)? Whichever choice is made risks confusing some people, as does doing nothing. For reasons outlined later we recommend linking to the full description, realizing that this choice has both negative and positive implications for usability.

Earlier usability analysis had noted that in this and other list structures within the site, the white space before and after the green header was approximately the same size. This made it harder to perceive a given list item as a group of header, two links and a short piece of text. A simple design fix was incorporated into a subsequent version of the interface, making the space before the header larger than the space after the header and so making the grouping into list items much clearer.

One particular design challenge of the collections registry is how to enable users to gain a sense of the available collections and then, when they find one that they are interested in, to know how to leave the registry site and go to the collection site. Furthermore, users need to know when they are leaving the registry and moving over to a particular collection site. In testing, it was found that the icon used to indicate leaving the site was reasonably successful in giving an understanding that clicking on that link would result in leaving the current site, whereas other nearby links (particularly the full description link) without the icon led to informational pages about the collection within the current site. In some cases users were not able to guess in advance the meaning of the icon, and had not read the explanation at the bottom of the page, but were still able to subsequently infer its meaning from the resultant effect of going to the collection website and seeing the usually dramatically different design (e.g. figure 8). The back button allows easy recovery if this result is not what is wanted, and thereafter those users mostly learned the icon's meaning and were able to apply it to other links with and without the icon. In initial analysis, we had been concerned that the meaning of the icon was not likely to be easily guessable. In testing we found that to be true for some people, but that recovery was very fast, smooth and did not disturb or confuse users. A better icon design would of course be desirable, but given the results to date we recommend setting that as a relatively low priority. Several users remarked that on leaving the registry to go to a collection's home page, it would be nice if all such homepages pointed back to the registry, but they also conceded that this would be difficult to achieve with so many independent projects.

Another design concern had been the distinction between the collection home link and the full description. Would users be able to distinguish that clicking on them led to pages providing two very different kinds of information? We found that distinguishing them was not a problem, but that the collection home link, being to the left is the one that gets clicked on far more often. This is presumably exactly what the collection owners would want to happen. The only concern is that the full description contains a wealth of information that we believe would be highly valuable to those users trying to choose between different collections to explore and recommend. Our current expectation is that the full description data will be of most interest to more specialist users such as reference librarians, school media specialists and teachers who are trying to make decisions between different candidate collections for particular purposes in the future. By contrast an end user is more likely to want to get straight to something that they find interesting rather than review a set of options to carefully select the most appropriate one (a satisficing versus an optimizing strategy). For end users we need to support this more rapid, less considered access (analogous in spirit to the Google "I'm feeling lucky" option), while still providing the rich supplementary information about the collections to the specialist users. Therefore we are not too concerned about the relatively rare use of the full description use observed to date in open-ended exploratory use. It is

however something of a concern that when subjects were given a task to find out about whether a given collection had a certain kind of resources or features, they very frequently went straight to the site and ignored the full description. This is especially noteworthy given the relatively specialist expertise of the user sample selected – precisely the people most likely to find the content of the full description of interest.

## Full Description

On finally trying out the full description link (figures 5, 6 & 7), users frequently expressed surprise at the wealth of information contained. As one user noted: “This is a wonderful resource right here... It is just kind of buried.” This means that we have more of a functionality marketing problem than a classic usability problem. That is, it is not the case that users know what they want but don’t know and can’t guess the interaction sequence to get to it. Rather they have an information need but have no idea that the website contains particular resources that directly address that need, and so they try and invent indirect strategies to approximate to their need. Providing this kind of awareness information is a challenge. One way is to feature extracts from the deeper levels higher up in the access hierarchy to give users clues about the kind of information that is available if they are prepared to drill down. Mechanisms such as a featured site of the day or week, located at or near the home page with extracts from the full description could help.

Although the full description information is likely to be a minority interest as noted above, it seems that even for that minority of users, it is not yet fully exploited. Testing on librarians (the typical envisaged users of this detailed information) revealed a number of problems. Firstly, initial users may not be aware that the information even exists. This seems to be due to lowered expectations arising from experiences with other portal-like sites that frequently contain a large list of organized links, each accompanied with a short blurb describing what can be found by going to the link. As noted above, for the more casual visitor, this is entirely sufficient, and our design should not get in the way of enticing them to directly go to the first link that intrigues them. But even for information specialists like librarians, the full description may get overlooked. Different users acted differently in the degree to which they considered clicking on the full description link. This problem needs to remain under review.

Once going to the full description page, a large amount of information is available. The quantity varies somewhat from collection to collection, but is typically a rather long list. In most aspects of website usability analysis, this would immediately lead to a recommendation to break it up into smaller pages that are easier to read without too much scrolling. We also have to consider the degree to which this full description might be printed out, or copied and pasted into other documents for side by side comparisons or discussions and recommendations with others. A redesign with multiple subpages may solve problems with some kinds of uses but introduce problems with other kinds. The problem remains of a large amount of information of varying kinds that would be of interest to very different kinds of people

Organization of this information is problematic. Within-page links are provided at the top of the page, but these were rarely used, perhaps because it is not clear that they are indeed within-page links rather than linking to other pages of information. Users did not bother to fully scroll when they assumed that scrolling would just give them more of what they could currently see rather than quite different kinds of information.

The page layout is made longer by its format as lists of lists. The title, URL and Description are all typically very terse. However the GEM subjects covered (of great interest to educators) can be extensive, as can lists of geographic coverage and audience. Even time period and objects represented extend over several lines. Some information is highly specialist such as format, copyright and IP rights, metadata schema used, IMLS grant number, etc. If too prominent, they can distract from the information likely to appeal to a wider audience. The ordering could be improved to group and prioritize those fields expected to have the broadest appeal or most use. For example, the audience field is the 11<sup>th</sup> item, but perhaps deserves to be positioned higher than, say, format. The supplementary resources, audience and GEM subjects covered should be grouped together and figure more prominently if they are to be usable by educators. Sublinks (internal or external by usage, such as “for educators” may prove helpful.

The associated collections part of the resource is potentially valuable but rather problematic. We particularly investigated its usability in our testing because prior analysis had revealed problems. The difficulty seems to be that the full description is expected by many users to contain some broad overview information and then increasingly detailed information about aspects of the collection. associated collections information is somewhat buried in this detailed description when actually it should be treated as of more interest to the general user. The design challenge is similar to that faced by Amazon in showing details about a particular book: general information for most people and then a variety of particular kinds of information for smaller minorities of users. In addition Amazon provides various kinds of ‘see also’ links including recommendations of other books purchased along with the current book. The associated collections information is very like this kind of ‘see also’ information.

The URL field also points off the collections registry site to the home page of the actual collect. As in the collection listing pages from the browse options (e.g. figure 4) it has the external link icon. However instead of being labeled “Collection Home” it has as its label the actual collection home page URL. This was found to be even more recognizable to users as indicating that clicking on

it would take you from the registry site to the particular collection home page. One design possibility to consider is to use this format in the listing display as well, incorporating greater guessability and consistency at the expense of sometimes clumsily long URLs and a break with the convention of link names acting as supplementary labels.

## Browse Collections by Object

This browse option (figures 9 & 10) has a number of problems. Firstly, some subjects reacted negatively to the quantity of text and number of options on the page. This was most noticeable in the case of one subject who was a librarian. This needs to be considered carefully – if even a librarian has a slight negative reaction to overwhelming information navigation, we can suspect that people with less sophisticated information navigation skills are also likely to be at least as confused. The difficulty is that switching to more of a list format would probably lead to more scrolling and clicking as a result of a less information dense design.

The option also embodies a classic usability problem – a seemingly innocuous and ‘obvious’ word turns out to have a variety of different meaning that are understood by different people in different ways. In this case the problem was around the word ‘object’. As one volunteer said: “When I see object I think of something 3D. Something round or square, not something that you would look at flat”. That is, the interface is using the word ‘object’ as a way of enabling the user to browse by the kind of thing that the artifact is, broken up into categories such as image, text sound, etc. However users may be using the word ‘object’ to mean ‘three dimensional artifact to be contrasted with a painting, print or other flat item’

Furthermore there are many different kinds of object that are grouped into 8 broad categories: Dataset, Interactive Resource, Physical Object, Text, Image, Moving Image, Sound and Unknown. These categories themselves are potentially problematic to some users for a variety of reasons:

- The size of each category varies widely, consisting of 1, 4, 4, 6, 8, 15, 43, & 40 object types and containing 2, 5, 11, 14, 30, 60, 177 & 215 collections.
- With large numbers of object types within a category, it becomes much harder to read through and especially to browse through the options. The current design works well for groups of up to about 15 items, but fails on larger groups.
- Also, the level of analysis may be confusing. Given that it is a digitized collection, it can consist of images of physical objects such as headdresses. But these can be found in the physical object and not the image category, unless it a collection of prints of physical objects (like clipper ships) in which case it is found under image.
- Some types are present in more than one category. For example, “scrapbook” is in both Image and Object, linking to the same two results (figure 19).
- The term ‘Object’ is re-used as a category.

The whole category of “dataset” was found to be confusing to a number of users, again emphasizing the variability of user needs and backgrounds. Presumably this would be far less confusing to, say, a high school science teacher.

## Browse Collections by Place

Geographic regions (figures 11 & 12) can be specified at different levels of detail, and there can be overlapping regions. For example, a collection’s region may be United States, Pacific Coast US, California, or Los Angeles. Even the use of a more rigorous controlled vocabulary would not eliminate all potential confusion. Currently the listing of options is alphabetical, which can initially be confusing to people, and was often remarked upon as a surprising way to organize the data. With a relatively small list of place options this is arrangement acceptable, but the longer and more heterogeneous the list, the harder it is to gain a true sense of what is there by browsing. The happenstance of the first entry being “Africa” caused an initial confusion to some users who then expected that results were first grouped by continent, then country then perhaps state or region. Better representations might be a more hierarchical arrangement of the options, perhaps supplemented by a map-like graphical interface.

## Browse Collections By Title

This option (figure 13) is likely to be of use only to people who already know or who would recognize a collection’s title. It could be used for browsing, but already the number of collections is so extensive that we suspect it will in reality only be used relatively rarely and for more specialist purposes by more expert users. Titles of collections are frequently problematic from a usability perspective. They may prominently include a donor’s name, which conveys no useful information to the casual user and can be distracting or positively misleading. Financial imperatives may require such names in the title, but the consequential tradeoff in usability degradation should be explicitly acknowledged. This potential confusion seems to be exacerbated in web applications compared to physical buildings, presumably because the real world contains many additional contextual clues to alleviate the confusion.

## Search Collections

Searching is increasingly being used by web users as an alternative to browsing. It is important that any interface provides mechanisms for both, ideally from the home page (figure 1). The search feature works well, and the highlighting of the searched terms in the results listing particularly promotes learning of more sophisticated searching approaches using multiple terms. However the search engine currently lacks a thesaurus. This means that a user searching for a particular term will only find collections that contain text that exactly match what they typed in. For example, a search on “agriculture” yields 9 collections that have the word agriculture variously in their title, “other topics” field or Description field (figure 16), whereas a search on “farming” yields no results (figure 17). Similarly, one user chose to search on “U.S. History” and was surprised to find only one collection returned – on the U.S. Virgin Islands.

A generic solution to this problem is difficult and expensive. It should be a matter of future research, and might be amenable to user-generated folksonomies. A related problem is typos. Errors in entering a search term are common, both simple typing slips, and also cases where the user does not know the correct spelling of a specialist term or proper name. Again, generic solutions are expensive, but smaller ad-hoc solutions can provide incremental improvements (such as logging and mining failed searches for examples of common typos and synonyms that could be added as alternative metadata).

## Browse Collections by National Leadership Grant Project and by Hosting Institution

Two browse options were provided for the more specialist user group consisting of IMLS staff, grant holders, potential grant applicants and collaborators and others interested in the collections, precisely because they were funded by IMLS grants. The kinds of features and options such users would want are very specialized and can employ and assume more specialized knowledge and terminology than features aimed at more general users. In testing however it rapidly became clear that these additional features could prove confusing to non-specialist audiences, also distracting from the browse options that were more geared towards them. The proposed solution, now implemented, was to move these options lower in the main page in a clearly separate area labeled “Other Browse Options” and to support browsing “By National Leadership Grant Project” and “By Hosting Institution”.

In testing, the browse by national leadership grant project name option revealed various potential confusions that can occur between the name of the collection and these name of the grant project. These are often identical, but not always.

The browse by hosting institution option lists all institutions on one page, grouped by state and then in alphabetical order (fig. 14). It provides internal links to each state which are then highlighted in pale blue (figure 15). This is very effective in managing a complex list. However the details of exactly how the internal jump is managed led to some users deciding to scroll up slightly in order to orient themselves, to see some white space, clearly indicating the start of the highlighting pale blue box. A few pixels of adjustment of the internal link would greatly improve this very helpful feature. The term “hosting institution” is itself problematic. It is used to address a fine distinction arising out of multi-institutional projects, but is likely to be confusing to people outside the project and IMLS, particularly due to the potential confusion with ideas of web hosting by ISPs.

## Advanced Search

This feature is still under development, and so was not evaluated in depth. However ongoing usability work will inform its future refinement. At this stage, based on our current analyses and studies of other parts of the system, advanced search should prioritize narrowing down a search in circumstances when a large number of results has been obtained or the user expects to have to narrow down as they get a sense of what is available (figure 19).

## Conclusion

As well as enabling us to progressively improve the interface to the collections registry, this work has also enabled us to refine the evaluation techniques so that they can be applied to future projects. There is a clear need for usability methods that are substantially less expensive and time consuming than conventional rigorous experimental methods, and which can be smoothly integrated into the ongoing development process, including at the early stages of design. Continuing usability work will extend the activities reported here, including broadening out the analytic concern to include other user groups, especially educators, and also apply the techniques to the item level registry.

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# Appendix 1

## Heuristic Analysis of Collection Registries

As more collecting institutions provide access to materials online, it can be difficult for users to identify reliable digital collections. A collection registry collocates high level descriptions of digital collections to guide users to useful resources. The University of Illinois, Grainger Engineering Library has been participating in an effort to build a repository of both item and collection level information for projects created with funding from the [Institute of Museum and Library Services](#) (IMLS). The [IMLS Digital Collection and Content Project](#) will serve as the core of Assignment 4 activities.

### ***IMLS Digital Collections Registry***

- [Read Heuristic Analysis](#)
- [View Site](#)

#### **Purpose**

The purpose of the IMLS Digital Collections Registry is to make digital collections funded by IMLS National Leadership grants more visible and more usable. In addition to building an Open Archives Initiative repository of item level information, the DCC is also building a collection level registry of digital projects.

#### **Users**

As stated on the Collections Registry *About* page, the intended users of the IMLS Digital Collection Registry are:

- The general public to discover and access interesting and innovative digital collections.
- Institutions and organizations to seek potential collaborators based on the content of their digital collections.
- Educators to find high quality digital collections for use in the classroom.
- NLG applicants to understand the types of digital collections funded by the NLG program.
- IMLS staff.

### ***EnrichUK***

- [Read Heuristic Analysis](#)
- [View Site](#)

#### ***Purpose***

Enrich UK is similar to the IMLS DCC project in that it highlights created with funding from the UK Lottery New Opportunities Fund.

## **Users**

EnrichUK does not explicitly state who their target audience is for the resource, however press materials and other language on the site suggests it is aimed at a general user interested in the United Kingdom's cultural heritage.

## **National Science Digital Library (NSDL) Collections**

- [Read Heuristic Analysis](#)
- [View Site](#)

## **Purpose**

The National Science Digital Library provides access to information generated by National Science Foundation grants and other sites related to the study of science, engineering and mathematics. In addition to item level searching NSDL supports browsing of collection level descriptions using a text interface and a Java application that has created a topic map of different collections.

## **Users**

NSDL is intended to support science education at all levels. The intended users of the site are both educators and NSF funded projects who provide educational materials.

## **Heuristic Analysis of Collection Registries**

[Home](#) | [IMLS Digital Collections](#) | [EnrichUK](#) | [National Science Digital Library](#)

# **IMLS Digital Collections Registry**

## **Simple and natural dialog (including design)**

- The logos and header consume almost 30% of the available screen real estate at 800x600 pixels. While it's important to identify the project and funders, the space could be more effectively used. At 800x600 the arrangement of the header forces most of the choices for action to fall off the bottom of the screen, with the exception of browsing. At 1024x768 the main Browse categories and the Search box are visible, but the extended Browse categories are just barely visible.



- The Browse categories box only takes up a portion of the horizontal space, forcing sub-text to wrap and force content further down the page. If this table extended further along the horizontal axis additional content could be brought above the fold.
- Search and browse seem to be relatively clear and common descriptions of user choices.

## Speak the user's language

- The main title of the Collections Registry frequently refers to "IMLS." It's not until the user scans downward to the introductory paragraph that IMLS (Institute of Museum and Library Services) is spelled out. While this may be appropriate for practitioners in the field familiar with IMLS' activities, non-professional users may find it confusing.
- When [Browsing Collections by Subject](#), IMLS DCR has adopted the Gateway to Educational Materials (GEM) subject categories. While this is explained in a footnote at the bottom of the page, the categories may not immediately be obvious to professionals who are familiar with other subject classification schemes such as Library of Congress Subject Headings. It appears that LC Subject headings are included in the full
- The [Browse by Object Type](#) does not include any explanation of if a controlled vocabulary is being used for describing objects.
- [Browsing by Place](#) is confusing. The listing includes not only *where* a collection or project is located, but what the collection is *about*. So a collection housed in New York with objects in Africa will appear both under Africa and New York. The list is organized about. Common conventions for geographic hierarchies (country, region, state, city....) are not followed here. Since other Browse categories are grouped into sub-topics grouping geographic browsing into *about* and *where* categories.
- 

## Minimize user memory load

- Brief display of collections descriptions includes an icon to indicate that the link will take the user to another site. However the icon does not include an ALT tag to explain what it is. Users must have read the explanation in the footer and remember that this icon stands for an external link.

## **Be consistent**

- [\*Browse by Subject\*](#) for main headings the numbers in parenthesis are qualified by "collections" while sub-categories simply have a number.
- [\*Browse by Hosting Institution\*](#) takes the user to a listing by the state an institution is listed in (the page title changes to "Browse Institutions with Digital Collections by State"). While those familiar with IMLS will recognize this as a common way to announce grant projects, the user may be expecting an Alphabetical list of institutions by name, rather than a list organized geographically. This is also inconsistent with the way the Subjects, Objects are grouped.
- [\*Browse by NLG Leadership Grant\*](#) takes the user to a page named "Browse National Leadership Grants with Digital Collections," with items arranged alphabetically by project title.

## **Provide feedback**

- When searching for collections, DCC highlights terms that were found from the search.
- When Browsing by Institutions and NLG grants, the list highlights a selected group by changing the background (e.g. the "B's").

## **Provide clearly marked exits**

- The DCR uses consistent Breadcrumb navigation at the top of the content area that provides an easy exit to higher levels of the site.

## **Provide shortcuts**

- The DCR uses left-hand navigation to provide shortcuts to other areas of the site. The header also remains constant with a links to Home/About/Contact Us.

## **Good error messages**

- While DCC provides users the opportunity to edit search terms if a search doesn't produce any results, the resulting error search does not provide access to controlled vocabulary subject or object terms as is the case on the Advanced Search page.

## **Prevent errors**

- One of the biggest challenges in these kinds of projects is link rot. Currently there's not an easy way to recover from a bad URL. IMLS DCR sends you out to the internet regardless of whether there's something on the other side. Would be nice if there was a way to test URLs before sending users to a bad URL. (such as displaying an error message {Resource Temporarily Unavailable} or something.

## Heuristic Analysis of Collection Registries

[Home](#) | [IMLS Digital Collections](#) | [EnrichUK](#) | [National Science Digital Library](#)

# EnrichUK

## Simple and natural dialog (including design)

- EnrichUK uses some subtle coloring, and small typefaces for labels to "website" and "full record links" A light purple/pink background surrounds the title. The links are a slightly different shade that isn't readily visible.

## Speak the user's language

- As a Yank I was a little confused by the "Countries" tab on the main navigation. In fact, EnrichUK is comprised of individual projects from the "Countries" that make up the United Kingdom (Scotland, Wales, etc). This is probably common terminology in the UK, but is confusing to those outside the country.

## Minimize user memory load

- The brief record display sometimes include icons that seem to suggest media types in the collection (i.e. a speaker for sound collections, film frame for video, etc.) However none of the icons are explained and do not have ALT tags. Most records appear without any icons making it inconsistent.

## Be consistent

- The list of projects under Countries uses a slightly different record display than the main Browse screen. While the links to "website" and "full record" are still there, they appear below an additional item "Project Name."

## Provide feedback

- After Browsing by topic the user only sees a list of titles and brief descriptions. There's no indication of why a particular item met the browse criteria. Would be helpful to display Topic categories for each item.

## Provide clearly marked exits

- Enrich UK maintains the same global navigation on all screens (even error screens) so users can get to other areas of the site easily.

## Provide shortcuts

## Good error messages

- Unfortunately the QuickSearch and Advanced Search doesn't appear to be working this evening. Instead of presenting the user with a understandable error message, a system message including SQL

query language is returned.



- Full record descriptions were also unavailable, a similar SQL query statement was presented as the error message.

## Prevent errors

- The site does suffer from errors, so this heuristic needs to be addressed.

## Heuristic Analysis of Collection Registries

[Home](#) | [IMLS Digital Collections](#) | [EnrichUK](#) | *National Science Digital Library*

# National Science Digital Library (NSDL) Collections

## Some initial Usability Problems

The NSDL Collections section is relatively simple - an alphabetical list of collections by title. There's no choice given to the user about how to sort, and no clear way to search JUST collections areas. (the search box on Collections searches Item level records in addition to collection level records.)

Searching Collections is possible, but the user must first go to Search and select a limiter "Collection Records." This is not obvious from the Collections page.

The alternative to the alphabetical list is something called "[NSDL at a Glance](#)" a Java application that creates a visualization of NSDL collection subject areas. While interesting and innovative it suffers from many usability features. There's no easy way to show the tree without lots of screenshots. I'd encourage you to visit before reading this.



## **Provide feedback**

- In the topic tree the boxes only display titles or topic categories for resources. To see a description the user has to carefully hover the mouse over a title. If the mouse moves the description disappears. No other information is available about the resource.
- Nodes of the tree that have matching searches are indicated with a flag and border. Leaves that match searches use a small bullet point, clicking on the bullet takes you to that leaf.

## **Provide clearly marked exits**

- Even when using the Inxight tree viewer the NDSL main navigation remains visible.

## **Good error messages**

- When a user clicks on a title that is a terminal leaf in the topic tree nothing happens. This user expected the selected site to launch for viewing. There was no feedback from the tree that this might happen or that nothing would happen because this was a terminal leaf.
- The Inxight software allows users to search the tree. However if too broad a term is used the tree simply collapses in on itself.

## **Prevent errors**

- The Inxight viewer does include a help document. However some of the icons shown in the help file are not available in the version being used by NSDL.

# Appendix 2: Figures

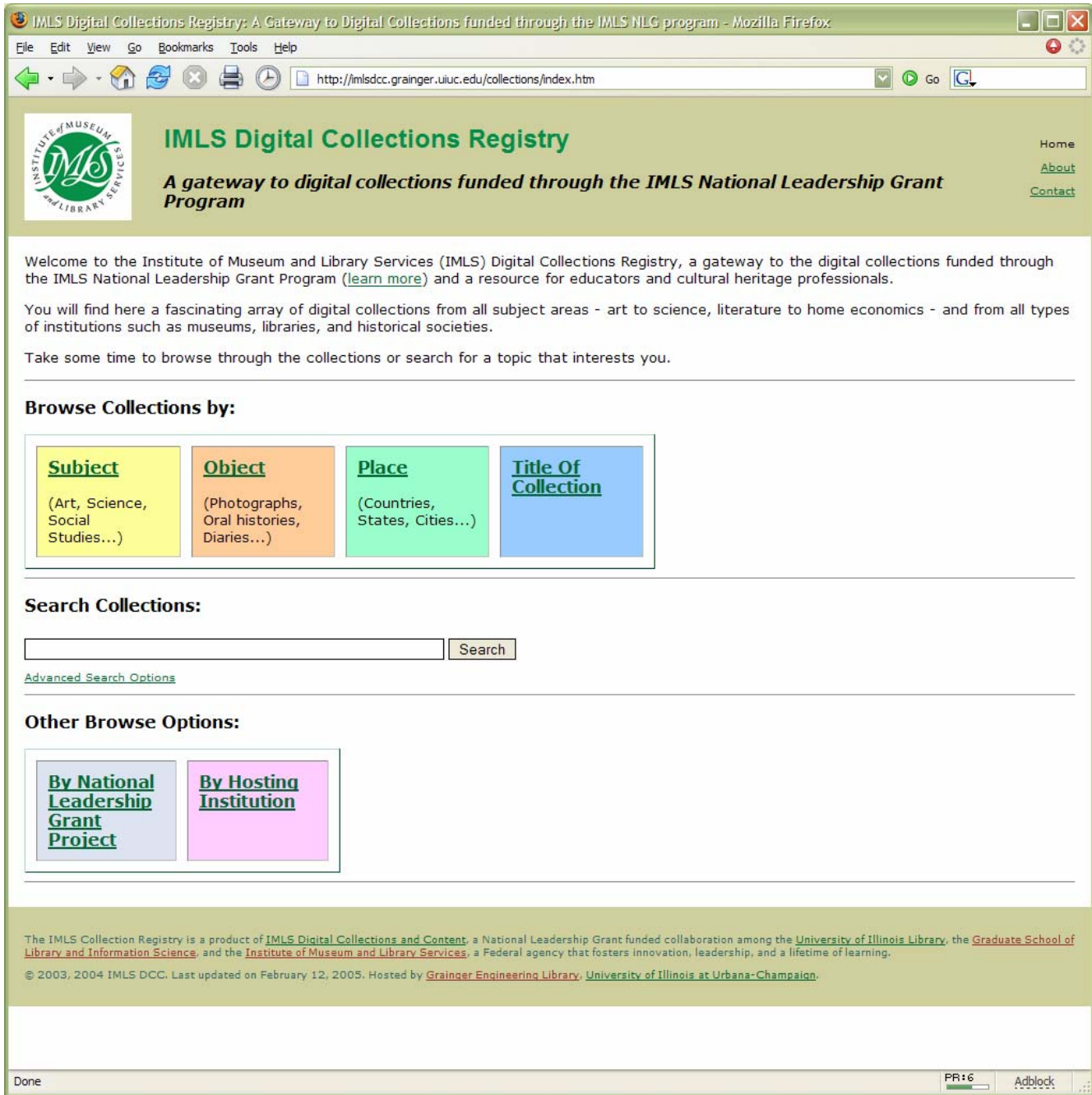


Figure 1

Browse Collections by Subject - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlscg.granger.uiuc.edu/collections/GEMTopPlusSubs.asp

**IMLS Digital Collections Registry**  
 A gateway to digital collections funded through the IMLS National Leadership Grant Program

Home  
 About  
 Contact

---

**Browse Collections by Subject**  
 (Collections may be listed under more than one subject)

**Browse Collections by:**

- Subject**
- Object**
- Place**
- Title**

**Search Collections**

Go

**Advanced Search**

---

**Other Browse Options:**

- By National Leadership Grant Project**
- By Hosting Institution**

---

**Arts (65 Collections)**

[Architecture](#) (8), [Computers in art](#) (3), [Dance](#) (2), [Drama/dramatics](#) (4), [Film](#) (3), [History of art](#) (6), [Informal education in art](#) (2), [Music](#) (9), [Photography](#) (28), [Popular culture](#) (8), [Technology in art](#) (3), [Theater arts](#) (5), [Visual arts](#) (33)

**Educational Technology (9 Collections)**

[Educational media](#) (3), [Informal education in educational technology](#) (3), [Language laboratories](#) (1), [Multimedia education](#) (6), [Technology planning](#) (1)

**Foreign Languages (3 Collections)**

[History of foreign languages](#) (1), [Linguistics](#) (2)

**Health (6 Collections)**

[Aging](#) (2), [Chronic conditions](#) (1), [Consumer health](#) (2), [Death and dying](#) (3), [Disease](#) (1), [Environmental health](#) (3), [Family life](#) (1), [History of health](#) (2), [Human sexuality](#) (1), [Informal education in health](#) (1), [Mental/emotional health](#) (3), [Nutrition](#) (5), [Safety](#) (2), [Smoking](#) (2), [Substance abuse prevention](#) (3), [Technology in health](#) (2)

**Language Arts (12 Collections)**

[Alphabet](#) (2), [Grammar](#) (1), [Listening comprehension](#) (1), [Literature](#) (9), [Reading](#) (1), [Story telling](#) (2), [Writing \(composition\)](#) (1)

**Mathematics (3 Collections)**

[Algebra](#) (1), [Calculus](#) (1), [Geometry](#) (1), [Number theory](#) (1), [Patterns](#) (1), [Statistics](#) (1), [Trigonometry](#) (1)

**Philosophy (1 Collections)**

[Aesthetics](#) (1), [Epistemology](#) (1), [Existentialism](#) (1), [Marxism](#) (1), [Phenomenology](#) (1)

**Physical Education (2 Collections)**

[History of physical education](#) (2), [Individual sports](#) (1), [Informal education in physical education](#) (1), [Outdoor education](#) (1), [Team sports](#) (1)

**Religion (6 Collections)**

[Buddhism](#) (1), [Christianity](#) (1), [Confucianism](#) (1), [History of religion](#) (2), [Informal education in religion](#) (1), [Instructional issues in religion](#) (1), [Islam](#) (2), [Judaism](#) (1), [Taoism](#) (1)

**Science (22 Collections)**

[Agriculture](#) (4), [Biological and life sciences](#) (6), [Biology](#) (10), [Botany](#) (6), [Chemistry](#) (1), [Earth science](#) (3), [Ecology](#) (11), [Embryology](#) (1), [Engineering](#) (5), [Entomology](#) (3), [General science](#) (6), [Geology](#) (7), [Histology](#) (1), [History of science](#) (5), [Informal education in science](#) (3), [Natural history](#) (6), [Oceanography](#) (2), [Paleontology](#) (1), [Physical sciences](#) (4), [Physics](#) (2), [Technology in science](#) (1)

**Social Studies (124 Collections)**

[Anthropology](#) (11), [Civics](#) (8), [Criminology](#) (3), [Current events/issues](#) (6), [Economics](#) (12), [Geography](#) (13), [Human behavior](#) (2), [Human relations](#) (4), [Informal](#)

**Vocational Education (8 Collections)**

[Agriculture](#) (2), [Business](#) (1), [History of vocational education](#) (4), [Occupational home economics](#) (3), [Trade and industrial](#) (1)

Done PR:5 Adblock

Figure 2

Browse Collections by Subject - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/GEMTopPlusSubs.asp

**Search Collections**

Go

**Advanced Search**

**Other Browse Options:**

**By National Leadership Grant Project**

**By Hosting Institution**

**History of foreign languages (1), Linguistics (2)**

**Language Arts (12 Collections)**

[Alphabet \(2\)](#), [Grammar \(1\)](#), [Listening comprehension \(1\)](#), [Literature \(9\)](#), [Reading \(1\)](#), [Story telling \(2\)](#), [Writing \(composition\) \(1\)](#)

**Philosophy (1 Collections)**

[Aesthetics \(1\)](#), [Epistemology \(1\)](#), [Existentialism \(1\)](#), [Marxism \(1\)](#), [Phenomenology \(1\)](#)

**Religion (6 Collections)**

[Buddhism \(1\)](#), [Christianity \(1\)](#), [Confucianism \(1\)](#), [History of religion \(2\)](#), [Informal education in religion \(1\)](#), [Instructional issues in religion \(1\)](#), [Islam \(2\)](#), [Judaism \(1\)](#), [Taoism \(1\)](#)

**Social Studies (124 Collections)**

[Anthropology \(11\)](#), [Civics \(8\)](#), [Criminology \(3\)](#), [Current events/issues \(6\)](#), [Economics \(12\)](#), [Geography \(13\)](#), [Human behavior \(2\)](#), [Human relations \(4\)](#), [Informal education in social studies \(3\)](#), [Instructional issues in social studies \(1\)](#), [Process skills in social studies \(1\)](#), [Psychology \(2\)](#), [Social work \(3\)](#), [Sociology \(2\)](#), [State history \(65\)](#), [Technology and civilization \(3\)](#), [United States Constitution \(1\)](#), [United States government \(21\)](#), [United States history \(103\)](#), [Urban studies \(17\)](#), [World history \(28\)](#)

**Mathematics (3 Collections)**

[Algebra \(1\)](#), [Calculus \(1\)](#), [Geometry \(1\)](#), [Number theory \(1\)](#), [Patterns \(1\)](#), [Statistics \(1\)](#), [Trigonometry \(1\)](#)

**Physical Education (2 Collections)**

[History of physical education \(2\)](#), [Individual sports \(1\)](#), [Informal education in physical education \(1\)](#), [Outdoor education \(1\)](#), [Team sports \(1\)](#)

**Science (22 Collections)**


[Agriculture \(4\)](#), [Biological and life sciences \(6\)](#), [Biology \(10\)](#), [Botany \(6\)](#), [Chemistry \(1\)](#), [Earth science \(3\)](#), [Ecology \(11\)](#), [Embryology \(1\)](#), [Engineering \(5\)](#), [Entomology \(3\)](#), [General science \(6\)](#), [Geology \(7\)](#), [Histology \(1\)](#), [History of science \(5\)](#), [Informal education in science \(3\)](#), [Natural history \(6\)](#), [Oceanography \(2\)](#), [Paleontology \(1\)](#), [Physical sciences \(4\)](#), [Physics \(2\)](#), [Technology in science \(1\)](#)

**Vocational Education (8 Collections)**

[Agriculture \(2\)](#), [Business \(1\)](#), [History of vocational education \(4\)](#), [Occupational home economics \(3\)](#), [Trade and industrial \(1\)](#)

**Aging (2), Chronic conditions (1), Consumer health (2), Death and dying (3), Disease (1), Environmental health (3), Family life (1), History of health (2), Human sexuality (1), Informal education in health (1), Mental/emotional health (3), Nutrition (5), Safety (2), Smoking (2), Substance abuse prevention (3), Technology in health (2)**

A note about our subject headings: The IMLS Digital Collections Registry is organized by the GEM (Gateway to Educational Materials) subject headings. The GEM subject headings provide broad categories for browsing suitable for the educational and cultural heritage communities. To find out more about GEM, see <http://www.thegateway.org/>.

The  symbol indicates that the hyperlink is to a web site external to the IMLS Digital Collections Registry.

The IMLS Digital Collections Registry is a product of [IMLS Digital Collections and Content](#), a National Leadership Grant funded collaboration among the [University of Illinois Library](#), the [Graduate School of Library and Information Science](#), and the [Institute of Museum and Library Services](#), a Federal agency that fosters innovation, leadership, and a lifetime of learning.

© 2003, 2004 IMLS DCC. Last updated on February 12, 2004. Hosted by [Grainger Engineering Library, University of Illinois at Urbana-Champaign](#).


Done PR:5 Adblock

Figure 3

Browse Collections by Subject - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlscg.granger.uiuc.edu/collections/GEMBrowse.asp?gt=Social+Studies&st=United+States+history

 **IMLS Digital Collections Registry**  
 A gateway to digital collections funded through the IMLS National Leadership Grant Program

[Home](#)  
[About](#)  
[Contact](#)

Subject >> [Social Studies](#) >> United States History

**United States history**

**North Carolinians and the Great War**

[Collection Home](#) [Full Description](#)

"North Carolinians and the Great War" examines how World War I shaped the lives of different North Carolinians on the battlefield and on the home front as well how the state and federal government ...

**Making of Modern Michigan: Digitizing Michigan's Hidden Past**

[Collection Home](#) [Full Description](#)

The Making of Modern Michigan is a collaborative project involving more than 50 Michigan libraries. It includes local history materials from communities around the state. Michigan's unique heritage is ...

**Louisiana Purchase: A Heritage Explored**

[Collection Home](#) [Full Description](#)

The Louisiana Purchase in 1803 stands as the most significant event in the westward expansion of the United States and as an experiment to incorporate a substantially different culture. This LSU ...

**Brooklyn Daily Eagle Online**

[Collection Home](#) [Full Description](#)

The Brooklyn Daily Eagle was published from October 26, 1841 to 1955 and was revived for a short time from 1960 to 1963. Phase I, which can at present be found on this site, covers the period from ...

**Minnesota Historical Society Online Resources**

[Collection Home](#) [Full Description](#)

A group of interactive online resources which examine Minnesota's past and paint an overview of Minnesota history.

**Illinois Alive! The Heritage and Texture of a Pivotal State During the First Century of Statehood (1818-1918)**

[Collection Home](#) [Full Description](#)


Done Print/a Adblock

Figure 4

Full Description of Collection - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/FullDisplay.asp?cid=2621

 **IMLS Digital Collections Registry** [Home](#)  
 A gateway to digital collections funded through the IMLS National Leadership Grant Program [About](#)  
[Contact](#)

---

**Browse Collections by:**

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

[Advanced Search](#)

---

**Other Browse Options:**

- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

**Full Description**

**North Carolinians and the Great War**

**Find Out More About:** [Collection Description](#)  
[Collections Associated With This Collection](#)  
[National Leadership Grant Projects Responsible For This Collection](#)

**Collection Information**

**Title:** North Carolinians and the Great War

**URL:** <http://docsouth.unc.edu/wwi/>

**Description:** "North Carolinians and the Great War" examines how World War I shaped the lives of different North Carolinians on the battlefield and on the home front as well how the state and federal government responded to war-time demands. The collection focuses on the years of American involvement in the war between 1917 and 1919, but it also examines the legacies of the war in the 1920s.

**GEM Subjects:** [Language Arts](#)  
[Literature](#)

[Social Studies](#)  
[Geography](#)  
[State history](#)  
[United States history](#)

**Subjects:** World War, 1914-1918 -- United States  
 World War, 1914-1918 -- North Carolina  
 World War, 1914-1918 -- War work -- North Carolina  
 Women in war -- North Carolina  
 World War, 1914-1918 -- War work -- Red Cross  
 World War, 1914-1918 -- Economic aspects  
 World War, 1914-1918 -- Finance  
 United States. Navy -- Recruiting, enlistment, etc.  
 World War, 1914-1918 -- Civilian relief -- North Carolina  
 Nurses -- North Carolina -- Diaries  
 World War, 1914-1918 -- Personal narratives, American  
 United States. Army -- Military life  
 United States. Army -- Officers -- Correspondence  
 World War, 1914-1918 -- Campaigns -- France  
 Soldiers -- North Carolina -- Diaries

**Geographic Coverage:** [United States \(nation\)](#)  
[Europe \(continent\)](#)  
[Southern U.S. \(general region\)](#)

Done PR:n/a Adblock

Figure 5

Full Description of Collection - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/FullDisplay.asp?cid=2621

Soldiers -- North Carolina -- Diaries

**Geographic Coverage:** [United States \(nation\)](#)  
[Europe \(continent\)](#)  
[Southern U.S. \(general region\)](#)

**Time Period:** 1900-1929

**Objects Represented:** [Physical artifacts](#)  
[Books and pamphlets](#)  
[Posters and broadsides](#)  
[Manuscripts](#)  
[Institutional reports](#)

**Format:** image/gif  
image/jpeg  
text/html  
audio  
text/xml

**Language:** eng

**Audience:** General public  
Genealogists/History Enthusiasts  
K-12 students  
Undergraduate Students  
K-12 teachers and administrators  
Scholars/Researchers/Graduate Students

**Interaction With Collection:** Search  
Browse

**Copyright & IP Rights:** <http://docsouth.unc.edu/copyright/>

**Collection Development Policy:** <http://docsouth.unc.edu/about/>

**Frequency Of Additions:** No longer adding

**Metadata Schema Used:** Dublin Core (simple or qualified)  
MARC  
TEI Header

**Supplementary Materials:** Contextual information  
Related web sites  
Essay(s)  
Teacher and student resources  
Biographical information

**Hosting Institution:** [University of North Carolina at Chapel Hill. Libraries.](#)

Done PR:n/a Adblock

Figure 6

Full Description of Collection - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/FullDisplay.asp?cid=2621

**Hosting Institution:** [University of North Carolina at Chapel Hill. Libraries.](#)

### Associated Collections

**Parent Collections:**

**Title:** The North Carolina Experience, Beginnings to 1940

**URL:** <http://docsouth.unc.edu/nc/>

**Description:** "The North Carolina Experience, Beginnings to 1940" is a collection that tells the story of the Tar Heel State as seen through representative histories, descriptive accounts, institutional reports, fiction, and other writing. It comprises digitized and encoded printed works, images, and oral history interviews and workplace songs.

**Hosting Institution:** University of North Carolina at Chapel Hill. Libraries.

**Associated Physical Collections:**

**Title:** North Carolina Collection; Rare Book Collection

**Hosting Institution:** University of North Carolina at Chapel Hill. Libraries.


### National Leadership Grant Projects Responsible for Digital Collection

**Title Of Project:** [North Carolina in Black and White: Beginnings to 1940](#)

**IMLS Grant Number:** ND-00031

**Project URL:** <http://docsouth.unc.edu/nc/about.html>

**Administering Institution:** University of North Carolina at Chapel Hill. Libraries.

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Figure 7

North Carolinians and the Great War Collection homepage - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://docsouth.unc.edu/wwi/

DOCUMENTING the American South

powered by Google™

Search All Collections Search

Highlights | About | Collections | Authors | Titles | Subjects | Geographic | Classroom | New Additions

*Collections*

True and Candid Compositions: Antebellum Writings

First-Person Narratives of the American South

Library of Southern Literature

North American Slave Narratives


The Southern Homefront, 1861-1865

The Church in the Southern Black Community

The North Carolina Experience, Beginnings to 1940

North Carolinians and the Great War

**NORTH CAROLINIANS AND THE GREAT WAR**



"North Carolinians and the Great War" examines how World War I shaped the lives of different North Carolinians on the battlefield and on the home front as well how the state and federal government responded to war-time demands. The collection focuses on the years of American involvement in the war between 1917 and 1919, but it also examines the legacies of the war in the 1920s.

- Introduction
- Browse this Collection Alphabetically
- Browse this Collection by Topic
- Browse Images by Subject
- For Further Research
- About this Collection

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 Copyright / Usage Statement  
 URL: http://docsouth.unc.edu/wwi/index.html  
 Last updated September 26, 2005

hosted by **ibiblio**

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Figure 8

Browse Collections by Object - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlscg.granger.uiuc.edu/collections/GEMdcmi.asp

**IMLS Digital Collections Registry**  
 A gateway to digital collections funded through the IMLS National Leadership Grant Program

Home  
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## Browse Collections by Object

(Collections may be listed under more than one object type.)

**Browse Collections by:**

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

[Advanced Search](#)

**Other Browse Options:**

- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

**Dataset (5 Collections)**

[Field data \(2\)](#), [Geospatial data \(1\)](#), [Statistical documents \(1\)](#), [summarized evaluation data \(1\)](#)

**Image (218 Collections)**

[Advertisements \(1\)](#), [Architectural models \(1\)](#), [Bird's eye views \(1\)](#), [Blueprints \(1\)](#), [Caricatures \(5\)](#), [Cartoons \(Commentary\) \(3\)](#), [Christmas Cards \(1\)](#), [Clipper ship cards \(1\)](#), [Concert posters \(1\)](#), [Costume plates \(1\)](#), [Digital art piece \(2\)](#), [Digital representation of New York City skyline \(1\)](#), [Engravings \(1\)](#), [Etchings \(2\)](#), [Fiber Arts \(1\)](#), [Illustrated books \(1\)](#), [Illustrations \(3\)](#), [Intermedia \(1\)](#), [Landscape drawings \(1\)](#), [Lantern slides \(1\)](#), [Lithographs \(2\)](#), [Mail art \(1\)](#), [Maps \(12\)](#), [Mixed Media \(2\)](#), [Modern art \(1\)](#), [Oil paintings \(3\)](#), [Paintings \(9\)](#), [Performance art \(1\)](#), [Periodical illustrations \(1\)](#), [Photographs / slides / negatives \(99\)](#), [Pictorial envelopes \(1\)](#), [Pictorial lettersheets \(1\)](#), [Political Cartoons \(3\)](#), [Postcards \(5\)](#), [Posters and broadsides \(14\)](#), [Prints and drawings \(28\)](#), [Scrapbook \(2\)](#), [Stereographs \(1\)](#), [Stereolithographic files \(1\)](#), [Watercolors \(1\)](#)

**Interactive Resource (14 Collections)**

[computer-aided design \(1\)](#), [Interactive learning objects \(11\)](#), [Interactive maps \(1\)](#), [Teaching materials \(1\)](#)

**Physical Object (61 Collections)**

[Bonds \(Negotiable instruments\) \(1\)](#), [Clothing \(4\)](#), [Clothing and accessories \(1\)](#), [Currency \(1\)](#), [Dioramas \(1\)](#), [Ephemera \(4\)](#), [Headdresses \(1\)](#), [Ikenga \(1\)](#), [Masks \(1\)](#), [Physical artifacts \(32\)](#), [Physical specimens \(plants / animals / etc\) \(6\)](#), [Scrapbook \(2\)](#), [Sculpture \(3\)](#), [Tapestry \(1\)](#), [Textiles \(1\)](#), [Toys \(1\)](#)

**Text (183 Collections)**

[Archival finding aids \(34\)](#), [Artist's books \(1\)](#), [Artist's statements \(1\)](#), [Books and pamphlets \(40\)](#), [Classified ads \(1\)](#), [Concert posters \(1\)](#), [Concrete poetry \(1\)](#), [Court records \(1\)](#), [Diaries \(5\)](#), [Directories \(1\)](#), [Directory data \(1\)](#), [Documents \(2\)](#), [Ephemera \(4\)](#), [Essays \(1\)](#), [Field diaries \(2\)](#), [Finding aid \(1\)](#), [Finding aids \(1\)](#), [Funeral booklets \(1\)](#), [Government documents \(6\)](#), [Government web sites \(3\)](#), [Institutional reports \(2\)](#), [Journals \(2\)](#), [Land grant documents \(1\)](#), [Legal documents \(2\)](#), [Legislative documents \(1\)](#), [Letters \(10\)](#), [Manuscripts \(10\)](#), [Manuscripts: Legal documents \(1\)](#), [Newspapers \(17\)](#)

**Moving Image (11 Collections)**

[Films \(1\)](#), [Interviews \(video\) \(1\)](#), [Storyteller performances \(1\)](#), [Television news program \(1\)](#), [Video \(3\)](#), [Video art \(1\)](#), [Video files \(2\)](#), [Video of field researchers \(1\)](#)

**Sound (30 Collections)**

[Audio of field researchers \(1\)](#), [Music \(audio files\) \(13\)](#), [Oral histories \(audio files\) \(11\)](#), [Sound files \(3\)](#), [Sound recordings \(1\)](#), [Wax cylinders \(1\)](#)

**Unknown (1 Collections)**

[Documentary films \(1\)](#)

Done PR:5 Adblock

Figure 9

Browse Collections by Object - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/GEMdmi.asp

Place  
Title

**Search Collections**

Go

**Advanced Search**

---

**Other Browse Options:**

**By National Leadership Grant Project**

**By Hosting Institution**

**Interactive Resource (14 Collections)**

[computer-aided design](#) (1), [Interactive learning objects](#) (11), [Interactive maps](#) (1), [Teaching materials](#) (1)

**Physical Object (61 Collections)**

[Bonds \(Negotiable instruments\)](#) (1), [Clothing](#) (4), [Clothing and accessories](#) (1), [Currency](#) (1), [Dioramas](#) (1), [Ephemera](#) (4), [Headdresses](#) (1), [Ikenga](#) (1), [Masks](#) (1), [Physical artifacts](#) (32), [Physical specimens \(plants / animals / etc\)](#) (6), [Scrapbook](#) (2), [Sculpture](#) (3), [Tapestry](#) (1), [Textiles](#) (1), [Toys](#) (1)

**Text (183 Collections)**

[Archival finding aids](#) (34), [Artist's books](#) (1), [Artist's statements](#) (1), [Books and pamphlets](#) (40), [Classified ads](#) (1), [Concert posters](#) (1), [Concrete poetry](#) (1), [Court records](#) (1), [Diaries](#) (5), [Directories](#) (1), [Directory data](#) (1), [Documents](#) (2), [Ephemera](#) (4), [Essays](#) (1), [Field diaries](#) (2), [Finding aid](#) (1), [Finding aids](#) (1), [Funeral booklets](#) (1), [Government documents](#) (6), [Government web sites](#) (3), [Institutional reports](#) (2), [Journals](#) (2), [Land grant documents](#) (1), [Legal documents](#) (2), [Legislative documents](#) (1), [Letters](#) (10), [Manuscripts](#) (10), [Manuscripts: Legal documents](#) (1), [Newspapers](#) (17), [Notebooks](#) (1), [Oral histories](#) (1), [Papers](#) (1), [Periodicals](#) (6), [Plant profiles](#) (1), [Play scripts](#) (1), [Proceedings](#) (1), [Programs](#) (1), [Research reports](#) (1), [Scrapbook](#) (2), [Sheet music and scores](#) (8), [Travel narratives](#) (2), [Treaties](#) (1), [Web pages](#) (2)

**Moving Image (11 Collections)**

[Films](#) (1), [Interviews \(video\)](#) (1), [Storyteller performances](#) (1), [Television news program](#) (1), [Video](#) (3), [Video art](#) (1), [Video files](#) (2), [Video of field researchers](#) (1)


**Sound (30 Collections)**

[Audio of field researchers](#) (1), [Music \(audio files\)](#) (13), [Oral histories \(audio files\)](#) (11), [Sound files](#) (3), [Sound recordings](#) (1), [Wax cylinders](#) (1)

**Unknown (1 Collections)**

[Documentary films](#) (1)

([Commentary](#)) (3), [Christmas Cards](#) (1), [Clipper ship cards](#) (1), [Concert posters](#) (1), [Costume plates](#) (1), [Digital art piece](#) (2), [Digital representation of New York City skyline](#) (1), [Engravings](#) (1), [Etchings](#) (2), [Fiber Arts](#) (1), [Illustrated books](#) (1), [Illustrations](#) (3), [Intermedia](#) (1), [Landscape drawings](#) (1), [Lantern slides](#) (1), [Lithographs](#) (2), [Mail art](#) (1), [Maps](#) (12), [Mixed Media](#) (2), [Modern art](#) (1), [Oil paintings](#) (3), [Paintings](#) (9), [Performance art](#) (1), [Periodical illustrations](#) (1), [Photographs / slides / negatives](#) (99), [Pictorial envelopes](#) (1), [Pictorial lettersheets](#) (1), [Political Cartoons](#) (3), [Postcards](#) (5), [Posters and broadsides](#) (14), [Prints and drawings](#) (28), [Scrapbook](#) (2), [Stereographs](#) (1), [Stereolithographic files](#) (1), [Watercolors](#) (1)

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Figure 10

Browse Collections by Place - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlscg.grainger.uiuc.edu/collections/GEMGeoCoverage.asp

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**Browse Collections**  
by:

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

Go

[Advanced Search](#)

---

**Other Browse Options:**

- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

**Browse Collections by Place**  
(Collections may include material referencing more than one place.)

Please note that this page is still under development.

- [Africa \(continent\)](#) (14)
- [Alabama \(state\)](#) (3)
- [Antarctica \(continent\)](#) (3)
- [Arizona \(state\)](#) (1)
- [Arkansas \(state\)](#) (3)
- [Asia \(continent\)](#) (17)
- [Boston, Massachusetts](#) (2)
- [Brooklyn, New York](#) (2)
- [California \(state\)](#) (12)
- [Canada \(nation\)](#) (6)
- [Central America \(general region\)](#) (6)
- [Chicago, Illinois](#) (1)
- [Chile \(nation\)](#) (1)
- [China \(nation\)](#) (1)
- [Colorado \(state\)](#) (3)
- [Cuba \(nation\)](#) (1)
- [Deerfield, Massachusetts](#) (1)
- [Delaware \(state\)](#) (1)
- [Detroit, Michigan](#) (1)
- [District of Columbia \(National District\)](#) (1)
- [England \(country\)](#) (2)
- [Europe \(continent\)](#) (20)
- [Florida \(state\)](#) (4)
- [France \(nation\)](#) (2)
- [Georgia \(state\)](#) (2)
- [Great Britain \(island\)](#) (1)
- [Great Lakes Region \(general region\)](#) (1)
- [Hawaii \(state\)](#) (2)
- [Idaho \(state\)](#) (1)
- [Illinois \(state\)](#) (8)
- [India \(nation\)](#) (1)
- [Indiana \(state\)](#) (1)
- [Indonesia \(nation\)](#) (1)
- [Ireland \(nation\)](#) (1)
- [Japan \(nation\)](#) (2)
- [Kansas \(state\)](#) (2)
- [Kentucky \(state\)](#) (2)
- [King \(county\), Washington](#) (1)
- [Liberia \(nation\)](#) (1)
- [London, England](#) (1)
- [Los Angeles, California](#) (1)
- [Louisiana \(state\)](#) (2)
- [Maine \(state\)](#) (1)
- [Maryland \(state\)](#) (1)
- [Massachusetts \(state\)](#) (1)
- [Mexico \(nation\)](#) (9)

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Figure 11

Browse Collections by Place - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdc.granger.uiuc.edu/collections/GEMGeoCoverage.asp

- [Mexico \(nation\)](#) (9)
- [Michigan \(state\)](#) (1)
- [Middle Atlantic U.S. \(general region\)](#) (11)
- [Middle East \(general region\)](#) (4)
- [Midwest \(U.S.\)](#) (2)
- [Midwest U.S. \(general region\)](#) (25)
- [Minnesota \(state\)](#) (2)
- [Mississippi \(state\)](#) (2)
- [Mississippi River \(river\)](#) (1)
- [Monroe \(county\), New York](#) (1)
- [Mountain Region U.S. \(general region\)](#) (14)
- [Nebraska \(state\)](#) (1)
- [New Jersey \(state\)](#) (1)
- [New York \(state\)](#) (3)
- [New York City, New York](#) (3)
- [North Carolina \(state\)](#) (2)
- [Northeastern U.S. \(general region\)](#) (20)
- [Oceania \(continent\)](#) (4)
- [Oklahoma \(state\)](#) (1)
- [Oregon \(state\)](#) (2)
- [Pacific Coast U.S. \(general region\)](#) (12)
- [Pacific Coast U.S. \(general region\)](#) (6)
- [Pacific Islands \(general region\)](#) (7)
- [Paris, France](#) (1)
- [Peru \(nation\)](#) (1)
- [Philadelphia, Pennsylvania](#) (1)
- [Pittsburgh, Pennsylvania](#) (1)
- [Rochester \(county\), New York](#) (1)
- [Rochester, New York](#) (1)
- [San Francisco, California](#) (3)
- [Seattle, Washington](#) (1)
- [Sonora \(state\)](#) (1)
- [South America \(continent\)](#) (8)
- [South Carolina \(state\)](#) (1)
- [Southern U.S. \(general region\)](#) (27)
- [Southwest U.S. \(general region\)](#) (22)
- [Springfield, Massachusetts](#) (1)
- [Tennessee \(state\)](#) (3)
- [Tennessee Valley \(valley\)](#) (1)
- [Territorial Kansas](#) (1)
- [Texas \(state\)](#) (1)
- [United Kingdom \(nation\)](#) (1)
- [United States \(nation\)](#) (56)
- [Utah \(state\)](#) (2)
- [Virgin Islands of the United States \(dependent state\)](#) (5)
- [Virginia \(state\)](#) (2)
- [Washington \(state\)](#) (3)
- [West Indies \(archipelago\)](#) (3)
- [West Virginia \(state\)](#) (1)
- [Wyoming \(state\)](#) (2)

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Figure 12

Browse Collections by Title - IMLS Digital Collection Registry - Mozilla Firefox

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http://imisdcc.granger.uiuc.edu/collections/GEMColl.asp

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**Browse Collections by Title**

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**Search Collections**

[Advanced Search](#)

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**Other Browse Options:**

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**Browse Collections by Title**

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

**A** [back to top](#)

**Africa Focus: Sights and Sounds of a Continent**

[Collection Home](#) [Full Description](#)

Africa Focus contains digitized visual images and sounds of Africa contributed over the years to the African Studies Program of the University of Wisconsin-Madison. These digital files are stored in ...

**AlabamaMosaic**

[Collection Home](#) [Full Description](#)

The purpose of AlabamaMosaic is to make unique historical treasures from Alabama's archives, libraries, museums, and other repositories electronically accessible to Alabama residents as well as ...

**American Journeys**

[Collection Home](#) [Full Description](#)

American Journeys contains more than 18,000 pages of eyewitness accounts of North American exploration, from the sagas of Vikings in Canada in AD1000 to the diaries of mountain men in the Rockies 800 ...

**American Missionary Association and the Promise of a Multicultural America: 1839 - 1954**

[Collection Home](#) [Full Description](#)

The American Missionary Association and the Promise of a Multicultural America: 1839 - 1954 is a digital photo archives of more than 5000 photographs of the activities of and related to the American ...

**American Natural Science in the First Half of the Nineteenth Century**

[Collection Home](#) [Full Description](#)

Text and illustrations that document the establishment of a distinctly American approach to natural science during the first half of the 19th century. The selected works were written by scientists ...


Done PR:5 Adblock

Figure 13

Browse Institutions with Digital Collections - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlscg.grainger.uiuc.edu/collections/GEMHostInst.asp

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**Browse Collections**  
by:

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

[Advanced Search](#)

---

**Other Browse Options:**

- [By National Leadership Grant Project](#)
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---

**Browse Institutions with Digital Collections by State**

These institutions are **hosting** the digital collection(s). Other institutions may also have contributed to the digital collection.

[ALABAMA](#) [ARIZONA](#) [CALIFORNIA](#) [COLORADO](#) [CONNECTICUT](#) [FLORIDA](#) [GEORGIA](#) [HAWAII](#) [ILLINOIS](#)  
[INDIANA](#) [KANSAS](#) [KENTUCKY](#) [LOUISIANA](#) [MAINE](#) [MARYLAND](#) [MASSACHUSETTS](#) [MICHIGAN](#) [MINNESOTA](#)  
[MISSISSIPPI](#) [MISSOURI](#) [MONTANA](#) [NEBRASKA](#) [NEW JERSEY](#) [NEW YORK](#) [NORTH CAROLINA](#) [OHIO](#)  
[PENNSYLVANIA](#) [TENNESSEE](#) [UTAH](#) [VIRGIN ISLANDS](#) [VIRGINIA](#) [WASHINGTON](#) [WEST VIRGINIA](#) [WISCONSIN](#)

**ALABAMA** [back to top](#)

[Auburn University Digital Library](#) (1 collection)

**ARIZONA** [back to top](#)

[University of Arizona. Library.](#) (2 collections)

**CALIFORNIA** [back to top](#)

[Exploratorium](#) (1 collection)

[MOAC](#) (27 collections)

[San Francisco Museum of Modern Art](#) (1 collection)

[Stanford University. Libraries & Academic Information Resources.](#) (1 collection)

[University of California, Riverside. Library.](#) (1 collection)

[University of California, Santa Barbara. Donald C. Davidson Library. Department of Special Collections.](#) (1 collection)

**COLORADO** [back to top](#)

[Colorado Digitization Program.](#) (1 collection)

[University of Denver. Penrose Library.](#) (2 collections)

**CONNECTICUT** [back to top](#)

[University of Connecticut. Thomas J. Dodd Research Center.](#) (1 collection)

**FLORIDA** [back to top](#)

[Broward County Main Library](#) (1 collection)

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Figure 14

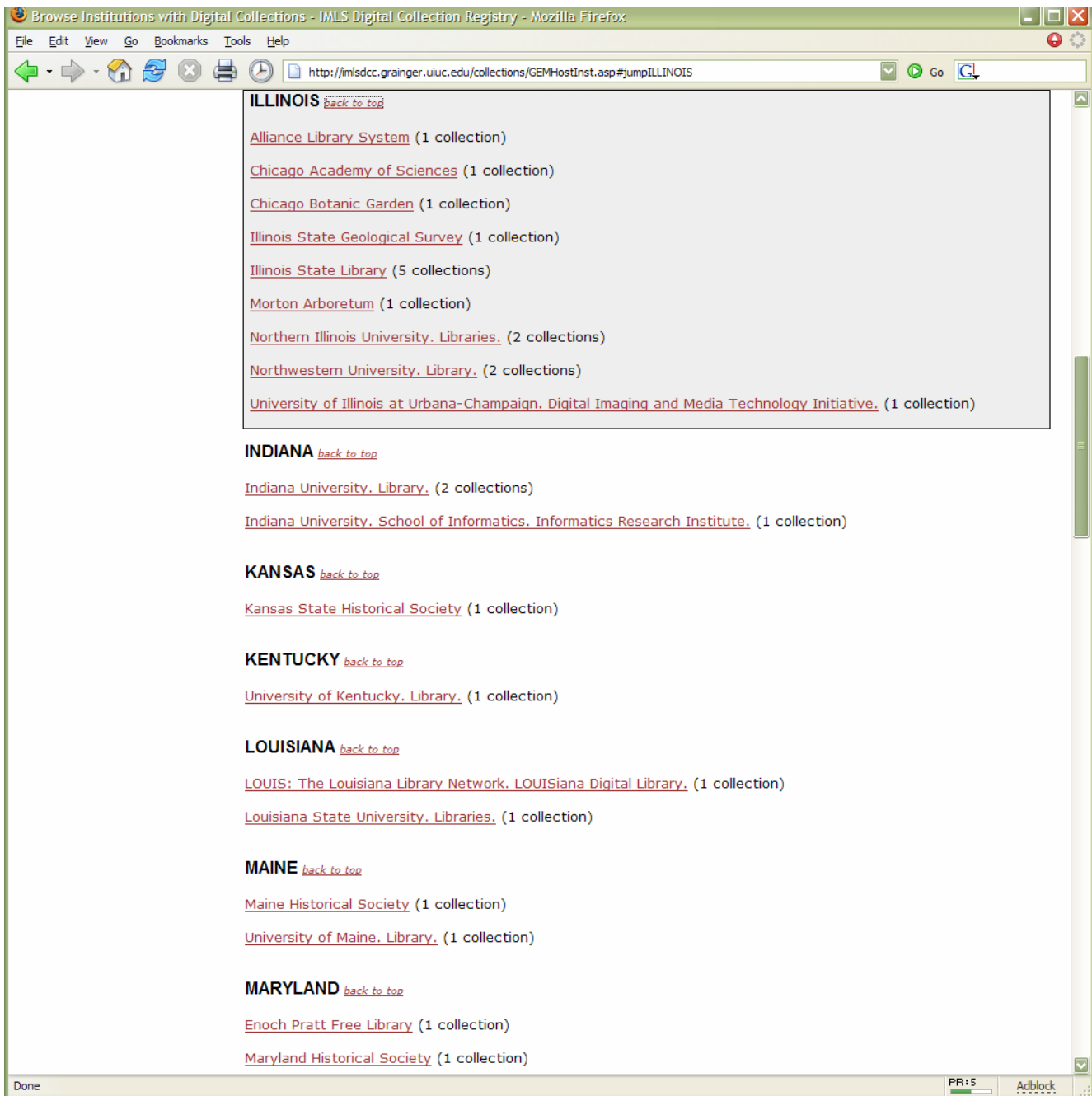



Figure 15

Search Collections - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlscg.granger.uiuc.edu/collections/GEMSearch.asp?q=agriculture

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**Browse Collections by:**

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

[Advanced Search](#)

---

**Other Browse Options:**

- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

---

**Search Results**

You may edit your search in the box below.

**9 Collections were found:**

**Core Historical Literature of Agriculture**

[Collection Home](#) [Full Description](#)

**Title:** Core Historical Literature of **Agriculture**

**Find-It! Illinois**

[Collection Home](#) [Full Description](#)

**Other Topics:** **Agriculture**

**Illinois Government Information**

[Collection Home](#) [Full Description](#)

**Other Topics:** **Agriculture**

**INFOMINE Scholarly Internet Resource Collection**

[Collection Home](#) [Full Description](#)

**Other Topics:** **Agriculture**

**Jackson Davis Collection of African American Educational Photographs**

[Collection Home](#) [Full Description](#)

**Other Topics:** **Agriculture**

**Minnesota Historical Society Online Resources**

[Collection Home](#) [Full Description](#)


Done PR:3 Adblock

Figure 16

Search Collections - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/GEMSearch.asp?q=farming



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**Browse Collections**  
 by:

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

---

**Search Collections**

[Advanced Search](#)

---

**Other Browse Options:**


- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

---

**Search Results**

You may edit your search in the box below.

**Unable to find any matches for *farming***

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Figure 17

Search Collections - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imisdcc.grainger.uiuc.edu/collections/GEMSearch.asp

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[Contact](#)

---

**Browse Collections**  
by:

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

---

**Limit Search to Types of Objects in Collection**


- Dataset
- Image
- Interactive Resource
- Moving Image
- Physical Object
- Sound
- Text
- Unknown

This advanced search screen is still in development. New features will be added in the future.

---

**Other Browse Options:**

- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

The  symbol indicates that the hyperlink is to a web site external to the IMLS Digital Collections Registry.

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Figure 18

Object - IMLS Digital Collection Registry - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://imlsdcc.granger.uiuc.edu/collections/GEMdcmi.asp?dt=physical+object&st=Scrapbook

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**Browse Collections by:**

- [Subject](#)
- [Object](#)
- [Place](#)
- [Title](#)

**Search Collections**

[Advanced Search](#)

---


**Other Browse Options:**

- [By National Leadership Grant Project](#)
- [By Hosting Institution](#)

[Object](#) >> [Physical Object](#) >> Scrapbook


## Scrapbook

**Moriyuki Shimada Scrapbook, 1942-1945**


[Collection Home](#)  [Full Description](#)

Moriyuki Shimada was twenty-two years old when he and his family were forcibly removed from their home in Santa Clara, California to the Heart Mountain Concentration Camp in Wyoming. Shimada created a ...

**Centennial Exhibition Digital Collection**

[Collection Home](#)  [Full Description](#)

The Free Library of Philadelphia, with the generous support of the Institute of Museum and Library Services, invites you to visit our Web version of the 100th birthday party for the United States, the ...

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Figure 19