

## FINAL REPORT

**IMLS Grant #03193:** SPARKS! Ignition Grants for Libraries

**Title:** An Innovative Evaluation Metric for School Librarians and Graduate Library Programs

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Just as with the growth of print resources, as the number of Web-based resources continues to soar, the need to evaluate has become a critical information skill for both children and adults. Because of the dynamic, interactive nature of Web-based resources, new tools are required that encompass a broader concept of evaluation. The following project outcomes were met in part or in full.

**Outcome #1.** Participants (school librarians) involved in the evaluation of the metrics will find the new metrics useful for their own practice.

**Indicator 1:** Eight of ten (80%) school librarians from central NY State who review and provide critical, formative feedback on ways to improve the *WebMAC Professional* (for school librarians) tool will also indicate that they would use the tools in their own practice when they become available. (Skype using interview protocol).

**Indicator 2.** At least two thirds (66%) of the fifty school librarians nationwide who submit generated reports and share their in-depth views and experiences on the use by themselves and their students of new and revised, automated *WebMAC* evaluation tools will also report an intention to utilize the instruments in their practice when they become available. (Electronic survey results).

**Outcome #2:** Library professionals and leaders will recognize and accept the new automated evaluation metrics and reporting system as a valuable contribution to the education of pre-service and in-service school librarians and their students.

**Indicator #1:** Two articles and conference papers about the innovation submitted by the project team to professional library journals and organizations will be accepted for publication (Copies of/links to articles posted on CDL Web site)

**Indicator #2:** Program directors of school media programs in graduate schools will indicate an intention to circulate the best-practice recommendations (including guidelines for pre-service education assignments) to school media faculty for possible inclusion in appropriate courses. (Follow-up telephone calls to a random sample of 15 program directors who received the recommendations from the PI)

This one-year SPARKS! project proposed to:

- (1) revise existing paper-based student Web evaluation instruments for K-12 students. The three original, paper-based *WebMAC* instruments for students were revised to make them more user-friendly and vocabulary appropriate and then were pilot tested. The name of

the series of instruments was changed to *WebCHECK* [*Junior* (elementary level), *Middle* (middle school level), *Senior* (high school level)].

- (2) create a new, customized, accessible Web evaluation instrument for school librarians. The original version of *WebMAC Professional* was revised, pilot tested with ten librarians. Changes to the instrument were made based on results and the name of the instrument was changed to. In addition, we created *WebCHECK Facilitator*, a way for a librarian or teacher to organize a Web evaluation activity for a *WebCHECK Professional* group or class. All instruments are freely available and accessible at [www.mywebcheck.net](http://www.mywebcheck.net).
- (3) automate them including report generation capability. Working with the project team, the project programmer automated each of the student instruments, the librarian instrument, and the facilitation instrument. He developed a Web site <mywebcheck.net> to house the instruments, as well as three dozen lesson plans developed for teaching Web evaluation skills to students using one of the *WebCHECK* instruments.
- (4) pilot test and evaluate them with 60 school librarians (Outcome 1: Indicator 1). Ten librarians, representing all grade levels and spanning from under 3 to over 20 years of service, completed a pilot test of *WebCHECK Professional* (see Appendix 1). Results indicate the instrument was “easy to use” (4.9/5) and “useful to librarians” (4.4/5) while the instrument’s rating for “fun to use” was 3.8/5. Ratings for instrument instructions ranged from 4.5-4.6. The automated scoring and chart creation features of the instruments were rated 4/5/5. One librarian commented:

Having the site automatically produce the report rather than having to chart your own results is an instant time saver (who couldn't use more time?!?) and will make teachers and librarians more likely to use it. And, as previously noted, the automated reports (and the ability to save/print them) make handy justifications for the use of websites should their validity in the classroom ever be questioned.

The feedback received from the automatically generated report was rated 4.4/5. One librarian commented:

It would help librarians defend their web site choices and recommendations. Choices would be supported by Evaluation Report data instead of just librarian's 'opinion.'

Revisions were made to improve both the fun to use and useful to librarians features, including wording of specific items. When asked how the instruments can be useful to librarians, most respondents found it to be an excellent addition to the tools librarians use. For example, one respondent wrote:

Fantastic tool for teaching students evaluation skills - it clearly lists the items that are important to consider when using a web page for academic research.

Another stated:

While most librarians have had training in evaluating web sites, not all teachers have. This tool will help those teachers evaluate sites, but also allows everyone using the tool to evaluate all sites based on the same criteria in a consistent manner, giving a score that allows for easy comparison between sites.

Finally, one described its use for library Web sites, “I intend to use the tool to evaluate the website that I built (and am always building) for our school.”

More than 150 librarians nationwide volunteered to pilot test the student instruments; 50 were selected. However, only 31 completed the pilot test which included development and testing of two lesson plans for teaching Web evaluation skills at different levels (see Appendix 2). Results indicated that the instruments and report generator worked as designed. The only major issues were with wording and vocabulary. There was a general problem with the length of the directions on all instruments and major issues with the scoring and report vocabulary on *WebCHECK Junior*. Revisions were made based on the pilot test results. Total number of pilot testers for this project was 41.

- (5) make them freely available online to school librarians nationwide. Announcements regarding the official launch of the *WebCHECK* Web site were made on the LM\_NET and AASLforum listservs as well as to school library faculty nationwide. Two articles about this project have been accepted for publication. One, focused on the development and evaluation of the *WebCHECK* instruments, was co-authored by the PI and co-PI. The second, focused on the relevance of Web site evaluation activities using *WebCHECK*, was co-authored by four graduate students in the Library and Information Science Program at Syracuse University’s School of Information Studies. A third article on specific ways school librarians can use *WebCHECK Professional* for evaluating Web site for teaching and learning based on pilot test data, is in progress.

- Small, R.V. and Arnone, M.P. (2014, March). *WebCHECK: The evaluation instrument, Knowledge Quest.*
- Justus, K., Fagnoli, C., Herring-Harrington, L. and Knight, S. (2014, Mar/Apr). Evaluating Internet resources with ‘WebCHECK’: A guide for school librarians. *Library Media Connection.*

The creation of a set of guidelines for creating course assignments on Web site evaluation for pre-service school library graduate students was initiated but not completed. During the spring 2014 semester, this part of the project will be completed (after grant period has ended) and disseminated electronically to school library graduate programs nationwide. A random sample of 15 program directors will be contacted for feedback. *An addendum to this report will be sent to IMLS as soon as this is completed.*

*WebCHECK* will be nominated for the 2014 AASL Best Websites for Teaching and Learning.

## APPENDIX 1

### Report on Pilot Test of WebCHECK Professional

Last Modified: 04/09/2013

#### 1. Please fill in the following information.

First and Last Name	Job Title	What is the name of the school at which you work?	Where is the school at which you work located? (City, State)
Gail Brisson	Teacher Librarian	Trumansburg Elementary School	Trumansburg, NY
Jill Schaal	Library Media Specialist	Donovan Middle School	Utica, NY
Penny Sweeney	School Library Media Specialist	Liverpool Central School District	Liverpool, NY
Christina Lupo	School Librarian	Auburn Junior High School	Auburn Ny
Karen Fenner	Library Media Specialist	Westhill High School	Syracuse, NY
Susanne Bang	Librarian	Grimshaw Elementary School	LaFayette, NY
Serena Waldron	School Librarian	LaFayette Jr/Sr High School	LaFayette, NY
Jacqueline Owens	Library Media Specialist	Sandy Creek Middle/High School	Sandy Creek, NY
Erika Kwasnik	LMS (EC-grade 8), ELA (grades 5-8)	Holy Family School	Norwich, NY
Margo Gustina	Librarian	South Seneca Middle / High School; Romulus Central School	Ovid, NY ; Romulus, NY

Statistic	Value
Total Responses	10

**2. What grade levels are served in the school at which you work?  
(Check all those that apply)**

#	Answer		Response	%
1	K		5	50%
2	1		5	50%
3	2		5	50%
4	3		5	50%
5	4		5	50%
6	5		4	40%
7	6		5	50%
8	7		6	60%
9	8		6	60%
10	9		4	40%
11	10		4	40%
12	11		4	40%
13	12		4	40%

Statistic	Value
Min Value	1
Max Value	13
Total Responses	10

**3. How many years have you been a professional librarian?**

#	Answer		Response	%
1	Less than 3 years		4	40%
2	3-5 years		3	30%
3	6-10 years		2	20%
4	11-15 years		0	0%
5	16-20 years		0	0%
6	More than 20 years		1	10%
	Total		10	100%

Statistic	Value
Min Value	1
Max Value	6
Mean	2.20
Variance	2.40
Standard Deviation	1.55
Total Responses	10

**4. Statement: The information on the Welcome page, that details what the instrument is designed to do, is clearly written.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Information on welcome page: clearly written	4.00	5.00	4.50	0.53	10

**5. Please describe, in detail, any words, sentences, or phrases that are not clear on the Welcome page information about what the instrument is designed to do.**

**Text Response**

I believe it to be very clear and descriptive.

Not about the welcome page, but I can't enter the entire URL when registering to use WebCheck. Can only put in: <http://www.emc.maricopa.edu/fa>

I thought the paragraphs could be put into bullets to make it easier to highlight the separate factors. I liked the example graphic of what to expect at the end of the evaluation. Could a fill in the blank form of MLA or APA citation information for the web site be provided so that the person doing the testing could have that printed on their evaluation form?

The first sentence of the first complete paragraph is worded awkwardly. Consider revising for clarity, brevity, and style.

Statistic	Value
Total Responses	4

**6. Statement: The information on the Welcome page, that details what the instrument is designed to do, is comprehensive and complete.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Information on welcome page: comprehensive/complete	4.00	5.00	4.60	0.52	10

**7. Please describe, in detail, any ways in which the Welcome page information on what the instrument is designed to do is not comprehensive and complete.**

**Text Response**

My only suggestion is to label the three quadrants on the second chart that have no label. The upper right is labelled Awesome Website, it would be nice to have a label for the other three.

I've used this website evaluation tool before, in an SU class, so I was already familiar with what it was designed to do.

I believe it is succinct in what this instrument will do. I might utilize subtle changes in text color or bullets to highlight the separate factors. I think the factors are the most important part of the evaluation for student use. WebCheck can be used as a training tool for students to learn the critical thought process of evaluating information found on a web site.

Statistic	Value
Total Responses	3

**8. Statement: The instructions for completing the WebCHECK Professional instrument are clearly written.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Instructions for completing: clear	4.00	5.00	4.60	0.52	10

**9. Please describe, in detail, any examples of ways in which the instructions for completing the WebCHECK Professional instrument are not clearly written.**

**Text Response**

There was no instruction at the top of the initial set of questions. It seemed clear to me. Did you want to have persons with disabilities to use this tool? Would a speech to text tool be useful? Or would a version with fewer questions at a larger font be useful (I think many tools for students with vision difficulties are able to enhance a typical web page - has this tool been tested with enlargement tools?)

What was written was clear. In future versions, I think having descriptions of the different classes of users and the difference in evaluation experience would be helpful.

Statistic	Value
Total Responses	2

**10. Statement:All of the items on the WebCHECK Professional instrument are clearly written.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Items on instrument: clear	4.00	5.00	4.40	0.52	10

**11. Please describe, in detail, any examples of items on the WebCHECK Professional instrument that are not clearly written and a suggestion for revision.**

**Text Response**

be careful of statements with double negatives

List of ratings on first page of questions– semicolons not necessary –looks cluttered (They’re not there on second page of questions) Question 1: Web site written as Website – two words the rest of the time. Question 9: needs a period – there is only a period for the etc. abbreviation inside the parentheses. Question 14/15: #14 reads “information IN” the web site, #15 reads “information ON” the web site – these should agree, think they both should read ON. Question 17 - the verb “helps” should be “help” to make the verb tense agree with formats, not variety. Question 23 - the text “AT” the web site should be changed to text “ON” the web site. Question 24 – Sentence should start with ON instead of AT. Question 31 – Should be ON the Web site, not IN the Web site Question 35 – Ends with quotation mark instead of period Questions 38 and 42 seem like the same question – was this intentional? Sometimes beginning of questions read “THE information” (or another noun), sometimes they read just “Information...”, this should be consistent.

As with any tool that provides an evaluative range, it depends on how the person taking the test perceives what an entry means. For example, item number 30, 34, and 38 all relate to the authorship of the web page. I found them interesting because is caused me to check the authority of the web site over and over. This is actually a feature that reinforces the importance of authorship. Would it be better if the questions were organized by the four factors you mentioned on the directions page. Big issue I see: The website was boring to me. There are so many opportunities to illustrate photosynthesis with video, flash animation, sound, color and this web site exhibited none of that. The illustrations were great but it was boring. This tool didn't really spot that even though I believe I rated the interactivity of the web site as very low. Was it my interpretation of the items or that there aren't questions that really highlight it?

All the writing was clear but I didn't have a clear expectation of the endpoint. Right now, taking this survey there is a scale at the bottom of the page letting me know where I am in the process. This might be helpful as numerous questions feel repetitive for the user, even if they are important from a testing perspective (questions 36 and 40, question38, etc.). I appreciated the N/A follow-up - it really felt as though the test was truly interactive.

Statistic	Value
Total Responses	4

**12. Statement: The WebCHECK Professional instrument is easy to use.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Instrument: easy to use	4.00	5.00	4.90	0.32	10

**13. Statement: The WebCHECK Professional instrument is fun to use.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Instrument: fun to use	3.00	5.00	3.80	0.63	10

**14. Statement: The WebCHECK Professional instrument will be useful to librarians.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Instrument: will be useful to librarians	3.00	5.00	4.40	0.70	10

## 15. In what ways might the instrument be useful to school and other librarians?

### Text Response

It's helpful to get a clear and objective picture of whether a website will be useful for a school unit/project. It covers everything that the librarian needs to consider when evaluating a website.

I feel this tool may be redundant for librarians; experienced LMS will be able to quickly evaluate a web site without the need to answer numerous questions. This may be helpful for those that are not as experienced.

I would like to use this with my older students to show the value of websites. We have done paper copies of similar questions. I think students would like the online aspect and the report aspect of it, but I love the student shorter version. I would love to have teachers use this, as many of them are not very specific with what they allow the students to use, or what they use themselves. In my buildings, though, realistically, I am not sure I could get them to participate.

I think it will be a good tool to use to validate a site to students and colleagues.

Fantastic tool for teaching students evaluation skills - it clearly lists the items that are important to consider when using a web page for academic research.

It draws attention to various aspects of websites that should be considered when they are being evaluated. This helps librarians become better evaluators, which, in turn, helps librarians teach others to be better website evaluators.

I like how the instrument forces me to think about specific areas/components of a website and how they affect a site's usefulness. Rather than looking at a site and thinking, "I don't think this will be useful/I think students will like this site", the webCheck tool forces me to specifically address what areas contribute to those thoughts. It organizes my evaluations. Not only will this be useful for teachers and librarians as a personal tool, having an organized, official report of a site's usefulness can help battle any future objections that might arise from using a particular site.

This would be a useful tool for reinforcing critical thinking about web page information. I am always trying to find different ways to push these ideas to make them habits. Could this be revised for younger students too? It is also a tool for when a parent questions the student use of a web site. It would provide the data as reinforcement.

While most librarians have had training in evaluating web sites, not all teachers have. This tool will help those teachers evaluate sites, but also allows everyone using the tool to evaluate all sites based on the same criteria in a consistent manner, giving a score that allows for easy comparison between sites.

I intend to use the tool to evaluate the website that I built (and am always building) for our school. A version of the tool would be good for my students as we talk about the many angles from which we can think critically about a work. Perhaps as an evaluation tool for other students' web building work?

Statistic	Value
Total Responses	10

**16. Statement: The automated report function of the WebCHECK Professional instrument will be useful to librarians.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Automated report: will be useful to librarians	4.00	5.00	4.50	0.53	10

**17. In what ways might the automated report be useful to school and other librarians?**

Text Response
<p>The report lays out the information from the evaluation in a clear way. The librarian could do a side-by-side comparison of various websites to determine which are going to be the most useful,</p> <p>I think we could require students to show that they websites they used were evaluated and found to be acceptable. They would have to turn in the report as "proof."</p> <p>The report can be used to share the findings with colleagues to validate the site.</p> <p>1. Evaluating librarians' own web sites, teaching students how to evaluate sites that they are building.</p> <p>I think this tool would be useful when ilbrarians are trying to show other teachers/students why certain web sites are NOT great web sites. It forces you to take a really good look at many aspects of a web site.</p> <p>Having the site automatically produce the report rather than having to chart your own results is an instant time saver (who couldn't use more time?!?) and will make teachers and librarians more likely to use it. And, as previously noted, the automated reports (and the ability to save/print them) make handy justifications for the use of websites should their validity in the classroom ever be questioned.</p> <p>The report could be useful to give to teachers who request a useful site on a topic.</p> <p>The report gives an actual score for each area the site is evaluated on. This allows for people both familiar and not to compare sites and their appropriateness in a quantitative way.</p> <p>For relatively little investment in time librarians have a straight forward evaluation of the broad strengths and weaknesses of their web interface.</p>

Statistic	Value
Total Responses	9

**18. Statement: The automated feedback report is clearly written and understandable.**

#	Answer	Min Value	Max Value	Average Value	Standard Deviation	Responses
1	Automated report: clear and understandable	4.00	5.00	4.40	0.52	10

## 19. In what ways might school librarians use the automated Evaluation Report feedback in their schools?

### Text Response

The TL could use the report with teachers to help determine what websites would be most useful for a project or unit of study. The TL could also use the report to track which websites they want to add to their library page.

It can work in the negative too, telling a user why NOT to use a site.

See above.

It would help librarians defend their web site choices and recommendations. Choices would be supported by Evaluation Report data instead of just librarian's "opinion". A color coded graph would make it easier to understand at first glance if the Web site is good (green) or not (red). Each of the four paragraphs explaining how the Web site scored on the 4 factors contains a sentence like this one, "This Web site scored 0 for how stimulating this Web site is." I think there should be a pronoun for the second "this Web site". It should instead read "This Web site scored 0 for how stimulating it is." On page 3: "Each factor with its corresponding items and individual item scores are listed for analysis in the next section of the report." – It took me a minute to figure out what this meant. I guess you're referring to the questions I answered as "items". That could probably be written more clearly – I think this is the first time you refer to these questions as items. On page 4 – "This allows you to pinpoint specifically in what ways this Web site may be modified or revised" Missing period at end of sentence. Also, think sentence needs clarification: "... may be modified or revised in order to improve its value and expectation of success ratings." OR "...to make it more stimulating, motivating, organized and/or easy-to-use." On pages 4 and 5: Item scores by factors: Page reads, "Stimulating [in descending order from 3-0]" Does the "descending order" refer to the item scores? The items are not listed according to their scores. It does not list the items that scored a 3 first, then 2s... it seems to be random, or maybe in the order that they were asked. \*\*Any changes made to questions on survey, will need to be changed in the Evaluation Report as well.

Besides the previously mentioned uses, I could see a school librarian creating a binder of these reports (whether physical or digital) for teachers to reference when trying to decide what sites they want to try with their classes. Teachers could submit their own evaluations to the collection or submit requests for sites to be evaluated and added to the collection.

I believe the two graphs are illustrative but the rest seems a bit too wordy. While the information is worthwhile, the busy schedules and understaffing of schools and school libraries hinders that useful information from being imparted. Could the item source by factors be ordered by rating (0-3)? That way the good aspects could be highlighted as well as the not great aspects.

Librarians can use these reports to aid in selection of sites to link from the school or library web page. We use portaportal in our school, and students are restricted to accessing sites from that page (Google safe search is available for use, but tested and suggested links are given as links separated by subject on that page. This is managed by the school technology aid and has sites teachers have asked to be included as links.)

Before I begin answering the above question I would like to note errors in the report which I was not asked about: Page 1- "The value...and also..." this second also is redundant and there is an extra space before it. Page 2- The entire first have describing the mechanism of the test may be better suited for a linked page about how the test works. The same goes for each page. As a user I might want to get right

to the meat of my results and actions. This "about the test" page might also be an appropriate place to talk about how the test determines the average. How often does the test re-evaluate user data to find the "average" or is the average based on a specific test group? The Item Scores by Factors would be most helpful to me in applying the analysis and for integrating into a useful rubric for students. Also, after the report generates, it would be helpful to have a way of linking back to the test or to the project homepage.

Statistic	Value
Total Responses	8

## 20. Please share your THREE ideas/stories in the text box below.

### Text Response

Jane Biblio is a librarian in a small district. The district is rural, and serves about 1200 students in grades K-12. The superintendent and building administrators have asked Ms. Biblio to help evaluate websites that offer premium/paid services and will be used by students. They would be used at different grade levels and across the curriculum. The district does not have a lot of money to devote to paid online resources, so they want to make sure they choose those that will be useful and engaging. Ms. Bibliouses WebCHECK to evaluate potential resources and presents the superintendent with the evaluation reports, along with her recommendations as to what the district should purchase. Jim Bookish is a librarian at a middle school. As part of a summer curriculum project, he is working with a team of ELA teachers to align their curriculum to the Common Core. In addition to the print resources that the library offers, he wants to build a website with links to top-quality resources that will support what the teachers want to do. He shows the teachers the WebCHECK instrument and he and the teachers each evaluate a roster of websites to see which ones they'd like to include. He looks at everyone's reports to determine which websites scored highest with everyone. Mary Pages is a librarian at an elementary school that serves a number of children with physical disabilities. She works with the building's Occupational Therapist, Speech Therapist, Resource Room teachers, and classroom teachers to use WebCHECK to evaluate resources that will be useful for students with physical challenges.

1. Share with teachers searching for credible web sites 2. Share with secondary students searching for credible web sites

1. Mr. Kennedy is a high school biology teacher. He is frustrated with his AP Bio Students because he found them citing sources like travel agencies and twitter on a scientific paper they were to write. He came to Ms. Smith, wondering how he could avoid this. Ms. Smith, the librarian, recommended that students be required to complete the Webcheck for any source they cite not found on her pathfinder or databases and to hand in the Webcheck reports with their papers. He loved the idea! Students loved the idea of being able to choose whether to use a website of their choice, or use the databases and pathfinder chosen by the teachers. 2. Ms. Smith, the librarian, is developing a unit on internet use with her sixth graders that will be going to middle school next year. She has students choose from a list of 6 websites on one topic with a range of values and asks them to evaluate one of the sites listed. After, the students compare the reports and answers so that they have the opportunity to see what is good and bad. 3. Ms. Smith, the librarian, is developing a pathfinder for fourth graders. She does not want to overwhelm them with too many sites to choose from, but she is having a hard time narrowing them down. She decides to do a webcheck on them, and realizes she is four clear winners. She knows sometimes a tool like this can help clarify your thoughts!

Ms. L is a teacher in the 7-8 school. She has a large population of high needs students with both developmental and learning challenges. She is very active with her Home and careers teacher and has found many of these students struggling with the pre-selected sites the teacher uses. She will use this tool to demonstrate the challenges these students face with these sites and help differentiate by offering alternatives that have good results from this tool.

The librarian works closely with the web design class in the high school which has students in grades 10 through 12. They are given guidelines for developing the layout and content of their own web sites and are asked to evaluate each others' sites. The WebCHECK tool, introduced by the library media specialist, can be used as a rubric-like guide for students while developing their sites. They may also use it to peer-evaluate the sites that other students are developing. Ultimately, the teacher and/or library media

specialist can use WebCHECK as a grading rubric. Because of its strong visual presentation and explanation which breaks out the crucial elements, the teacher has opportunities to discuss how the students' web sites can be improved, so revision can be part of the learning process and students can watch the quality of their sites' development on the WebCHECK grid.

I envision this tool being helpful for 1) assisting librarians and teachers in becoming better evaluators of web sites chosen for student use 2) making librarians and teachers more aware of what makes a web site a "good" one... information that will help them teach students how to evaluate web sites themselves 3) librarians and teachers that maintain their own web sites and want to know how to make their web sites more stimulating, meaningful, organized and easy-to-use

Creating an indexed "binder" of webCheck evaluated sites (physically or better yet, digitally) for teachers to search when they need ideas of sites to use with their classes. Teachers could even submit requests for sites to be evaluated and added to the binder. Perhaps the school librarian could educate teachers on how to use WebCheck themselves so they can add their own evaluations to the binder. Modify some of the questions/evaluations items on the WebCHECK questionnaire to be applicable/accessible to students. Use these items as part of a lesson on selecting appropriate websites for research with students. Keeping all your WebCHECK evaluations on file somewhere can help provide evidence that a site was well researched and the assignment that used the website was well thought out. This can be useful when a site/assignment is being questioned by an administrator or parent. It can also be useful as part of annual reviews. These evaluations help show the time and effort that is being put into every aspect of lessons and planning.

1. Ms. Owens is a school librarian who has been asked by a 12th grade English teacher to give a lesson on web site research. First and foremost the school librarian must teach students to evaluate web sites they find. She offers the WebCheck tool to the students so they can work independently for each web site they find during their research on Gothic authors. The scores sheets are part of their research paper and must be handed in. 2. A teacher is just starting in grade 7 after five years as a 6th grade teacher. She will be teaching science and providing a project for the students to research and write about a specific local wild flower or tree. Part of her research process is teaching how to find information on the web. She asks the librarian to provide a list of good websites to use for their research since she doesn't want them straying too far from the best information. She also asks that the librarian provide the WebCheck tool for each web site so that both of you can reinforce the evaluation process during class instruction. 3. Ms. Owens, a middle school librarian provides a Common Core professional development opportunity to her peers on the skills needed for students to write a research project in any subject. An important part of the research process is evaluation of Internet information. She introduces the WebCheck tool as the option being used in the library as part of the instruction to students on evaluating web sites. The goals of this part of professional development would be to help teachers learn more about the skills students need to further their knowledge of content, what the library does to instruct in research skills and how to reinforce evaluation skills classroom instruction.

Mrs. Davis has been teaching at school ABC for 30 years. While the idea of new technology fascinates her, she isn't completely comfortable with it so is reluctant to use it with her students. She's just not sure and can sometimes be overwhelmed by the amount of information out there. Her school's LMS, Mr. Redd, takes time to sit with Mrs. Davis and introduce her to the WEBCheck instrument. He instructs her on both the use and usefulness of the instrument in order to help her gain confidence in her ability to present her students with current, accurate, and appropriate information. Mrs. Thomas is a librarian at a very small private school where funds are limited. The money isn't there for databases outside the free access databases provided by the state. Teachers want to develop research projects and provide their students with opportunities to explore and navigate web sites, but need to know the

best way to select high quality web sites. Mrs. Thomas approaches her principal and is given time to instruct her peers in the use of the WEBCheck instrument, thereby giving them a useful tool to aid in selection of sites for use in their classroom. Miss Esposito, the Social Studies teacher at ABC School, and Mrs. Daniels, the school's librarian, are teaming to complete a research project with their middle school students on media bias. Together, they use the WEBCheck tool to locate sites that are blatantly biased, blatantly unbiased, and biased in ways that are not as evident at first glance while still being user-friendly, appealing, and accurate.

I'm a librarian in a rural k-12 school. My older students are working on developing interactive web based portfolios for college and career applications. While I have felt confident in their learning digital citizenship and professionalism standards through our units, I am not sure they really get a website as an engagement tool. My students will use the WebCHECK instrument to evaluate each other's work. This will expand on conversations on how accessibility leads to better overall engagement, as well as give them specific areas to look for improvement. Mr. K has been having an incredibly hard time with the web site building tool offered to teachers in our school. His biggest challenge is that, while all the necessary information is there, none of his students seem to know it. He has shared out the web site address and he has seen his students on his page in the library, but they just don't seem to be getting what he wants them to get. The librarian and Mr. K used the WebCHECK instrument to find the gaps in accessibility and navigation he needed to think about in order to increase findability on his website. As a teacher librarian, I am always looking for tools to guide my thinking on my practice from a new perspective. The WebCHECK tool has helped me evaluate the instructional value of our school library website for student engagement and motivation.

Statistic	Value
Total Responses	10

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## APPENDIX 2

# WebCHECK PILOT TEST: REPORT

### PARTICIPATION SUMMARY:

- We had 31 total participants in the study; nearly all completed the study to the full extent and provided feedback from beginning to completion.
- The majority of participants were in elementary and middle schools, with a smaller number of high school level participants.
- Most participants used the facilitator option, and reported being highly satisfied with it and the functions contained in it.
- Participants who used the JUNIOR instrument with young students reported the most difficulties. [See below].

### TECHNICAL ISSUES:

- A minor technical glitch involved the login function of the WebCHECK tool. A participant created an account, but was unable to login with her email address due to a limited number of characters allowed to be entered into the field textbox. Ryan Backus was consulted and addressed the problem.
- One participant reported difficulty printing the final reports, which are published as Adobe PDF files. It was unable to be determined whether the issue was with the WebCHECK program issuing the report, or the technology [printers and computers] being used to print the reports, but the participant was under the impression it was a technology issue on her end.

### SUGGESTIONS FOR IMPROVEMENT:

#### NOTE:

Because the responses for JUNIOR were specific to the targeted age group, they are separated. MIDDLE and SENIOR statements tended to share similar sentiments, so they are grouped together.

#### FROM PARTICIPANTS USING JUNIOR:

1. Regarding the **Welcome page information and instructions:**
  - a. Reduce the amount of text and upper-level vocabulary on the “Welcome” page of the WebCHECK tool. [This is the page that displays at

webcheck.ischool.syr.edu]. As an example, students struggled to read and comprehend statements such as “the WebCHECK program will generate graphical representations of the site's scores with text explanations, based on the dimensions and factors described above.”

- b. **Additionally**, a suggestion was made to have a “for teachers” page of instructions that goes into more detail [potentially to be read aloud to students], while having the “Welcome” page be more kid-friendly with shorter text and graphics to break up the paragraphs.
- c. One participant shared that *“Several students suggested a short video that explained [how the Webcheck tool works] would be more helpful”*.
- d. One participant remarked, regarding the “Welcome” page, *“I would suggest adding at the bottom of the page “If you have any questions or feedback on Webcheck, please contact....”*

2. Regarding the **statements on the instrument**:

- a. Several participants remarked that their students struggled to comprehend the “not applicable” answer. [No suggestions were given for better word choice; a simple explanation in the welcome page instructions regarding the N/A choice would likely be the best solution to this issue.]
- b. Multiple participants asked that “0, 1, 2, 3,” be changed to **word** answers such as “I really agree, I kind of agree, I disagree a little, I disagree a lot”. Others suggested that images accompany the scores if they remain in number format, such as the faces with smiles and frowns used on the paper version of WebMAC Junior. This would aid students understanding of how to score each item.
- c. See also: “text issues” section below.

3. Regarding **students experience with the report**:

- a. Overall, the report was overwhelming to students, due to amount of text and unfamiliarity with matrix graphs. One participant stated, *“I do not think that a 4 page printout of data is necessary or particularly useful”*. Another participant remarked, *“I do not think it is necessary to include the formula used and explanations. If you want to provide a report to younger children, it needs to include more graphics, and the text must be greatly simplified.”*
- b. **Suggestions**: present the graph without the “Items Scores By Factors” and other information for JUNIOR users; emphasize which quadrants are “good” in which ways. Add visuals and graphics to the report, *or* remove much of the text which is too difficult for younger students to read through and comprehend.

## FROM PARTICIPANTS USING MIDDLE AND SENIOR:

1. Regarding the **Welcome page information and instructions**:

- a. Overall, reduce the amount of text on the welcome page and make it more student-friendly One participant shared, *“The WebCHECK instrument evaluates those features that motivate individuals to visit, explore, and return to a Web*

*site. It was designed for use by librarians, educators, students and Web designers. WebCHECK was funded by a SPARKS! Ignition Grant from the U.S. Institute of Museum & Library Services (IMLS). " For my students they found this opening statement to be stuffy and they stopped reading after the first paragraph, until I made them read it."*

2. Regarding the **statements on the instrument**:
  - a. See: "text issues" section below.
3. Regarding the **students experience with the report**:
  - a. Overall, students appreciated the graphic. One participant said, *"The visual graph was easy for students to understand."* Participants did remark that students tended to skim the textual information instead of closely reading it.
  - b. **Suggestion**: break the information presented in the report into bulleted lists, which are easier for students to skim and read without losing motivation.

## SUMMARY OF RESULTS AND RATINGS

Note: all scores are computed using a scale from 1-5, with 5 being the best/highest score and 1 being the lowest/worst.

### FACILITATOR FUNCTION

- Note: 71% of participants utilized facilitator with their students.
- **"I found the information on the Facilitator Homepage, which explains the facilitator function, was clearly written."**
  - Average score: 4.14
- **I found the information on the Facilitator Homepage, which explains the facilitator function, was comprehensive and complete.**
  - Average score: 4.05
- **I found the Facilitator function, particularly for generating an aggregate report, easy to use.**
  - Average score: 4.24
- **I found the Facilitator function, particularly for generating an aggregate report, will be useful to school librarians.**
  - Average score: 3.80

### WELCOME PAGE INFORMATION AND INSTRUCTIONS

- Students found that the **information on the Welcome page, detailing what the instrument is designed to do, was clearly written.**
  - Average score: 3.50
- Students found that the **information on the Welcome page, detailing what the instrument is designed to do, was comprehensive and complete.**
  - Average score: 3.43

- Students found that the **instructions** for completing the WebCHECK instrument **were clearly written**.
  - Average score: 3.97

#### ITEMS ON THE WEBCHECK INSTRUMENT AND USE OF THE WEBCHECK INSTRUMENT

- Students found that all of the **items** on the WebCHECK instrument **were clearly written**.
  - **Average score: 3.70**
- Students found that the **WebCHECK** instrument **was easy to use**.
  - Average score: 3.90
- Students found that the **WebCHECK** instrument **was fun to use**.
  - Average score: 3.10

#### USEFULNESS OF WEBCHECK AND AUTOMATED REPORT FUNCTION

- You, the librarian, found that the **WebCHECK** instrument **was useful for teaching students** web evaluation skills.
  - Average score: 3.73
- The **automated report** function for the WebCHECK instrument **was useful to students**.
  - Average score: 3.17
- The **automated feedback report** **was clearly written and understandable** for students.
  - Average score: 2.93

### TEXT ISSUES

Note: these suggestions from participants target noted items (statements) on the WebCHECK instrument that students found difficult to comprehend. The statements have been revised in an attempt to increase clarity. See the revised lists of statements for junior, middle, and senior for changes, which are marked in bold. Notably, the most issues were with the JUNIOR instrument, likely due to text complexity.

#### ISSUES FROM PARTICIPANTS WHO USED JUNIOR

1. Statement #2: "The information that I found at this Web site was useful to me". Students struggled with the subjectivity of "useful".
2. Statement #4: "I do not need special skills or experience to use this Web site". Students struggled with the negative phrasing of this statement.
3. Statement #5: "Information in different formats (like pictures and sound) is presented in ways that all students can understand." The 'all' confused students who were working individually.
4. Statement #6: "There is a way to contact the creator or author of the Web site." Students struggled because this seemed like a yes/no question, and librarians wanted more focus on determining the author instead of contacting them (particularly with younger students).

5. Statement #8: "All parts of this Web site work the way they should." This was confusing to some students. If there was nothing to "work" on the website and only things to look at, students did not know what to put.
6. Statement #10: "The information at this Web site is believable and up-to-date." I think this should be split into 2 separate questions. Believability and currency of info are two different issues.
7. Statement #12: "The directions for using this Web site are simple and clear." The vast majority, if not all, of the websites being evaluated did not list directions for use. I think that's how most websites are. Suggest removing this statement entirely.

#### ISSUES FROM PARTICIPANTS WHO USED MIDDLE

8. Statement #1: "This Web site allows me to choose what information I want to see." We took this to mean that the students were able to click on different links and navigate to different pages within the site. I think the wording of this question should be adjusted though.
9. Statement #4 - Some students did not know what a "help" function was without my explaining it.
10. Statement #15 - Some students were unclear as to what "exit" meant, i.e. exit and go back to previous page or exit the website completely
11. Statement #16 students were confused by what was being referred to with the word "abilities". Several students struggled to understand the statement, "*Information on this website is accessible to all abilities*".

#### ISSUES FROM PARTICIPANTS WHO USED SENIOR

12. Statement #13: There are opportunities to read and/or share different ideas and viewpoints that make this Web site interesting.-- would benefit from examples of "commenting, blog posts, etc."
13. Statement #15: For the question "The purpose and organization of this Web site is always clear to me." We always use the word "mission" in addition to purpose.