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TRAILS: Tool for Real-time Assessment of Information Literacy Skills

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ADVISOR REVIEWS—STANDARD REVIEW

TRAILS: Tool for Real-time Assessment of Information Literacy Skills

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*Date of Review: August 15, 2015***Composite Score: ★★ ★ 1/2**

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Abstract

TRAILS: Tool for Real-time Assessment of Information Literacy Skills, a product of Kent State University Libraries, free and online, aims to evaluate information literacy skills of elementary and high school students. Launched in 2006, the tool was initially funded by the Institute for Library and Information Literacy Education (ILILE), an initiative of the Institute of Museum and Library Services (IMLS), and the U.S. Department of Education. The multiple-choice, standards-based, knowledge assessment measures competencies in five information categories—topic development, identification of sources, development of search strategies, evaluation of information, and ethical uses of information—at the third-, sixth-, ninth-, and twelfth-grade benchmark levels.

Pricing Options

Free access via any Web browser.

Product Description

TRAILS: Tool for Real-time Assessment of Information Literacy Skills, a product of Kent State University Libraries, free and online, aims to evaluate information literacy skills of elementary and high school students. Launched in 2006, it was initially funded by the Institute for Library and Information Literacy Education (ILILE), an initiative of the Institute of Museum and Library Services (IMLS), and the U.S. Department of Education. ILILE, IMLS, the U.S. Department of Education, LSTA (Library Services & Technology Act Program), the Martha Holden Jennings Foundation, and Kent State University Libraries currently support the assessment. A development timeline (spanning 2004-2012) can be found on the assessment Web site via the link About TRAILS.

The multiple-choice, standards-based, knowledge assessment measures competencies in five information categories—topic development, identification of sources, development of search strategies, evaluation of information, and ethical uses of information—at the third-, sixth-, ninth-, and twelfth-grade benchmark levels. Examples of the types of skills connected to each category can be found on the assessment Web site via the link How TRAILS Works (in the subsection Categories). By 2013, over 1,000,000 students had taken the TRAILS assessment (*College Ready, College Bound* 2013, under “TRAILS: Tool for Real-time Assessment of Literacy Skills”), and the TRAILS Web site had “over 13,000 registered users in 50 states and over 30 countries” (Burhanna 2013, 13).

Librarians and teachers who consider implementing TRAILS may want to use Patricia L. Owen’s five-step framework for implementing the assessment. In a nutshell, “devise a TRAILS action plan, administer tests, analyze the results, share reports with teachers and students, and revise instruction” (Owen 2010, 38) and take into consideration the specific measures Owen took to introduce, publicize, and generate interest in the assessment; Owen held a drawing with prizes to motivate students and to advertise the assessment, for example (Owen 2010, 37). Useful guidelines for using TRAILS are provided on the TRAILS Web site under Ideas for Using TRAILS (via the link how TRAILS Works), including tips and suggestions about recruiting participants, administering the assessment, and employing post-testing measures. In a study conducted in the Montgomery County (Maryland) Public School District, 8,000 students in grades five, eight, and eleven took the TRAILS assessment; students who scored higher on TRAILS also scored higher on the state’s reading assessment tests (Bailey and Paul 2013, 48). These results have implications for a school’s ongoing assessment of information literacy skills, the need to apply curriculum mapping and make pedagogical changes, and the importance of school libraries and information literacy instruction in contributing to students’ overall achievement. Bailey and Paul recommend a similar framework to Owen’s for implementing TRAILS; briefly, develop an action plan, create a personal learning network, communicate plans, share data, promote the role of the library media specialist, and participate in professional development to support standards for school media programs (Bailey and Paul 2013, 48).

For each of the benchmark grades, TRAILS provides two general assessments (30 questions for twelfth graders, 25 questions for ninth graders, 20 questions for sixth graders, and 15 questions for third graders) covering the five information categories and one 10-question test for each of the individual categories. In the expanded (versus student) view, questions are linked to the American Association of School Librarians (AASL) Standards for the 21st Century Learner and the Common Core State Standards (CCSS). Providing two assessments for each benchmark grade is useful for implementing pre- and post-intervention testing; providing tests for several benchmark grades allows for “measuring growth” throughout the K-12 continuum. Students are given individual TRAILS-generated codes to protect their privacy and give them access to the assessment via a designated URL for that session. After all participants in a session have completed their assessments and the test administrator closes the session, individual and class reports are generated that can be shared and compared. Students can use their individual codes to view test scores and correct answers for questions they missed. The class report gives raw

scores and percent of respondents who chose each answer. National comparisons of General Assessment scores for each of the benchmark grades are posted at the end of the year under Benchmark Data.

TRAILS HOME PAGE

The TRAILS home page (Figure 1) includes links for new users to create an account or for registered users to sign in and links to About TRAILS, How TRAILS Works, My Account, FAQs, Related Resources, and Contact Us. The content of these sections are described in Table 1. The home page also includes a newsfeed with announcements and recent developments.

USING TRAILS

Users click on HOW TRAILS WORKS to see Steps for Using TRAILS (Figure 2).

In brief:

1. Teacher or librarian (test administrator) creates an account. Accounts are created via a link on home page; requires e-mail verification, school affiliation information, and acknowledgement that registrant is "an educator, and not a student."
2. Test administrator signs in via the link on the home page.
3. Test administrator creates a session for a specific class (or cohort). Once a session is created, TRAILS generates a session URL, individual codes for each student, and a printable set of instructions for students for taking the assessment.
4. Students take the assessment. Students can go to the URL provided by the test administrator, type in their individual codes and take the assessment.

FIGURE 1 TRAILS Home Page <www.trails-9.org>

TABLE 1 Home Page Sections

Sections	Subsections
About TRAILS	About the Assessment: General information about the assessment, reports, results, and the development of TRAILS; includes links to the American Association of School Librarians Standards for the 21st Century Learner and the Common Core State Standards About Your Privacy: Information about protecting students' identities, test administrators' account information, and the use of aggregate data for research by the TRAILS Development Team About the Project: Background information about the TRAILS project; includes a development timeline and a link to the Institute for Library and Information Literacy Education About the Project Team: Includes names, credentials, and affiliations of project members; other contributors; and acknowledgements
How TRAILS Works	Steps to Using TRAILS: Instructions for creating an account and creating and managing sessions Ideas for Using TRAILS: Suggestions related to recruiting, assessment environment, population, timing, and other ideas (such as using the assessment in a game show format) Categories: Brief descriptions of the information areas assessed (topic, sources, search strategies, evaluation, ethical use of information)
My Account (Available after signing in)	Sign in to Create and Manage Sessions; View Available Assessments, Sample Reports, Benchmark Data; Change Password; Edit Account Information
FAQs	Q&A about accessing TRAILS; creating, administering, and managing sessions; viewing results
Related Resources	Links to: Wiki for Trails "TRAILS presentations, lessons and links to resources that support information literacy" Transitioning to College (T2C) "Resources for both students and librarians about the college experience" Project SAILS "A standardized test of information literacy skills for higher education based on ACRL IL Competency Standards for Higher Ed"
Contact Us	E-mail form

FIGURE 2 Steps for Using Trails

5. Test administrator closes the session. Once all members of the class or cohort have completed the assessment, the administrator closes the session.
6. Class, Student, and Detailed Student reports are generated. As soon as the session is closed, Class (Figure 3), Student, and Detailed Student (Figure 4) Reports are generated. Students can then review their assessments by going to the session URL and typing in their individual codes.

CREATE A TRIAL/DEMO SESSION

To create a trial/demo session to introduce TRAILS to administrators and teachers, follow the same procedures for creating any new assessment session. Once signed in, click on Create and Manage Sessions (Figure 5) then click on Create a New Session (Figure 6). Fill out the form: add a session name; select desired assessment (e.g., Ninth Grade General Assessment 1); select grade (for which session will be used); indicate whether questions should be presented in a random or ordered fashion. Indicate if the session is to be a trial session; if so, data are not used for analysis. Indicate if student codes should be generated (on an EXCEL table), if a current list should be used, or if

FIGURE 3 Sample Class Report

codes should be generated at testing. Once a session is created, a URL (Figure 7, A) for that session and students' codes (Figure 7, C) are generated. Individual instruction letters (Figure 7, B) listing the session URL and the student's unique identifying code are generated for the test administrator's files and to be distributed to each student in the class or cohort. Test-takers use the URL to access the test and sign in with their individual codes. After all participants in the class or cohort have completed the assessment, the test administrator closes the session, and can manage the results (share reports, etc.).

WIKI FOR TRAILS

The Wiki for TRAILS (Figure 8) can be accessed via the Related Resources link or directly at <<http://trails-informationliteracy.wikispaces.com>>. One need not sign in to access the TRAILS Wiki.

The Wiki for TRAILS has sections for feedback, tips for getting started and using TRAILS, lesson plans, links to resources, TRAILS presentations, and scholarly publications. While the wiki provides a host of useful information in addition to providing a forum for sharing ideas, most sections in the wiki could use some updating (there are only seven articles in the TRAILS Scholarly Publications section and

Student Name	Student Code	Session	Total % correct	Develop Top	Identify Sour	Search Strate	Evaluate Res	Use Info Responsibly	Ethically % correct
8341	118795		92	80	100	100	100	80	
Class Average			92	80	100	100	100	80	
Class Range			92-92	80-80	100-100	100-100	100-100	80-80	

FIGURE 4 Detailed Student Report (from a demonstration session with one student)

FIGURE 5 Create and Manage Sessions

FIGURE 6 Create a New Session

FIGURE 7 A: Session URL, B: Instructional handout for students, C: Students' Codes

only two presentations, for example). The wiki is hidden under Related Resources and would be better promoted and advertised with an icon and/or direct link on the home page.

Critical Evaluation

Findings from a study conducted by Gross and Latham (2012) “support findings from the literature that conclude that students come to college without, or with low level, proficiency in IL [information literacy] skills [and] ... below-proficient students significantly overestimated their performance ... indicating a miscalibration between their actual skills and their self-views of their IL skills” (Gross and Latham 2012, 582). Librarians at Rutgers University conducted a study to discern why “first-year college students [are] information illiterate” (Varlejs, Stee, and Kwon 2014, 2) and found that, among other things, the failure of high school teachers and school librarians to collaborate “looms large” (Varlejs, Stee, and Kwon 2014, 18). Interviews and focus groups comprised of academic and school librarians were part of a grant-funded project, *College Ready, College Bound*, in which 1,200 twelfth graders and 400 college freshmen took the TRAILS assessment (restricted to the Develop a Topic category). The project revealed that the process of implementing the TRAILS assessment “opened the door between many librarians in the high schools and their teachers or administrators” (Huisman 2015, 464). Introducing TRAILS to a school or district’s administrators, teachers, parents and students is one way for librarians to initiate conversation about the importance of information literacy instruction; data from the assessment can provide evidence of the need to purposely incorporate information skills into a school’s curriculum, or serve as the impetus for conducting action research.

FIGURE 8 Wiki for TRAILS

TRAILS has many virtues. It is a free, easy-to-use, data-driven, low-stakes, standards-based formative assessment that results in quantifiable evidence of students' knowledge. It is continuously amended based on user feedback. It is a relatively quick assessment that students complete online at their own pace. It has pre- and post-tests that are useful for assessing curricular interventions. The individual information category tests are particularly useful for focused assessment. Helpful tips and clarifications are provided throughout the site.

While the scope of the test is limited—it is not an organic or authentic assessment and it doesn't measure all aspects of information literacy—Patricia L. Owen (2010) points out that “school librarians have long used informal or in-class assessments to gauge student learning. While effective, these assessments can be augmented by the use of [a] standards-driven information literacy test, such as TRAILS-9” (Owen 2010, 36). Just as students' acquisition of information literacy requires a multiplicity of approaches so too does assessment of students' information literacy skills and dispositions; in fact, librarians and teachers use surveys, portfolios, ‘questioning,’ rubrics, and other instruments to assess students' information literacy. As noted by Farmer and Henri (2008), the “process of assessing information literacy ... needs to reflect a variety of perspectives and measurements over the course of a student's academic journey” (Farmer and Henri 2008, 84). Because it is free, easy to administer and flexible (the assessment can be given to a class, an individual, in school, at home, 24/7), and because it produces data that can be shared and compared, TRAILS should certainly be included in a school's assessment toolbox. (The Resources for Educators section of the Wiki for TRAILS might be a good place to include links to complementary assessments such as rubrics and other useful tools.) If introduced, publicized, and implemented in an optimal way, the use of TRAILS may foster school-wide collaboration and educational conversations, include librarians in assessment, encourage data-driven curricula mapping and course design, strengthen the role of the librarian in the school and demonstrate compliance with national standards. A chart in the report *College Ready, College Bound* illustrates how TRAILS information categories crosswalk to ACRL (American Association of College and Research Libraries) Information Literacy Competency Standards for Higher Education; AASL Standards for the 21st Century Learner; ISTE (International Society for Technology in Education) National Educational Technology Standards for Students; and the CCSS (Under Information Literacy and Educational Standards).

Limitations aside, this assessment does what it intends, providing evidence of students' knowledge and serving as a vehicle for curricula improvement and teacher-librarian collaboration. While the TRAILS project team aims to continually improve the assessment, and plans to create reliability and validity measures in the future (Voelker, Schloman, and Gedeon 2013, 214-215), in its current iteration TRAILS meets its goal of providing a

low-stakes assessment and “an easily accessible and flexible tool for school librarians and teachers to identify strengths and weaknesses in the information-seeking skills of their students” (Kent State University Libraries 2015).

Contract Provisions

N/A

Authentication

Users create a user name and password for full access to the site.

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TRAILS Review Scores Composite: ★★ ★ 1/2

The maximum number of stars in each category is 5.

Content: ★★ ★

Far superior to stand-alone multiple-choice instruments, TRAILS is a standards-based assessment that covers the full K-12 continuum, provides a place to store data, provides immediately-generated reports for sharing and comparing results and feedback for students. It provides pre- and post-tests, a wealth of supporting documents, has a wiki for sharing ideas and best practices, and invites user feedback for continuous improvement.

Searchability: ★★ ★ ★

TRAILS meets its objective to be “intuitive for the school librarian/teacher.” It is easy to use and contains numerous useful tips and hints.

Pricing Options: N/A

Contract Options: N/A

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About the Author

Christina Miller, M.L.S., M.S. Ed., Assistant Professor, is both an academic librarian at York College Library and the Library’s high school librarian, for the Queens High School for the Sciences at York College, a specialized high school in New York City that shares the York College Library. Miller previously published an article about the AASL Lesson Plan Database in *The Charleston Advisor* and has given numerous presentations about information literacy standards, transliteracy, and the connection between AASL, ACRL, and literacy standards. Miller is a NYS-certified School Media Specialist and a NYS-certified Literacy Specialist (Grades 5-12), a member of the American Association of School Librarians, and a reviewer for *Voice of Youth Advocates (VOYA)*. ■

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