Expanding the Reading Literacy Framework of PISA 2009 To Include Online Reading Comprehension

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Introduction

The Internet has become an important new context for reading, literacy, and life in the twenty-first century (Coiro, Knobel, Lankshear, & Leu, in press; Hartman, 2000; International ICT Panel, 2001; International Reading Association, 2002). As a result, reading assessments that only measure the offline reading of books, documents, and other traditional print forms do not adequately measure the full range of reading in which our youth engage. Most importantly, they do not measure online reading comprehension, a new aspect of reading that is increasingly important for learning in both post-secondary schools and in the workplace (International Reading Association, 2002).

This short document presents a brief rational for why online reading comprehension skills should be included in the Reading Literacy Framework for PISA 2009. It then presents a theoretical definition of online reading comprehension, explaining how and why online reading comprehension requires additional skills and strategies beyond those required in offline reading. Next, it describes three different approaches to measuring online reading comprehension that are being used, providing examples from each. Finally, it explains why both metacognition and engagement need to be included in the framework for the reading of electronic texts, while leaving space for more knowledgeable others to define these elements of the construct.

What Are The Benefits To Including Online Reading Comprehension In The Reading Literacy Framework For PISA 2009?

During a period in which the nature of literacy is rapidly changing as the technologies and social practices of literacy change (Coiro, Knobel, Lankshear, & Leu, in press; Leu, 2000), it is important to begin to include these new literacies within our assessments, especially the online reading comprehension skills that are required by the Internet. There are many reasons for doing so. This paper describes three of the most important ones:

1. to ensure that the construct of reading is not under represented;
2. to measure our youth's preparation for, and transition to, the workplace; and
3. to collect critically important baseline data for public policy makers, during a time when the nature of reading is fundamentally changing.

Including Online Reading Comprehension Is Important To Ensure That The Construct Of Reading Is Not Under Represented

Perhaps the most compelling argument in favor of including online reading comprehension within PISA 2009 is to ensure that the construct of reading is not underrepresented. Reading a paragraph, a story, or a document offline is not the same as reading online to solve an informational problem, navigating through a rich multimedia space organized within new types of text and media structures.

Online, for example, on must locate information with a search engine, a task requiring new reading skills to read and infer which of several search engine results will take a reader to the most useful information (Henry, 2006). Online, one must navigate a web page, make an

inference about the information behind a link, and continually drill down or across to locate the answer to a problem or a question (Coiro & Dobler, in press). Once readers locate a useful site, they must critically evaluate the accuracy of the information within an online context where anyone may publish anything (Leu & Castek, 2006). They must think much more critically about information, learning to look for new resources such as an "About this site" link, to determine who created the information and what stance the author takes in relation to the information. Then, they must infer how this stance is likely to shape the information presented at that site. Moreover, readers often must read short, seemingly cryptic, text messages or email messages during their online reading experiences to gather new information resources or to evaluate the ones they have acquired (Lewis & Fabos, 2005).

Online reading comprehension differs in many ways from offline reading comprehension. Perhaps, though, the clearest way to explain this is to point out that during online reading comprehension it would be highly unusual for two readers to read the same text, even when they seek to solve the same informational problem. Each constructs a unique text from the information encountered at the links he/she follows during both the meaning and the text construction process that defines reading on the Internet.

The Internet requires new reading skills and strategies (International Reading Association, 2002). Limiting the assessment of reading to offline texts would severely under represent the construct of reading in PISA, 2009, failing to take into account the new reading demands required within the most powerful informational resource that has ever appeared in our history, estimated to be over 5 exabytes of new information, or the equivalent of more than 37,000 Libraries of Congress, in just 2002 alone (Lyman & Varian, 2003).

A second aspect of under representing the construct of reading is related to how common it is for people around the world to be reading online. Sometime late in 2005 an important global milestone was reached -- the one-billionth individual began reading, writing, viewing, and communicating online (de Argaez, 2006; Internet World Stats, 2006). Put another way, approximately one-sixth of the world's population in now reading online. Online access rates are presented in Table 1, summarizing worldwide Internet access statistics as of November 27, 2006. The growth rate in online access has been exponential; most of it having taken place in just the past five years (Evolution of Online Linguistic Populations, n.d., Internet World Stats, 2006). This rate, if sustained, suggests that more than one out of every three people in the world will be reading online by the time PISA 2009 is conducted.

Table 1 also shows that the fastest growth rates (from 2000-2006) are taking place in regions with the largest populations: Africa (625%), the Middle East (479.3%), Latin America/Caribbean (370.7%), and Asia (231.2%). Clearly, by the time PISA 2009 is conducted, online reading will be an important aspect of worldwide reading.

Table 1 About Here

Since PISA surveys 15 year olds, the danger of under representing reading is even greater because 15-year olds, around the world, read online at a rate much higher than the rest of the population. In Accra, Ghana, for example, 66% of 15-18 year olds attending school, and 54% of 15-18 year olds not attending school, report having gone online previously (Borzekowski, Fobil,

& Asante, 2006). In the U.K, 74% of children and young people aged nine to nineteen have access to the Internet at home, and most of these (84% in all) are daily or weekly Internet users (Livingstone & Bober, 2005). In the U.S., 87 percent of all students between the ages of 12 and 17 report using the Internet; nearly 11 million students do so daily (Pew Internet and American Life Project, 2005). Similar patterns are commonly found in other nations. In short, the Internet is quickly becoming this generation's defining technology for literacy and thus, issues of online reading comprehension are especially important to consider in relation to our youth.

We also see these changes in schools around the world where the past decade has seen the rapid integration of the Internet into school settings. For example, schools in the European Union report 96% Internet access in 2006, with broadband access the new standard. They average nearly 70% school classroom penetration, with highs of over 90% in the Nordic countries, the Netherlands, Estonia and Malta, and lows of 13-31% in Greece, Poland, Cyprus and Lithuania (Korte & Hüssing, 2006). In 2005, 99% of public K-12 schools in the U.S. had an Internet connection and 93% of all K-12 classrooms in the U.S. had Internet access (Parsad, Jones, & Greene, 2005). By contrast, however, only 5% of Mexican schools were estimated to have any kind of web access prior to 2004 (Cavanaugh, 2004) and only 26% of Brazil's schools had Internet access, though 67% of all secondary schools in Brazil had access (INEP – EDUDATABRASIL, 2005), suggesting that combined elementary and secondary school statistics on Internet access may under represent access rates in secondary schools.

Including Online Reading Comprehension Is Important So That We Measure Our Youth's Preparation And Transition To The Workplace.

There is also an economic argument. The nature of reading, writing, and communication has been rapidly changing in the workplace as economic units seek to meet global economic competition by becoming more productive (Friedman, 2005; The New London Group, 2000). Much of recent productivity growth has been driven by the integration of the Internet into the workplace and by empowering teams to use the Internet and other ICTs to identify important problems, to solve the problem, and then to rapidly communicate the solution throughout the economic organization (Friedman, 2005; Leu, 2006). As the European Commission recently stated, "Information and communication technologies (ICT) are a powerful driver for economy-wide productivity, growth and jobs." (European Commission, Directorate General for Enterprise and Industry, n.d.) Since PISA data are sometimes used to determine the ability of each nation's educational system's ability to prepare youth for their future, it is important to evaluate students' preparation for the new types of reading demands that will be essential to their future, both in the workplace and in post-secondary education.

The Importance Of Baseline Data, During A Time When The Nature Of Reading Is Fundamentally Changing

The third argument for including online reading comprehension in PISA 2009 is one that points to the future. If PISA 2009 includes the assessment of online reading comprehension, it would be the first international assessment of this important aspect of reading. This would allow PISA 2009 to provide critically important baseline data with which to measure progress, in each nation as well as internationally, as the nature of reading rapidly changes in the 21st century. Decisions about the construct of reading, made today, determine what will be measured three

years from now. Data collected in 2009 will be used for many years past that date. It would be unfortunate to miss the special opportunity that PISA 2009 represents to gather the first international set of data about online reading comprehension, representing what will become an increasingly important aspect of reading in the future. If we wait until 2019 to include online reading it will be too late to capture the initial changes to reading that are taking place as the Internet intersects our lives. Policy makers will be left without the information they require to evaluate progress in the online reading comprehension of their youth that took place from 2009-2018.

A Theoretical Definition of Online Reading Comprehension: What Is It and How Is It Different From Offline Reading Comprehension?

The changing nature of reading with digital technologies has generated a variety of constructs being used to describe reading within digital contexts. "Digital literacies," "new literacies," "ICT literacies," "ICT literacy," "computer literacy," "informational literacy," and many other labels have been used to capture slightly different aspects of reading that contrast with the reading of "traditional," "foundational," or "printed" text. Some straddle boundaries and include aspects of both online as well as online information within the same construct (e.g. "informational literacy"), assuming that the two contexts are isomorphic. Some focus on what many consider to be less essential aspects of reading in digital technologies (e.g. computer literacy). Some lump all forms of electronic text into the same category, not recognizing the distinctive and uniquely powerful nature of the Internet and how it differs from simply reading a document on a screen (e.g., "digital literacies"). Each of these, and other constructs suffer from severe definitional problems when contrasted with the more traditional text and reading context.

This paper proposes to use the constructs of *online* and *offline reading comprehension* for four reasons:

1. The central issue, from a reading perspective, is the comprehension of information RAND, 2002).
2. The Internet is the largest source of information today (Lyman & Varian, 2003).
3. The labels online and offline reading comprehension are precise, descriptive, and orthogonal.
4. Evidence exists to indicate that online and offline reading are not isomorphic (Leu, et. al., in press).

How is online reading comprehension different from online reading comprehension? It appears that while both share common aspects, other aspects are distinctive. Online reading appears more complex than offline reading comprehension (Coiro & Dobler, in press). It also contributes a significant amount of unique variance beyond offline reading comprehension and prior knowledge to the prediction of online reading comprehension (Coiro, 2007). Also, it appears that some online reading comprehension tasks do not correlate at all with offline reading comprehension (Leu, et. al., 2005). In addition, online reading comprehension appears to include processes common to offline reading comprehension that get manifested in distinctive ways: locating information, analyzing information, synthesizing information, and communicating information (Coiro, 2007; Leu, et. al., 2005). These elements appear to be interconnected, clustering in a factor analysis into a single common factor that is different from offline reading comprehension (Coiro, 2007; Leu, et. al., 2005).

It appears that if you define online reading comprehension as simply reading information on a single screen, there is little or no difference between online and offline reading comprehension

(Leu, et. al., in press). However, if you define online reading comprehension by situating reading within the social practices, texts, and contexts that drive the online reading act, important new skills and strategies are required (Coiro, 2003; Leu, 2006; RAND Reading Study Group, 2002).

A widely recognized theoretical framework, one being used in much of the research in the new literacies of online reading comprehension, identifies five major skill areas that get transformed during of online reading comprehension. It defines the new literacies of online reading comprehension as:

> "the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICT to identify important questions, locate information, analyze the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others."
>
> (Leu, et. al, 2004, p. 1570)

Online reading comprehension always begins when we *identify an important question* that initiates online reading. We read to discover answers or solve problems on the Internet. Reading that is initiated by a problem or question, differs in important ways from reading that does not (Taboada & Guthrie, 2006). In fact, this difference, in conjunction with new genres of text organization, new media forms, and new technologies such as search engines, all of which require new reading strategies, may account for much of the difference between offline and online reading comprehension.

After we identify an important question, we *locate information*. At least three new sets of comprehension skills come into play during the location of information:

1. Constructing a set of appropriate key words and entering these into a search engine and then revising unsuccessful key word searches (Guinee, Eagleton, & Hall & 2003).
2. Reading search engine results to make the correct inference as to which link is likely to provide more appropriate information than others (Henry, 2006).
3. Reading a screen with information and making a forward inference, to select the link that will take the reader closer to the information they require (Coiro & Dobler, in press)

Rapidly locating the best information online is somewhat challenging for adolescents. Most never actually read the results, they simply work their way down a search results list from top to bottom, clicking on each link and then inspecting the web page that appears (Henry, 2006). This "click and look" strategy is inefficient and ineffective but it is the most common one that adolescents appear to use, suggesting that they lack adequate online reading comprehension skills (Guinee, Eagleton, & Hall, 2003; Henry, 2006).

Once a reader has located information related to the question or problem, critical *analysis* of that information becomes important. While critical analysis of information takes place offline, of course, it is much more important online, where additional, new skills are required. Moreover, it is a skill that few adolescents appear to possess; they are easily fooled by false information appearing on the Internet and do not always possess strategies to analyze its accuracy. In one recent study, twenty-four out of twenty-five grade twelve- and thirteen-year olds, all of whom

were high performing online readers, recommended a spoof site, with completely false information,

Save the Pacific Northwest Tree Octopus (http://www.lakelandschools.org/EDTECH/webdetechtor/SaveThePacificNorthwestTreeOctopus.htm), to another class that was looking for reliable information about an endangered species (Leu & Castek, 2006).

Offline, texts are typically edited and filtered by many layers of the print publication process. Online, however, anyone can publish anything and information is powerfully shaped by the stance of the person who creates it. It is not unusual, for example, to encounter sites such as *Martin Luther King, Jr.: A True Historical Examination* (n.d.), a site that appears to provide accurate information about this important individual. If you are skilled in online reading comprehension however, you would know to look for a link appearing at most sites ("About this site," "Hosted by," or similar links) whenever you encounter an unfamiliar site like this. You would analyze information at the link to determine who created the information, what their stance is in relation to the information, and how their stance shapes the information they present. In this case, one would discover that this site (with a URL that appears reliable, http://www.martinlutherking.org/) is hosted by Stormfront, a white supremacist organization, providing information about Martin Luther King in ways that are consistent with their racist beliefs.

Because the Internet permits anyone to publish anything, it also permits the posting of much information that is not just shaped, but also deliberately false (cf. *Save The Pacific Northwest Tree Octopus*, n.d.; *snopes.com*, n.d.). It becomes important, for example, to know if an image of a president who is reading a book upside down (cf.,

http://www.snopes.com/photos/politics/bushbook.asp) has been altered or if accurately represents an event.

How do skilled online readers evaluate questionable online information? Skilled readers know about many resources, such as snopes. com, that monitor deliberate falsehoods circulating on the Internet. They know to evaluate information that may be questionable. They also know how to use a search engine to gather additional information about a site by simply conducting a search for its title and additional words such as "hoax," "true?" or "accurate?" Critical analysis, a skill required during offline reading comprehension, gets transformed in important ways online, requiring new online reading comprehension skills.

Synthesizing information also gets transformed in new ways while reading online. We synthesize information offline, of course, but typically this takes place within continuous text that has been constructed for us. Online reading is different in that readers actually construct the texts that they read by the choices they make in the links that they follow, collecting a series of non-continuous texts and synthesizing the essential aspects of each during the comprehension process. Synthesis is also somewhat different in that readers often skip more information at any single page than they read; the units of text that readers find useful at any single page are often quite small and they seldom read all of the information at a single web page. Online reading is a continuous synthesis and evaluation process, with readers choosing the information that they read, often with new searches for information in the middle of the reading process, all of which takes place in a recursive manner until the reader determines that they have solved the informational problem or have come up with an answer that is sufficient.

Communicating information is not typically included on offline reading comprehension models but it appears to be central to online reading comprehension (Leu, Leu, & Coiro, 2004).

Proficient online readers do not just read online; they also communicate with others continuously, throughout the day, as they locate, evaluate, and synthesize information to solve questions or problems. Moreover, new questions or problems often come in by text messages, email, or IM, initiating new online reading comprehension journeys. Proficient online readers text message, IM, and email messages, comprehending new information that comes in, making decisions about new problems and new questions that need to be addressed.

Proficient readers also reread messages, both before they send them out, and after they have been sent, to comprehend and evaluate how others understand, or might have understood, their messages. During online reading, comprehension and composition become fused, making it difficult to maintain an arbitrary separation between the two. Any theoretical model of online reading comprehension must include online communication within it.

Summarizing The Differences Between Online And Offline Reading Comprehension

The largest international organization for reading education and research, The International Reading Association (2002), has recognized the unique nature of online reading comprehension and advocated that we begin to develop assessments that measure it. What are the distinctive elements of online reading comprehension? We use the Internet to answer questions, both large and small; we never read on the Internet without a question of a problem that prompts our reading (Leu & Reinking, 2005). Because online reading is typically driven by a question, it also requires locating information, perhaps by using a search engine and reading the results or by reading and navigating a web page to locate the links that will provide the answer. Along the way there may be critical evaluation of information, synthesis of disparate information resources, and communication, as readers seek information from others or as they communicate what they

have discovered to others. During all of these functions, shared by offline reading comprehension, somewhat different online reading comprehension strategies are required.

What evidence supports this emerging theoretical model and differences between offline and online reading comprehension? One study (Leu, et. al, 2005), found no significant correlation, among seventh grade students, between performance on a measure of offline reading comprehension and a measure of online reading comprehension (ORCA-Blog) with good psychometric properties. The assessment provided students with informational questions and measured their ability to locate information, critically evaluate information, synthesize information, and communicate information on the Internet. These results suggest that new skills and strategies may be required during online reading.

A second study, among highly proficient grade six students (Coiro & Dobler, in press) and limited to searching and evaluating information, found that online reading comprehension shared a number of similarities with offline reading comprehension but that online reading comprehension also included a number of important differences, making it more complex.

A third study (Coiro, 2007), using a regression model with a somewhat more complete online reading comprehension task, found that while offline reading comprehension and prior knowledge contributed a significant amount of variance to the prediction of online reading comprehension, additional, significant variance was contributed by knowing students' online reading comprehension ability. Again, students were evaluated in terms of their ability to locate, evaluate, synthesize, and communicate information. The results of this study are also consistent with the conclusion that new skills and strategies are required during online reading comprehension.

The pattern that is emerging from these studies is that the complexity of the online reading task determines the extent to which online reading is similar or different from offline reading. Performance with simpler, online reading tasks will correlate more with performance on offline reading; more complex online reading tasks such as locating three different resources for the study of human body systems, determining which would be best for a seventh grade class and then communicating the results, along with an explanation on a blog, will not.

Developing An Operational Definition Of Online Reading Comprehension: Measurement Strategies

Currently, three different approaches to operationalizing online reading comprehension, or related constructs, have been developed. Each may be used to develop an assessment instrument to measure at least four of the five components of online reading comprehension: location, analysis, synthesis, and communication.[1] The three assessment approaches used to date include:

1. *Measuring performance on problem solving tasks within a limited informational space developed to imitate a very small portion of the Internet (cf. ICT Literacy Assessment).* This approach uses a bounded, artificial information space, making it more amenable to control different aspects of the task. It suffers from limited ecological validity since it does not fully represent the full complexity and challenges of reading on the Internet, where information is nearly limitless. An

[1] It is likely to be more challenging to also measure the fifth element, the identification of an important question, since one often needs to control this aspect of the task around certain parameters such as prior knowledge and other considerations. Assessments, to date have focused largely on the four other components.

example may be found at ICT Literacy (ICT Literacy Assessment, n.d.) location online:

http://www.ets.org/portal/site/ets/menuitem.435c0b5cc7bd0ae7015d9510c3921509/?vgnextoid=b8a246f1674f4010VgnVCM10000022f95190RCRD

2. *Measuring performance on problem solving tasks on the Internet (cf. Leu, et. al., 2005; Coiro, 2007).* This approach provides students with a common informational problem to solve and evaluates their ability to locate, analyze, synthesize, and communicate information using a rubric scoring system. Such assessment vehicles, have demonstrated both good reliability and validity. They have been used in small-scale, labor-intensive studies (Coiro, 2006; Leu, et al, 2005; Leu & Reinking, 2005). Typically, they have used Camtasia video recording software to record, on the hard drive of the computer used in the task, a video of all online screen behavior and audio data. The video is then replayed and scored polytomously according to a scoring rubric. This approach may eventually have potential for wider, group-administered assessments, but at the present moment this approach is likely to require considerable resources and effort to administer and, especially, to score. An example of an online reading comprehension task may be found online at: http://newliteracies.typepad.com/science_exchange/ Videos of students' online reading comprehension sessions and scoring rubrics may be found online at: http://www.newliteracies.uconn.edu/reading.html
3. *Measuring performance using "snapshots" of separate decision points required during online reading comprehension within a multiple choice format.* This

approach provides screen shots of decision points that typically take place during online reading comprehension. Students are asked what decision they would make under a certain type of condition. This approach permits control of separate aspects of online reading comprehension but comes at the expense of ecological validity, since it does not fully represent the complexity of the Internet. Henry (2006), for example, argues that successful locating performance is required for online reading comprehension to continue, otherwise little else takes place. Measuring analysis or other subsequent skills may inflate scores of students who do not have strong locating skills, and who might, otherwise, never have the opportunity to analyze, synthesize, or communicate information related to the task. See Figures 1-5 from Henry (2007) for several examples of locating and analysis items that follow this approach.

Insert Figures 1-5 About Here

As we can see, each of these approaches has advantages and limitations. Measuring online reading comprehension in a limited information space and measuring "snapshots" of segments within a multiple choice format do not fully replicate the complexity of the Internet. Neither, for example, allows the reader to actually use Google or any one of a number of other search engines to locate information, since those are proprietary and, more importantly, since companies change their code frequently to prevent such use by outsiders. In an artificial and

limited information space, an artificial search engine must be created that may have skill sets required that are unique to that search engine and not necessarily required on the Internet. In a multiple choice format a screen shot of one search engine or another may be used but students might choose to use a different search engine for locating information where they to use the open context of the Internet. It is likely that the failure to fully replicate the open Internet will limit the ability of these two assessment formats to assess the unique aspects of online reading comprehension. On the other hand, providing an actual online reading experience also suffers from an important challenge: It requires much more expense and time to score performance. It is likely not possible to use this approach during large-scale assessments.

Integrating Engagement And Metacognition Within Online Reading Comprehension\.

It is important to note at the end of this discussion, and consistent with extent research, that both engagement and metacognition should be included in both theoretical and operational definitions of online reading comprehension. If there is a consistent pattern in all of the work on technology and literacy, it is that students, especially adolescents, are more engaged while reading within digital texts and the Internet (Garner & Gillingham, 1999; Harris & Jones, 1999; Leu & Reinking, 2005; Reinking, 2001). If self-report data will be used, it might be important to evaluate engagement with online reading in various settings. There is some thought that this varies between in-school and out-of-school settings (Leu, 2006). Those who are more expert in engagement research will be able to provide direction in this area.

It is also consistent with what we know about online reading to include metacognition into both theoretical and operational definitions. We know that many deliberate, strategic decisions are required during online reading comprehension, as readers make choices about

which links to follow, as they construct the texts that they read, and as they evaluate information they encounter. One approach might be to evaluate common distinctions between different types of metacognitive aspects of online reading comprehension strategy use including: declarative knowledge, procedural knowledge, and conditional knowledge (Paris, Lipson, & Wixson, 1983; Paris, Wasik, & Turner, 1991). Finally, it would also make logical sense to include aspects of comprehension monitoring in the measurement of online reading since this, too, often takes place during online reading comprehension (Coiro & Dobler, in press). Those who are expert in engagement and metacognitive aspects may be able to provide direction in these areas.

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Table 1

World Internet Usage and Population Statistics

Adapted from Internet World Stats (2006)

World Regions	Population (2006 est.)	Population % of the World	Internet Usage	% Population (Penetration)	Usage: % of the World	Usage Growth 2000-2006
Africa	915,210,928	14.1%	32,765,700	3.6%	3.0%	625.8%
Asia	3,667,774,066	56.4%	378,593,457	10.3%	35.2%	231.2%
Europe	807,289,020	12.4%	311,406,751	38.6%	28.9%	196.3%
Middle East	190,084,161	2.9%	19,028,400	10.0%	1.8%	479.3%
North America	331,473,276	5.1%	231,001,921	69.7%	21.5%	113.7%
Latin America/ Caribbean	553,908,632	8.5%	85,042,986	15.4%	7.9%	370.7%
Oceania/ Australia	33,956,977	0.5%	18,364,772	54.1%	1.7%	141.0%
WORLD TOTAL	6,499,697,060	100.0%	1,076,203,987	16.6%	100%	198/1%

Figure 1. An illustrative example for measuring the reading of search engine results to make the correct inference as to which link is likely to provide more appropriate information than others, for a given purpose.

Figure 2. An illustrative example to determine a reader's ability to read and make inferences about the reliability of information from the nature of a URL.

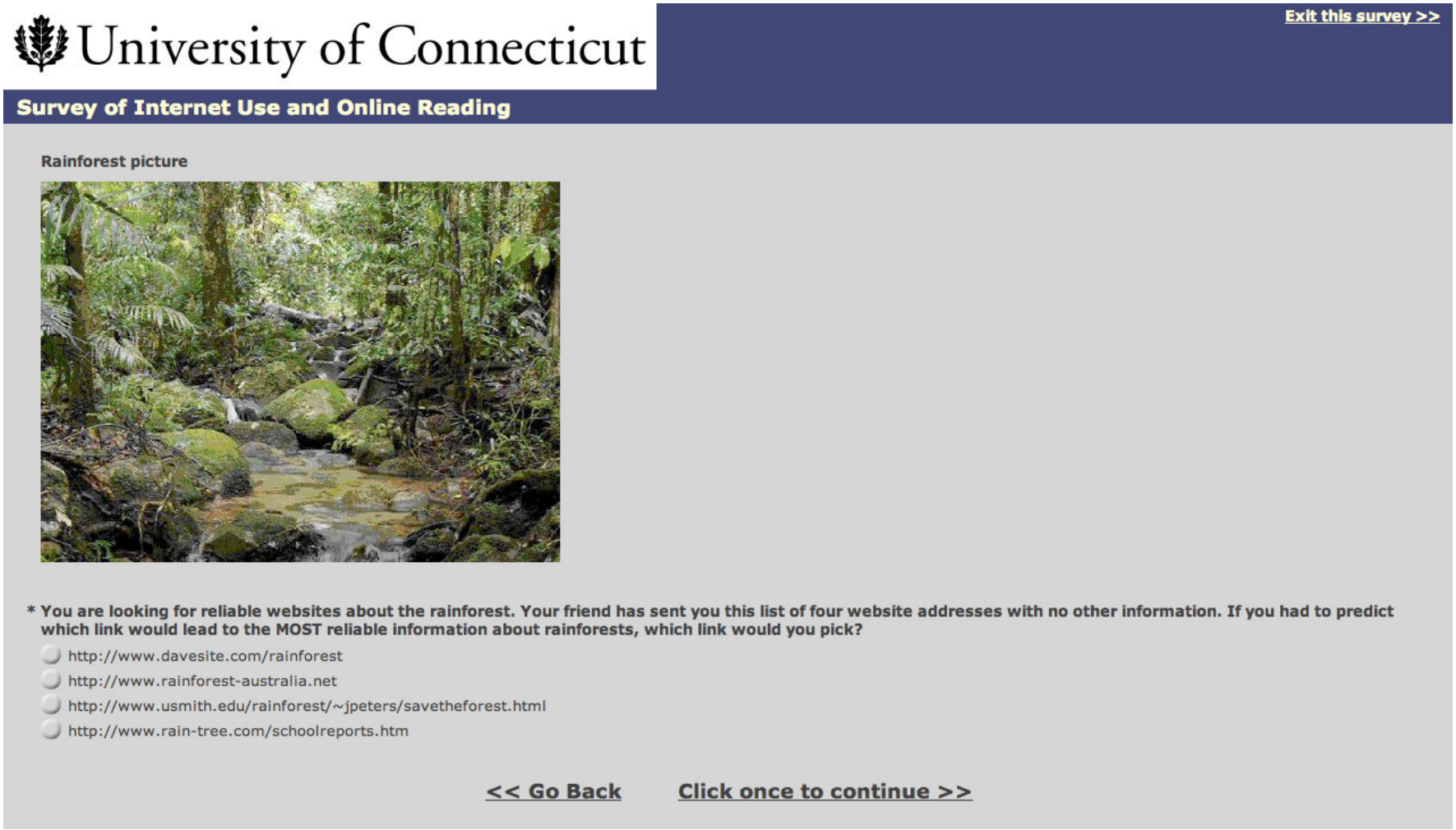
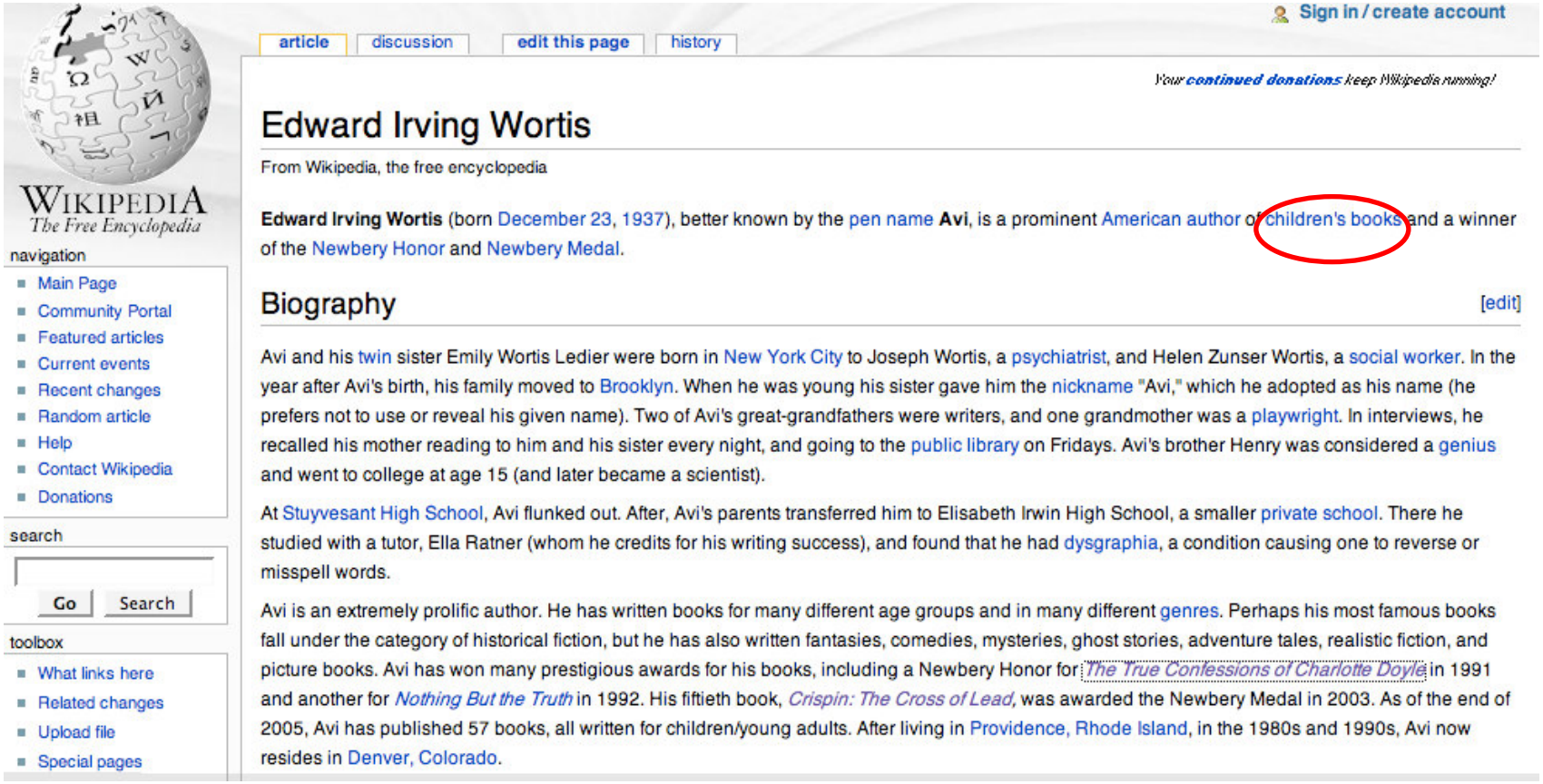


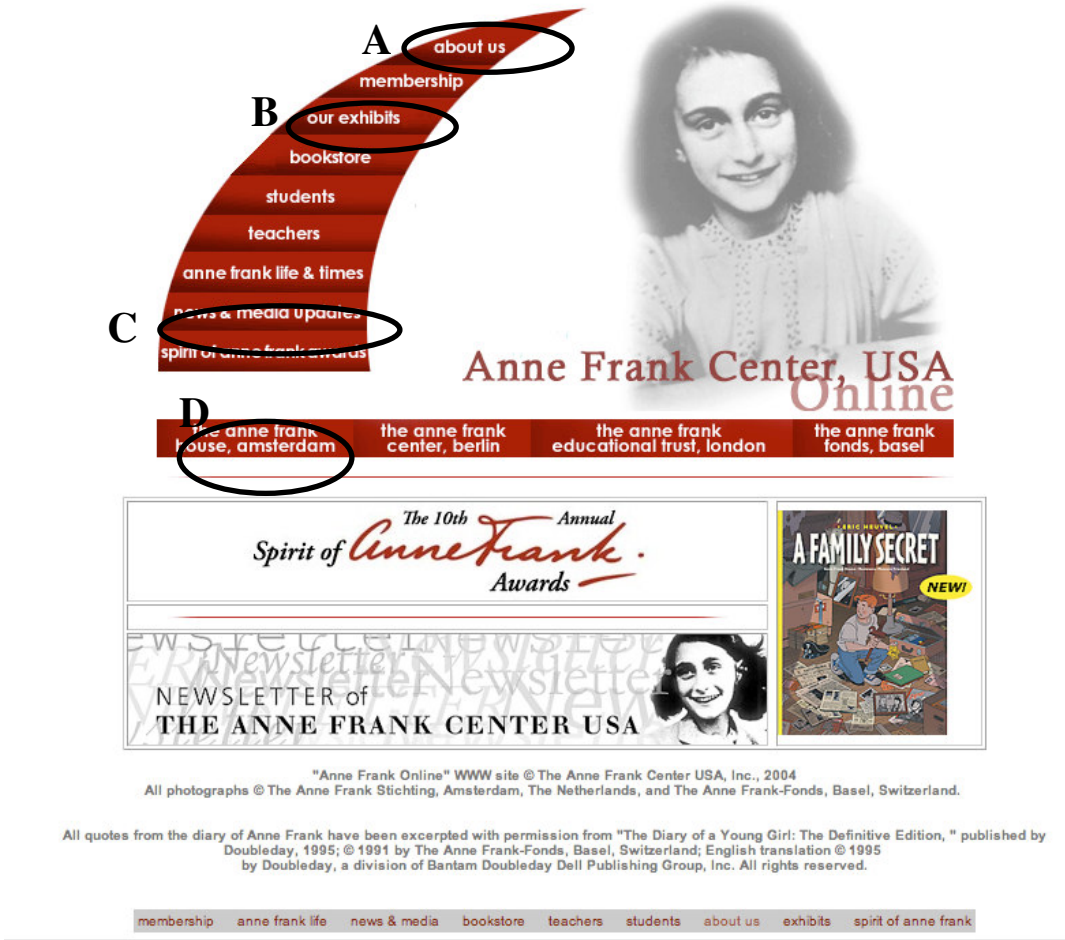
Figure 3. An illustrative item to determine a reader's ability to read, make a forward inference, and select the link that will take the reader closer to the information they require.



You are reading the webpage above. What would you expect to find if you clicked on the words "children's books"?

A. A list of children's literature
B. A list of Avi's books
C. A list of books by children
D. A place to buy books

Figure 4. An illustrative item to determine a reader's ability to read, make a forward inference, and select the link that will take the reader closer to the information they require.



This is the website for the Anne Frank Center, USA. If you wanted to visit this center, what would you click on to find the street address?

A. about us
B. our exhibits
C. news & media updates
D. the Anne Frank house, Amsterdam

Figure 5. An illustrative example to measure determining a reader's ability to know how to critically evaluate information, by determining who created a web page.

This is the first time that you have been to this website. Where should you go first?
A) Truth About King
B) Civil Rights Library
C) Download flyers to pass out at your school
D) Hosted by Stormfront