Black Hole Encyclopedia Data Summary
October 15, 2011

Data collected over time, ending September 2010. Data was reportedly cleaned and contained few nonsense answers. A total of 569 surveys were provided for these analyses. All multiple-choice questions asked respondents to mark all the choices that applied.

Results

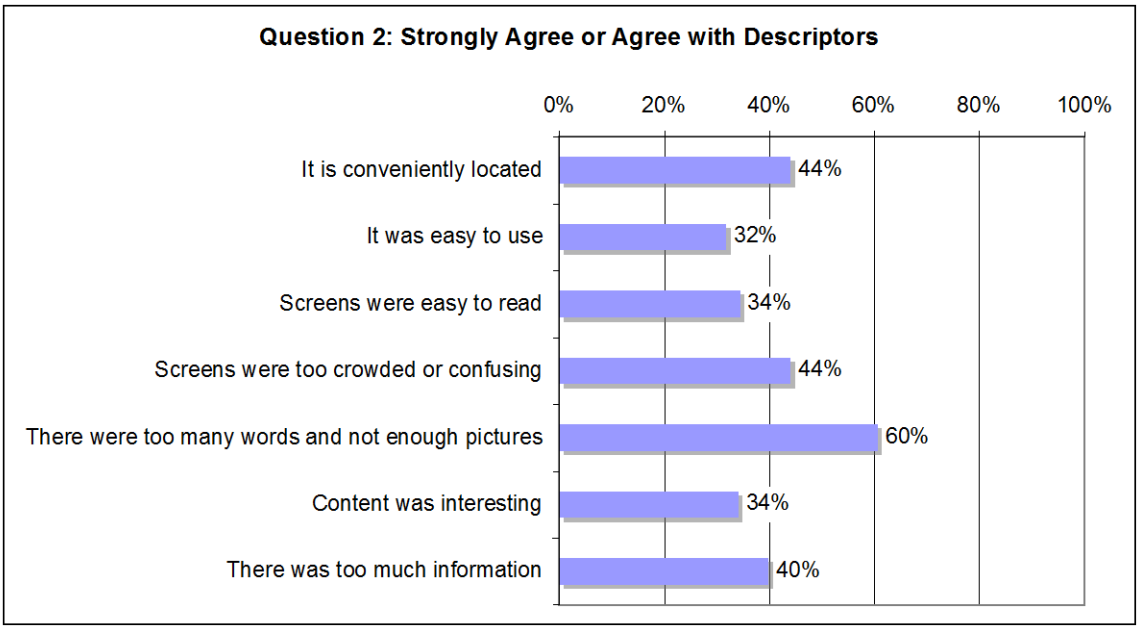
Responses to question 1 indicated that a search engine such as Google was the most frequent prompt for visiting, and "other" was the second most frequent prompt.

Q1. What prompted you to visit the Black Hole Encyclopedia? (please check all that apply)	Frequency	Percent
Linked from an Internet search engine (e.g., Google) or other website	205	36%
Other	131	23%
Learned about it in StarDate magazine	31	5%
Directed to it by a McDonald Observatory staff member or volunteer	15	3%
Linked from an Internet search engine (e.g., Google) or other website || Other	20	4%
Directed to it by a McDonald Observatory staff member or volunteer || Learned about it in StarDate magazine	7	1%
Linked from an Internet search engine (e.g., Google) or other website || Learned about it in StarDate magazine	2	0%
Learned about it in StarDate magazine || Other	1	0%
Directed to it by a McDonald Observatory staff member or volunteer || Linked from an Internet search engine (e.g., Google) or other website	1	0%
Directed to it by a McDonald Observatory staff member or volunteer || Linked from an Internet search engine (e.g., Google) or other website || Learned about it in StarDate magazine || Other	7	1%
Directed to it by a McDonald Observatory staff member or volunteer || Linked from an Internet search engine (e.g., Google) or other website || Learned about it in StarDate magazine	2	0%
NO RESPONSE	147	26%
Total	569	

Written descriptions of the "other" response indicated that schoolwork was a more frequent prompt for visiting the Black Hole Encyclopedia website than the listed responses. Other descriptions seemed to most frequently fall into categories related to a search for information about black holes, personal interest, StarDate sources other than listed (website, newletter, radio program), and recommended by friends and teachers.

Q1. Other (summary of written responses	Frequency	Percent
• School, Project, Research	37	20%
• Other (including unnamed) website, radio, tv, films, newsletters, or forums	30	17%
• Searched for black holes	28	15%
• Interest	25	14%
• Stardate radio, website, newsletter	20	11%
• Recommended	11	6%
• Search Engine, incl Google	9	5%
• Curiousity	4	2%
• other	5	3%
Nonsense answer	12	7%
TOTAL	181	

Question 2 asked respondents to rate their agreement with seven statements describing the location and usability of the Black Holes Encyclopedia website. The following figure shows the percent of positive ratings (Strongly Agree, Agree) for each statement. The greatest percent of respondents agreed or strongly agreed that the website had too many words and not enough pictures (60%). The statement "It was easy to use" received the lowest percentage of positive ratings (32%).

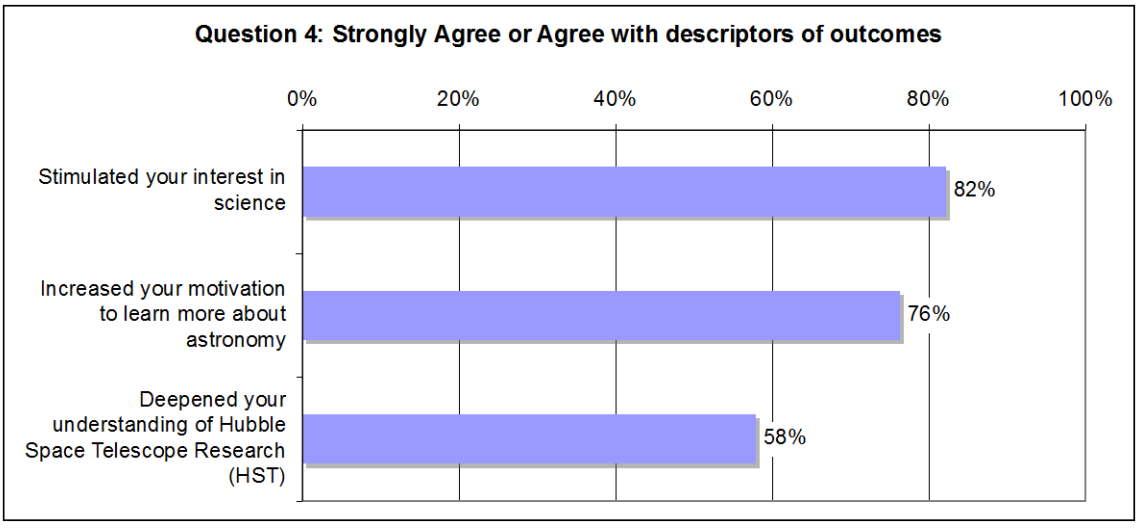


The majority of survey respondents identified themselves as students (53%). In addition to the 20 respondents who identified solely as teachers, 17 identified themselves as teachers and something else.

Question 3: What is your occupation? (please check all that apply)	Frequency	Percent
Student	303	53%
Parent	36	6%
Teacher	20	4%

Question 3: What is your occupation? (please check all that apply)	Frequency	Percent
Astronomer	10	2%
Museum professional	6	1%
None of these	113	20%
Student || Astronomer	4	1%
Student || Parent	3	1%
Student || Teacher	3	1%
Student || None of these	3	1%
Parent || Teacher	2	0%
Parent || Astronomer	1	0%
Parent || None of these	1	0%
Astronomer || Teacher	1	0%
Museum professional || Teacher	4	1%
Museum professional || None of these	1	0%
Student || Astronomer || Teacher	1	0%
Student || Parent || Astronomer	1	0%
Student || Parent || Astronomer || Museum professional	1	0%
Student || Parent || Astronomer || Museum professional || Teacher	1	0%
Student || Parent || Astronomer || Museum professional || Teacher || None of these	5	1%
No response	49	9%
Total	569	

Rating for Question 4, descriptors of possible outcomes from visiting the Black Hole Encyclopedia website, were most frequently positive (Strongly Agree or Agree) for "stimulated interest in science," and "increased motivation to learn more about astronomy."



Respondents who identified themselves as a teacher in any combination in Question 3, received four additional questions about their use of the website. The following tables show the number of respondents indicating that they had done any of these things.

Question 3a: Did you explore the topics on the website?				
	Basics	Directory	News	Resources
Teacher	15	9	11	10
Astronomer || Teacher	1	0	0	1
Museum professional || Teacher	2	2	2	2
Parent || Teacher	2	2	2	2
Student || Teacher	3	2	3	2
Student || Astronomer || Teacher	0	0	0	0
Student || Parent || Astronomer || Museum professional || Teacher	1	1	1	1
Student || Parent || Astronomer || Museum professional || Teacher || None of these	2	3	3	3
Total	26	19	22	21
Percent of all "teachers" (n=37)	70%	51%	59%	57%

Question 3b. Did you access the following Resources?					
	FAQs	Articles	Pop Culture	Glossary	Activity
Teacher	5	7	5	5	8
Astronomer || Teacher	1	0	0	0	0
Museum professional || Teacher	2	2	2	2	2
Parent || Teacher	0	0	0	0	0
Student || Teacher	2	1	1	1	1
Student || Astronomer || Teacher	0	0	0	0	0
Student || Parent || Astronomer || Museum professional || Teacher	1	1	1	1	1
Student || Parent || Astronomer || Museum professional || Teacher || None of these	3	3	3	3	3
Total	14	14	12	12	15
Percent of all "teachers" (n=37)	38%	38%	32%	32%	41%

Question 3c. Did you use Exploring Black Holes with your students?	
Teacher	0
Astronomer || Teacher	0
Museum professional || Teacher	1
Parent || Teacher	0
Student || Teacher	1
Student || Astronomer || Teacher	0
Student || Parent || Astronomer || Museum professional || Teacher	1
Student || Parent || Astronomer || Museum professional || Teacher || None of these	3
Total	6
Percent of all "teachers" (n=37)	16%

Ten respondents answered Question 3d, "If you used Exploring Black Holes with your students, what effect did it have?" One selected It helped them learn about science, three selected It helped them learn... and It enabled them experience science..., and two selected It helped them learn... and Neither of the above. Four selected Neither of the above.

Conclusions and recommendations

- Among website users, the group most likely to respond to the survey consists of students. If this pattern is indicative of future survey responders, questions about teacher use of website resources may be of limited use.
- Allowing respondents to select all that apply of a list of response choices can cause confusion and may not be useful in understanding the data.
- Data downloaded from the website survey contained some technical quirks that were not entirely compatible with Excel and data handling was complicated, taking more hours than should have been needed for these few questions.
- It is unclear how well respondents represent website visitors or what motivates visitors to respond to the survey.

The results of the data summary suggest rephrasing questions to better address reasons for seeking the website, uses made of the information, and likelihood of subsequent action. It is recommended simplifying survey questions to increase the number of single response selections, and if possible to move the survey to a commercial system (i.e., SurveyMonkey) that allows for data management and summarizing on-site, before downloading. Linking a survey would not look or feel any different to respondents, who need not know they are leaving the Black Hole Encyclopedia to complete a survey. Simple data management may be accomplished by any McDonald Observatory staff member with access privileges.

To possibly increase the representation of all users, McDonald Observatory leadership might consider the use of limited pop-up invitations to complete the survey. A pop-up at the point at which the user clicks off the website could be helpful in gaining a larger volume of responses of a wider selection of users.

Suggested survey items:

[if possible, offer an incentive for completion of survey. Perhaps entry into a drawing for a poster or Observatory t-shirt]

Thank you for taking our survey today. Please complete the following questions and enter your email address in our drawing.

1. What was the reason for your visit to the Black Hole Encyclopedia today?
____ A school assignment or project
____ A personal interest in Black Holes and Astronomy