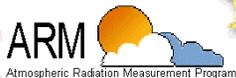


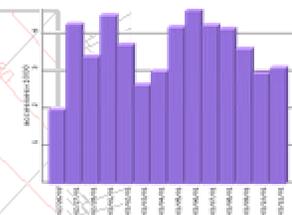
NSDL Community Development for Learners Utilizing ARM Data

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Carl Sandburg High School
High School District 230

Charleston Middle School



Web Accesses for web delivered class, sophomore level.



Figure 1. A General Model for Website Evaluation

Question	Mean	SD
56. The course website helped me get a better grade than I would have without it.	2.51	0.85
57. I feel comfortable to access content on my own computer.	2.63	0.81
58. Using the web is faster than using the library or other information sources.	2.63	0.81
59. The course web site helped me do well in my course.	2.67	0.80
60. I would like to see other courses at Cornell develop web sites similar to this one.	2.68	0.80
61. I was able to get useful information from the course website that was not covered in lecture.	2.68	0.80
62. I believe the information I get from the web is for the most part accurate.	2.78	0.79
63. I feel that interpersonal interaction is an important part of learning.	2.79	0.79
64. I have access to a computer that I can use at my convenience.	2.84	0.78
65. The course website increased my level of responsibility for my own learning.	2.84	0.78
66. I was able to review course content from the web site at my own pace.	2.92	0.77
67. The web allows me access information at most lecture hours.	2.97	0.76
68. I have used the web for research.	2.98	0.76
69. I prefer using an electronic text book to a web site rather than a paper copy for learning.	2.98	0.76
70. The web expands the amount of information available to me.	3.00	0.76
71. I am still continuing to learn from the Trochim web site after the class is over.	3.00	0.76
72. I enjoyed using the web site as part of the course.	3.09	0.75
73. The instructor helps students overcome all of their progress.	3.09	0.75
74. The course website has made a positive contribution to my educational experience.	3.09	0.75
75. Using the knowledge base significantly helped me learn the course content.	3.09	0.75
76. The course website allowed me to become independent in learning the course content.	3.09	0.75
77. I have been able to conduct an effective search on the web.	3.09	0.75
78. I would describe myself as very comfortable using the web.	3.09	0.75
79. The instructor allows important points in the lecture or discussion.	3.09	0.75
80. Using the course web site helped me develop my skills in using computers.	3.09	0.75
81. When assignments are relevant to what is being presented in class.	3.09	0.75
82. The course website expanded access to the professor.	3.09	0.75
83. I would use the web more if I had more time.	3.09	0.75
84. I would use the web more if I had more time.	3.09	0.75
85. I would use the web more if I had more time.	3.09	0.75
86. I would use the web more if I had more time.	3.09	0.75
87. I would use the web more if I had more time.	3.09	0.75
88. I would use the web more if I had more time.	3.09	0.75
89. I would use the web more if I had more time.	3.09	0.75
90. I would use the web more if I had more time.	3.09	0.75
91. I would use the web more if I had more time.	3.09	0.75
92. I would use the web more if I had more time.	3.09	0.75
93. I would use the web more if I had more time.	3.09	0.75
94. I would use the web more if I had more time.	3.09	0.75
95. I would use the web more if I had more time.	3.09	0.75
96. I would use the web more if I had more time.	3.09	0.75
97. I would use the web more if I had more time.	3.09	0.75
98. I would use the web more if I had more time.	3.09	0.75
99. I would use the web more if I had more time.	3.09	0.75
100. I would use the web more if I had more time.	3.09	0.75

Survey Questions

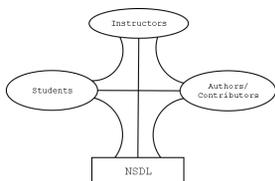
Question	Mean	SD
1) The Trochim web site significantly enhanced my learning of research methods	1.97	.81
2) Using the knowledge base significantly helped me learn the course content	1.87	.86
3) The Trochim web site helped me to do well in the course	1.88	.82
4) Using the Trochim web site helped me to develop my skill in using computers	1.85	1.05
5) I would like to see other courses at Cornell develop web sites similar to HSS 292	1.93	.97
6) I have access to a computer that I can use at my convenience	2.19	1.18
7) Comments on the class bulletin board contributed to my understanding of research methods	3.06	.69
8) I prefer using an electronic text book on a web site rather than a paper copy for learning	2.76	.95
9) I was able to review course content from the web site at my own pace	1.88	.84
10) Playing the Scavenger Hunt game was helpful in reviewing course materials	1.66	.77
11) I enjoyed using the web site as part of the HSS 292 course	1.76	.76
12) I plan on continuing to use the Trochim web site after the class is over	2.75	.87

**Results from the Trochim class at Cornell HSS292.

Summary:

1. NSDL and ARM can bring weather to the classroom
2. Digital learning and student motivation make NSDL activities valuable
3. Learning communities for students develop within the context of a classroom
4. For unknown reasons students using the web outperformed traditional classroom peers

Abstract
As part of the NSF National Science Digital Library (NSDL) project in Science, Mathematics, Engineering, and Technology Education (SMETE) we seek to establish a user community focused on science education. The user community will begin with an outreach program to middle school and high school physical science teachers. These teachers will initiate classroom and student based atmospheric projects that will use a wide range of visualization codes available through the ARM program. These instructors will establish connections to students and other teachers first in the Illinois-Missouri-Indiana region and then prepare to expand to a national base of users. The teachers will then become authors, contributors and evaluators of material to be developed for the growing community of users.



Search for Correlations (ranked descending by Course Total) from typical data from students.

Question	N	Min	Max	Mean	SD
1. I gained a good understanding of concepts and processes involved.	100	1.00	5.00	2.900	1.196
2. I assigned my friend in the subject matter of this course.	100	1.00	5.00	2.880	1.180
3. I developed skills in the subject matter of this course.	100	1.00	5.00	3.500	1.039
4. The instructor reviewed important points in the lecture or discussion.	98	1.00	5.00	3.917	0.759
5. The instructor gave material access in an interesting way.	98	1.00	5.00	3.875	0.925
6. The course website is more useful than other website materials.	97	2.00	5.00	3.897	0.963
7. The instructor keeps students informed of her progress.	100	3.00	5.00	4.740	0.549
8. The instructor of this course was clearly explained.	100	1.00	5.00	4.100	0.884
9. The amount of work required is appropriate for the credit received.	98	1.00	5.00	3.528	1.056
10. Written assignments are relevant to what is being presented in class.	98	1.00	5.00	4.038	0.855
11. Reading assignments are relevant to what is being presented in class.	97	1.00	5.00	3.822	0.974
12. Grades are assigned fairly and accurately.	100	1.00	5.00	4.100	0.978
13. I would recommend this course to others.	99	1.00	5.00	3.999	1.008
14. The course web site significantly enhanced my learning of research methods.	100	1.00	5.00	3.870	1.004
15. Using the knowledge base significantly helped me learn the course content.	99	1.00	5.00	3.878	1.143
16. The course web site helped me to do well in the course.	100	1.00	5.00	4.480	0.959
17. Using the course web site helped me to develop my skill in using computers.	100	1.00	5.00	3.780	1.154
18. I would like to see other courses at Cornell develop web sites similar to this one.	100	1.00	5.00	3.670	1.215
19. I have access to a computer that I can use at my convenience.	100	1.00	5.00	4.000	1.041
20. Comments on the class bulletin board contributed to my understanding of research methods.	99	1.00	5.00	2.937	0.978
21. I would like to see other courses at Cornell develop web sites similar to this one.	100	1.00	5.00	3.300	1.304
22. I was able to review course content from the web site at my own pace.	100	1.00	5.00	4.230	0.822
23. Playing the Scavenger Hunt game was helpful in reviewing course materials.	100	1.00	5.00	3.870	1.092
24. I believe the information I get from the web is for the most part accurate.	100	1.00	5.00	3.830	1.041
25. The structure of course assignments reflects the overall quality of the course experience.	99	1.00	5.00	3.440	1.289
26. The reading assignments are relevant to what is being presented in class.	100	1.00	5.00	4.230	0.975
27. The course website allowed me to become independent in learning the course content.	100	1.00	5.00	3.910	1.089
28. The website enhanced the overall quality of the course experience for me.	98	1.00	5.00	2.887	1.071
29. I believe the information I get from the web is for the most part accurate.	100	1.00	5.00	2.833	1.248
30. I enjoyed using the web site as part of the course.	100	1.00	5.00	3.880	1.140
31. The course website expanded access to the professor.	100	1.00	5.00	3.530	1.093
32. I would use the web more if I had more time.	98	1.00	5.00	2.986	1.089
33. I believe the information I get from the web is for the most part accurate.	99	1.00	5.00	2.848	1.065
34. The website allowed me to access information at most lecture hours.	100	1.00	5.00	4.200	0.997
35. The web expands the amount of information available to me.	100	1.00	5.00	4.480	0.959
36. I would describe myself as very comfortable using the web.	100	1.00	5.00	4.240	0.842
37. I would use the web more if I had more time.	100	1.00	5.00	3.880	1.059
38. I believe the information I get from the web is for the most part accurate.	100	1.00	5.00	3.880	1.059
39. I would use the web more if I had more time.	100	1.00	5.00	3.880	1.059
40. Using the web is faster than using the library or other information sources.	100	1.00	5.00	3.880	1.059
41. I believe the information I get from the web is for the most part accurate.	100	1.00	5.00	3.880	1.059
42. I feel that interpersonal interaction is an important part of learning.	98	1.00	5.00	4.142	0.815
43. The main value of web use in this course was learning more about web technology in general.	100	1.00	5.00	3.500	1.003
44. I believe the information I get from the web is for the most part accurate.	99	1.00	5.00	3.564	0.933
45. The course website has made a positive contribution to my educational experience.	97	1.00	5.00	3.889	0.933
46. The course website has made a positive contribution to my educational experience.	94	1.00	5.00	2.936	0.912
47. The comments submitted to the bulletin board helped me to learn about the course content.	97	1.00	5.00	3.371	1.051
48. The course website allowed me to become independent in learning the course content.	100	1.00	5.00	4.000	0.974
49. The course website allowed me to become independent in learning the course content.	100	1.00	5.00	4.000	0.974
50. The course website helped me get a better grade than I would have without it.	99	1.00	5.00	4.414	0.898