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Any Portal in a Storm: Factors Influencing Internet Portal Choice

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ABSTRACT:

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ABSTRACT

This exploratory study examines issues surrounding the use of Internet portals, which are web sites or services that offer a broad array of resources and services such as e-mail, community forums, news, a search engine, and online shopping. In particular, this paper examines the reasons a person uses a portal, and the features that are commonly perceived to be important to users. The author designed a survey to determine what attracts Internet users to portals and what factors they consider when making portal choices in continuing to use them. Analysis of the research results indicate that most significantly, particular features are in general what initially attract portal use, and satisfaction with performance encourages continued use. These results are important to web site developers for determining what users desire, and to information systems and marketing research for emphasizing theories suggesting what attracts users to web sites. Portal users benefit from the probable improvements to portals made because of research that developers have found to apply to attract and keep users at their sites.

INTRODUCTION

A portal is a web site or service that offers a broad array of resources and services such as e-mail, community forums, news, a search engine, and online shopping. Yahoo, Netscape, MSN, and Lycos are all examples of web portals. Cahners In-Stat Group, a high-tech market research firm, predicts that by the end of 2000, 60% of US households will be connected to the Internet [14]. According to Nielsen NetRatings, the number of U.S. Internet users has increased by almost 5% from June to July up to 143,958,588 people [13]. Because of the surge of Internet use, competition among World Wide Web portals is great. Companies have a vested interest in what attracts users to a certain web site as a starting point for their surfing experience. This interest comes from spending large sums of money to compete and advertise to be a web site that keeps users coming back. The purpose of this paper is to determine what factors and/or

conditions Internet users consider when selecting a web site to use as their primary World Wide Web portal. In the business world, the results of this research have enormous value in the multibillion dollar industry of companies whose web sites are vying to be the starting point for Internet activity. For academics, this topic is of interest to researchers in both marketing and information systems because it implicates both design issues and web surfer behavioral issues as influential factors.

There is great discussion today by researchers, computer industry analysts, internet experts, and the like of how to get more people to visit web sites. More specifically, portal companies are very interested in what will attract people to their sites how to keep them there. John R. Graham, who has done some research on what will attract visitors to a website, says it takes a large amount of advertising. Graham also says a website needs to have something that will attract visitors. Graham calls attractions, such as unique and interesting information, "magnets." These "magnets" must aid the user. The content or features on a web site must be of some benefit to customers or clients or they will not be interested in returning. [3] In the past, people most commonly signed on to the Internet to use search engines. Jim Hu, a CNet News author, describes that today, "the search engine has evolved to a large site offering a laundry list of free services such as email, personalization features, chat rooms, and a variety of content such as stock quotes, local news, and weather" [7]. The end result of the evolution just described is basically what a portal is now. Jim Hu adds that the reason sites, and portals more specifically, are adding features and accessories is to keep a user at their site so he/she hopefully will have no reason to leave. [7] Hu states that the name of the portal game is market share. The people developing portal sites desire to learn what users want and give it to them, while putting the right advertisers on the site that will attract the greatest amount of revenues for the portal company. A big part of the portal realm is about advertising. Internet sites most often receive their revenues

from advertisers, so a lot of time is spent researching issues dealing with the effectiveness of online advertisements. The study conducted for this paper will aid portal developers in knowing what it is that users expect from their time spent online, and specifically in using portals. It is significant to discuss the role of advertising to emphasize how influential and pervasive the business of portals really is. Advertisers and developers alike have a vested interest in the findings of the kind of research presented here.

Since one of the aims of web portals is to organize content for those who are newer to the online world, the question remains for how long portals will be a necessity because it is assumed that these newcomers will eventually become veterans. Patrick Keane, an analyst at Jupiter Communications, argues that portal companies probably have nothing to worry about though, because "as millions jump online every year, there will still be the need for someone to organize and categorize content." [7]

The remainder of the discussion in this study will begin with a background of previous research relevant to portal selection and use. A research model and design method will then be presented, and the results of the research will be given and finally discussed.

BACKGROUND

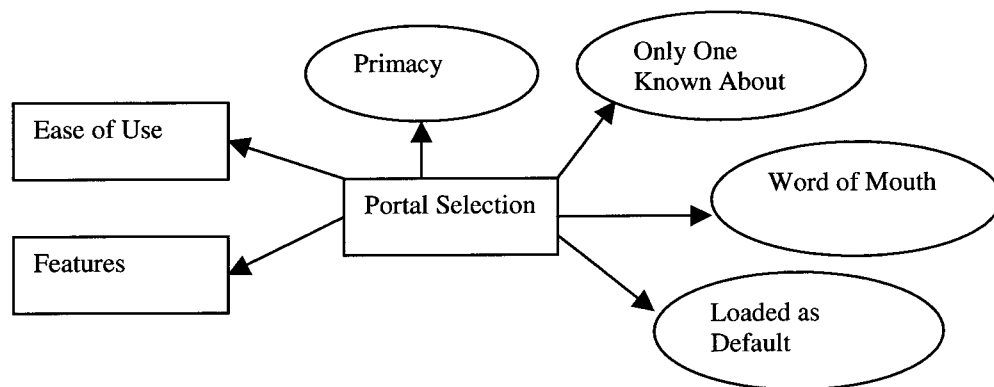
To help determine some of the factors that influence a web user's choice of world wide web portal, this study had a goal of determining those factors or conditions that both attract a user to a certain site and those that help the site retain them as a repeat user. A relevant case study done by Kim Guenther at the University of Virginia was conducted to determine what would suit the user needs for specialty portals in their Health Sciences department. The study found that the influential factors were user desires of content, price, and accessibility. [5]

Guenther's study is just one example of the research that has been done to determine why people

adopt information technologies. Marketing and Information Technology research shows that there are many factors that can influence people to be attracted to something such as a web site. Reasonable presumptions can be made that such factors as word of mouth will entice a user to check out a web site, and ease of use will cause him or her to continue using that site. In looking at how current Internet Service Providers are set up, it can be seen that many include a default browser or portal as their home pages. Also, there are many people who are new to the Internet and possibly have never before heard of portals. These such factors are those that have been found to influence Internet use.

RESEARCH METHOD

Figure 1. Original Proposition for Factors Influencing Portal Selection



The factors in Figure 1 were determined, as previously mentioned, from prior academic research, and were used to create a survey. This survey was given to a small sample of students at Northern Illinois University. For half of the items addressed in the survey, a set of possible responses was listed from which the respondents could choose. For the other half of the items, spaces were left for the respondents to create their own responses. Questions were asked about both primary and secondary portal use in order to gain a more clear understanding of what

people use the Internet for and what factors are involved in their choices. (See the Appendix to view the actual survey.)

Question 1 exists to determine what portals the respondents most often use. A list of widely known portals is presented in alphabetical order. Question 2 asks respondents why the portal from Question 1 is the portal that they use most often. The proposed responses are those factors depicted within ovals in Figure 1. The author proposes that respondents will have initially used their primary portal because of one of the following reasons: it was the first portal they ever used (Primacy); they had no knowledge of any other portals; a portal was recommended by someone else (Word of Mouth); or a person clicks on "home" or some other similar button that sends the user to a pre-loaded-as-default start page that happens to be a portal (Loaded as Default).

Question 3 will determine what causes a person to continue using a portal, and the expected responses are depicted within rectangles in Figure 1. The author proposes that respondents will be found to continue to use their primary portal because either: it is easy to use because of how the page is set up or other such reasons (Ease of Use), or because of specific features that the person finds to be useful, up to date, or interesting. Features (listed in question 4) that are commonly included in today's portals are most likely what attracts a person to a portal or to continue using a portal. This list in Question 4 will provide insight into what most people are looking for, if there is a trend, and be compared to the data collected in previous questions. Question 5 measures whether or not people use portals as their first stop on the Internet, or whether or not they choose another kind of site such as a favorite informational web page. It is possible people use a different portal in addition to their primary portal and different reasons may be attracting this secondary usage. Question 6 measures if a secondary usage exists. Question 6 parallels Question 1 in asking for a specification of which portal is used. Question 7

parallels Question 2 by measuring what influences initial choice of a secondary portal. Question 8 is similar to Question 3 in measuring what influences a person to keep using a portal. This will enable comparisons to be made between use of primary and secondary portals. The author proposes that secondary portal use will exist for reasons such as a desire for different information, better features, and ease of accessibility.

The remainder of the survey will provide information about experience and demographics of the respondents. Question 9 measures the time span of how long a person has been exposed to the Internet. This will show the length of time a person has had to become acquainted with different portals. Question 10 determines how often during the time span specified in the previous question a person has actually been using the Internet, such as how often each day. Question 11 determines whether a person used the Internet for business or personal tasks, or both. Questions 12, 13, and 14 ask for occupation, age, and gender of respondents, which may provide insight into portal choice and use.

After gathering all of the completed surveys, all of the responses were put into a database. The responses for Questions 2, 3, 7, and 8 were analyzed and categories of factors were created based on a general idea of the responses. The specific responses from each survey were then coded with a number as listed in Table 1. A brief description is given for each code. The first response of each section, numbered 10, 20, 30, and so on, are general categories for the responses. The categories listed in CAPS correspond to those factors the author proposed in Figure 1.

Table 1. Codes and Their Descriptions for Responses of Questions 2, 3, 7, and 8

10 – FEATURES	50 – Performance –meets user expectations and no problems are experienced
11 – a specific feature such as e-mail, Instant Messaging, games, or maps	51 – loads quickly
11.5 – a 2 nd search engine or different information	52 – reliable
12 – like the features or categories, has what user wants	53 – accurate
13 – variety of features or options	54 – many choices
14 – familiarity with set up, know how it works	55 – quality
15 – customizable	
16 – quality of information	60 – Bias (avoid others)
17 – up to date	61 – have not found better
	62 – 2 nd best
20 – EASE OF USE	70 – PRIMACY
21 – helpful setup	71 – 2 nd one heard of
22 – easy or convenient to access	
	80 – WORD OF MOUTH , saw advertisements
30 – Habit and comes to mind first	81 – popular, reputation
31 – know nothing else as well as habit	82 – friends use
33 – easy to remember	
34 – do not know another way	
40 – DEFAULT	90 – Free

The codes listed in Table 1 were used to code all of the responses to the appropriate questions for each survey received. Following the coding of the responses, the results were analyzed.

The results that were found are discussed next.

RESULTS

One hundred and eighty-four surveys were returned. Out of those, 95 were filled out on-line and 89 were filled out on paper. One hundred and seventy-four surveys were completed as usable (a total of 10 surveys returned as unusable as they were not sufficiently completed). The surveys were administered to students majoring in either Marketing or Operations Management using an on-line and paper format, respectively. There was no scientific reason for the distribution of the different formats to the different majors.

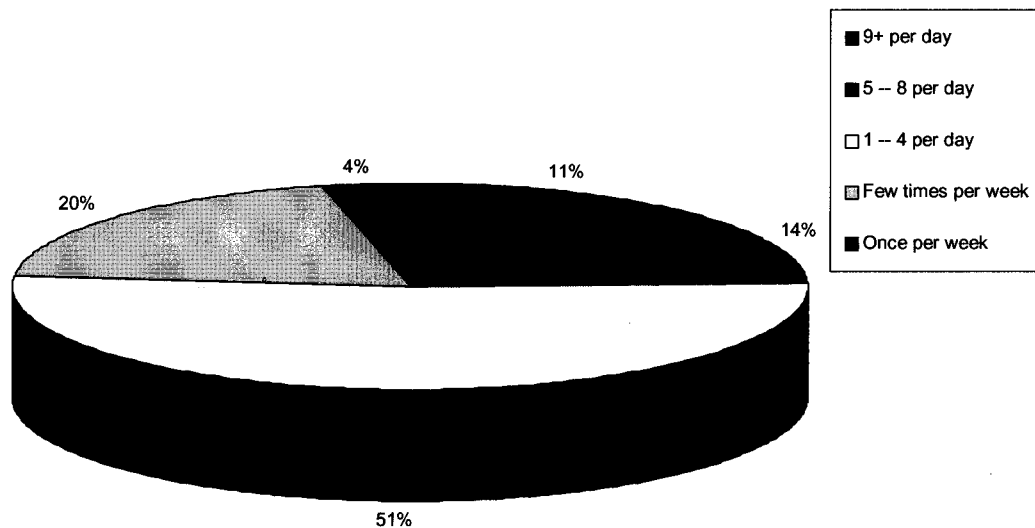
Demographics of Respondents

Approximately 34.9% of the survey respondents were female and 65.1% were male. Nine of the students were of ages under 21, 142 were between 21 and 25, 13 were from 26 to

30, and 4 were over 31. All of the people surveyed were students; however, some respondents listed other occupations as well. Most of these other occupations were of serving and retail positions. Five actually had professional positions in a computer-related industry and seven had other professional business positions.

Figure 1 shows that the experience level of the respondents in general was high. 120 of those surveyed responded they have been using the Internet for over 3 years. Forty-nine responded their experience was between one and three years. Only 4 reported having started using the Internet less than a year ago. The frequency of Internet use for these students was average. Eighteen (11%) reported using the Internet more than 9 times per day. Twenty-four (14%) reported use between five and eight times per day. Eighty-nine (51%) reported use one to four times per day. Thirty-four (20%) use the Internet a few times each week and 6 (4%) reported use only once a week. No one chose “once a month.”

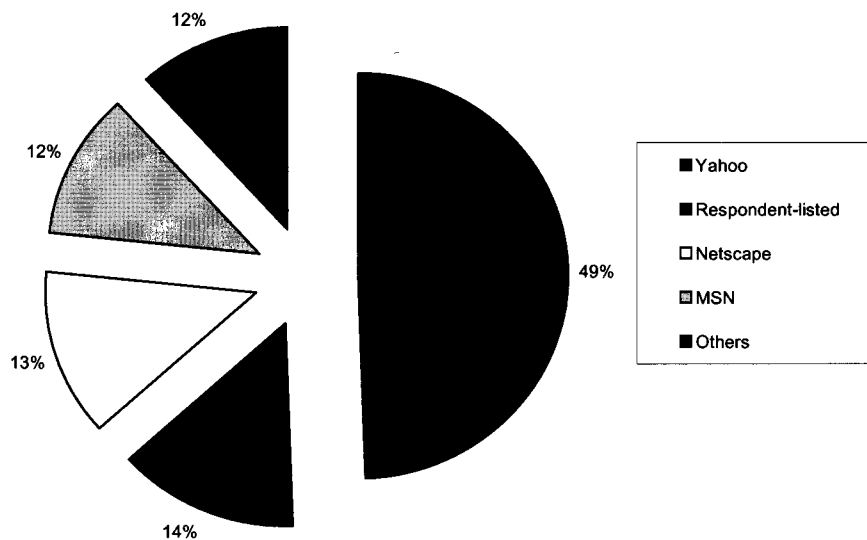
Figure 1 - Frequency of Internet Use



Portal Use

It is interesting to note that 85 (49.4%) people responded that they use Yahoo as their primary portal. Twenty-four (14%) use portals other than the survey listed, 23 (13.4%) reported using Netscape, and 20 (12.2%) reported using MSN most of the time. The most commonly listed portal in the “other” category is overwhelmingly AOL. Figure 2 depicts these numbers to better represent the distribution of primary portal use among the survey respondents.

Figure 2 - Primary Portal



Factors Related to Portal Selection and Continued Use

Since many questions on the survey asked for respondents to give their own responses, the responses given had to be categorized and interpreted. After viewing responses of several surveys, a trend of categories was formed into which the responses would all fit. These categories are discussed next. Many of the factors for portal choice and use turned out to be similar to those related to the adoption of information systems in general [10] which makes

the study even more relevant to the information systems field in confirming previous research. However, some responses, such as “free” and a big emphasis on performance, were unexpected, and thus were added to the list of categories. Once put into categories, the responses were compared with each other and tested against the hypotheses.

The categories can be described as follows (and are the same as in Table 1):

FEATURES. People look for specific features, or categories, such as the customizability or familiarity with the setup. **EASE OF USE.** The ease of use and convenience of access were important. **HABIT.** Many chose portals because of habit, first one that comes to mind, and knowing no other options. **DEFAULT.** Defaults are used because they are often set up on Internet service providers and school computer access systems. **PERFORMANCE.**

Performance in general, such as being satisfied with results, expectations being met, and having no problems. The system being reliable, accurate, fast, and having many choices.

BIAS. People sometimes use one portal to avoid other sites they dislike, or have not found anything better. **PRIMACY.** The first portal a person ever used. **WORD OF MOUTH.** Word of mouth, recommendations, and advertising, reputation/popularity. **FREE.** People choose a web portal because it is free to access and/or use.

Primary Portal Use

Using the categories above, the survey results have been categorized and then analyzed in depth. The reason that people gave most often for why they use their primary portal is because of a specific feature such as e-mail, instant messaging capabilities, games, the search engine, and maps (26 people gave this as their first response, 16.3%). The next most common reason was because it is a habit and the name of that portal comes to mind first (19 first responses for 11.9%). Following the two most common responses are ease of use (17

first responses for 10.6%), it is the default on the user's computer or school network (16 first responses for 10%), and for being satisfied with performance (15 first responses for 9.4%). Some other significant responses were use because of advertising and word of mouth, familiarity comfort with the set up, and appreciating the many choices and great amount of information available.

As for why users continue to use their primary portals, similar reasons were given. 18.3% (30) of respondents stated their continued use was because of performance. 15.9% (26) of respondents gave their reason as a specific feature that keeps them coming back. 14% (16) return because it is easy to use, and 6.7% (11) return out of habit. 6.1% (10) of first responses indicate an appreciation of the many choices and many others return for reasons such as it is easy to access, it is the default, it loads quickly, they like the features, and some even return because it is free. A comparison of the above responses given in regards to primary portals is shown in Table 2.

Table 2. Primary Portal Use.

WHY INITIALLY USED PRIMARY PORTAL		WHY CONTINUE TO USE PRIMARY PORTAL	
Given Responses*	Category	Given Responses*	Category
16.3 %	Specific Feature	18.3 %	Performance
11.9 %	Habit, First to Mind	15.9 %	Specific Feature
10.6 %	Ease of Use	14 %	Ease of Use
10%	Default	6.7 %	Habit
9.4 %	Satisfied with Performance	6.1 %	Many Choices

* Not equal to 100 % because responses displayed are only the most significant

Ninety-six (56 %) people go straight to their primary portal when they log on to the Internet, and 75 (44 %) do not. Out of those who do not go straight to their portal, most people listed e-mail as their first stop on-line. The next most common response is categorized as goal-directed: where people go wherever they need to, depending on the specific task at hand whether it be an assignment, or something they need to research. Many people, as an added note, always follow a specific list of tasks once they sign on to the Internet.

Secondary Portal Use

The most common response to a question asking the user to name the portal he/she most commonly uses as a secondary portal was that one (a secondary portal) is not used (40 or 24.7%). [Approximately 10 people chose more than one portal as their secondary portals, so their responses are not included in this immediate discussion.] Thirty-three people use Yahoo, 21 use one not on the list (most common responses being Infoseek, Askjeeves, Dogpile, and AOL), 18 use Netscape, 17 use MSN, 9 use Excite, 9 use Lycos, and 2 use Iwon. These responses basically parallel those given for primary portal use with respect to popularity. Secondary portal use was analyzed to determine whether or not people use different portals for different tasks as well as to better compare reasons for portal use.

The results show there might be a difference in usage for primary and secondary portals. In a portion of the survey testing reasons for use of secondary portals the author found similar responses to that of primary portals, with only some slight differences. [Note: Discrepancies in total number of respondents may seem to be existent, but it is only because several surveys did not have answers due to 40 (24.7%) respondents' lack of use of a secondary portal.] 28.1% (36) of the surveys resulted in responses of a specific feature being the first reason for using a secondary portal for the first time. 11.7% (15) similarly, gave the

reason of a second search engine or the desire for different information. The second most popular reason, with 15.6% (20) of the first responses given, is it is the default on the school network or service provider. 10.2% (13) of responses were because of advertising and word of mouth. Several other people used their secondary portal for the first time because it is free, or it has good information, good performance, lots of choices, or a good reputation.

The reasons survey-takers gave for continuing to use their secondary portal are the same top three as they gave for initially using the portal: 26% (30) for a specific feature, 18.3% (21) for performance, and 10.4% (12) for a second search engine or different information. Significantly, though, 7% (8) gave the reason that it is easy to use, 6.1% (7) say it is the default, 5.2% (6) say it is easy to access and convenient, and 3.5% (4) of the others continue to use the second portal for the quality information. A comparison of this information on secondary portals is shown in Table 3.

Table 3. Secondary Portal Use.

WHY INITIALLY USED SECONDARY PORTAL		WHY CONTINUE TO USE SECONDARY PORTAL	
Given Responses*	Category	Given Responses*	Category
28.1 %	Specific Feature	26 %	Specific Feature
15.6 %	Default	18.3 %	Performance
11.7 %	2 nd Search Engine, Different Information	10.4 %	2 nd Search Engine, Different Information
10.2 %	Advertising, Word of Mouth	7 %	Ease of Use
		6.1 %	Default
		5.25 %	Easy to Access, Convenient
		3.5 %	Quality of Information

* Not equal to 100 % because responses displayed are only the most significant.

Primary Portals vs. Secondary Portals

It is significant to compare the responses given for primary and secondary portals. Table 4 shows that similarities between initial use of portals, whether primary or secondary, can be attributed to the common properties held by portals in general such as features. However, in comparing the differences, it can also be seen that primary and secondary portals are initially chosen for different reasons, showing the validity in such a comparison. A comparison is made in Table 5 to show what similarities and differences exist in what causes a person to continue using primary and secondary portals. The top two reasons, Performance and Features, are the same for both types of portals. But the next most popular reasons differ slightly, which again reflects that the respondents did often have different reasons for using a secondary portal than a primary portal.

Table 4. Comparison of Initial Use of Primary and Secondary Portal.

WHY INITIALLY USED PRIMARY PORTAL		WHY INITIALLY USED SECONDARY PORTAL	
Given Responses*	Category	Given Responses*	Category
16.3 %	Specific Feature	28.1 %	Specific Feature
11.9 %	Habit, First to Mind	15.6 %	Default
10.6 %	Ease of Use	11.7 %	2 nd Search Engine, Different Information
10%	Default	10.2 %	Advertising, Word of Mouth
9.4 %	Satisfied with Performance		

* Not equal to 100 % because responses displayed are only the most significant.

Table 5. Comparison of Continued Use of Primary and Secondary Portal.

WHY CONTINUE TO USE PRIMARY PORTAL		WHY CONTINUE TO USE SECONDARY PORTAL	
Given Responses*	Category	Given Responses*	Category
18.3 %	Performance	26 %	Specific Feature
15.9 %	Specific Feature	18.3 %	Performance
14 %	Ease of Use	10.4 %	2 nd Search Engine, Different Information
6.7 %	Habit	7 %	Ease of Use
6.1 %	Many Choices	6.1 %	Default
		5.25 %	Easy to Access, Convenient
		3.5 %	Quality of Information

* Not equal to 100 % because responses displayed are only the most significant.

CONCLUSIONS

My original proposition for this study was that there is a clear distinction between what attracts users to portals and what actually keeps them coming back. However, the results of this study have shown that often the reasons a person comes back have to do with the reasons they initially used the site. In general, continued portal use can be attributed to the fact that a user was satisfied with the performance of the specific feature he/she came to the portal to use. It can be concluded that Internet users are most impressed with a portal when it is easy to use and it does what they expect. The results presented in this paper explain what those expectations are. In general, when performance is determined to be satisfactory in a user's mind, often no reasons exist to change which portal they use, especially if they have e-mail there and are happy with how the portal works. It is apparent that a lot of people use portals without even knowing it. They use portals to link to the information they need, and

rate a portal's effectiveness based on how fast and accurately the desired information is found. Sometimes people rate their satisfaction with features and return to a site in order to avoid a specific feature such as pop up windows, a detail that developers might therefore keep in mind.

With the information discussed here, developers can see that college students using portals, and probably Internet users in general, look for a variety of content, and are generally pleased when the web site runs fast and smoothly, and the content is organized in an easy to understand format. From this study, developers can see some of the desires of users that will help create more effective portals. Ensuring quick access and reliable service and information will definitely be beneficial in attracting and keeping users. It seems that having e-mail access and avoiding features that annoy users are two points that should be noted by those developing portals. Developers could conduct research studies to further survey the desires of users. One area of research that would probably be of interest to developers is to find out exactly what kind of content users are looking for, in order that such information can be integrated into the portals they work on developing.

What this research means to portal users is they can expect to get what they want as more research is done and competition for their business increases. Previous research has shown that competition is fairly great among portals to gain the loyalty of Internet users. Therefore, when a user does commit to using a portal for a while, s/he can probably expect to be provided with more attractive and satisfactory service as time goes on, and as more studies such as this one are conducted. The limitations of this study leave room for much expansion. This study has only a small sample of one university's population. Even though it is assumed that the results from this population are representative of those of Internet users in general, it

would be beneficial to examine many more factors within a greater population. Also, this survey was conducted only once, so no information has been gathered about the respondents over time. For the future, further research can be done in this area to determine whether or not there are differences in region of the country, a broader range of majors in college students, age ranges, and experience level. Also, further exploration of trends in what users desire and how their use changes over time could be a great area of discovery. Because the Internet is such a hot topic, portals and issues surrounding them are sure to be the subject of much continued discussion.

APPENDIX – The Survey

Web Portal Use Survey

Please Read each question carefully and answer as honestly and precisely as possible. Choose only one answer per question unless otherwise noted.

For the purposes of this study, a "portal" is a web site or service that offers a broad array of resources and services, such as e-mail, community forums, a search engine, and online shopping. It is usually the first web site that an Internet user sees or the main site from which they work.

1. Which portal do you use most often?

- | | | |
|------------------------------------|-----------------------------------|--------------------------------|
| <input type="checkbox"/> AltaVista | <input type="checkbox"/> Lycos | <input type="checkbox"/> Yahoo |
| <input type="checkbox"/> Excite | <input type="checkbox"/> MSN | <input type="checkbox"/> Other |
| <input type="checkbox"/> IWon | <input type="checkbox"/> Netscape | |

If you answered **other** to question #1, please name and describe your primary portal

2. Why is that the portal that you use most often?

3. What is the primary reason that you continue to use the portal you listed in #1?

4. What features do you use in your primary portal (from question#1) (Check all that apply.)

- | | |
|--|---|
| <input type="checkbox"/> News | <input type="checkbox"/> E-Mail |
| <input type="checkbox"/> Sports | <input type="checkbox"/> Message Boards |
| <input type="checkbox"/> Stocks (trading, information) | <input type="checkbox"/> Chat Rooms |
| <input type="checkbox"/> Shopping | <input type="checkbox"/> Other |
| <input type="checkbox"/> Search Engine | <input type="checkbox"/> Don't know |

If you answered **other** to question #4, please list the other features of the portal that you use

5. When you log onto the internet, do you go straight to your primary portal?

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

If you answered **no** to question 5, please describe where you do go after you log on.

6. Do you use portals other than the one you listed in question #1? (Please check all that apply.)

- I don't use any others (do not check any other boxes)
- AltaVista
- Excite
- Iwon
- Lycos
- MSN
- Netscape
- Yahoo
- Other

If you answered **other** to question #6, please name and describe the other portals that you use

7. Pick one of the portals that you checked or named in #6. Why did you start using that portal?

8. What is the primary reason that you continue to use the second portal you listed in question #6?

9. How long have you been using the Internet (including using email, gopher, ftp, etc.)?

- Less than 6 months
- 6 to 12 months
- 1 to 3 years
- more than 3 years

10. On average, how often do you use your WWW browser for a specific set of tasks?

- More than 9 times/day
- 5 to 8 times/day
- 1 to 4 times/day
- A few times a week
- Once a week
- Once a month

11. What do you use the internet for? (Please check all that apply.)

- School Work
- Personal
- Business
- other

If you answered **other** to question #11, please list the other activities that you use the internet for.

12. What is your occupation?

13. What is your age?

14. What is your gender?

- Female
- Male

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