

## AN INVESTIGATION OF STUDENTS' INTERACTIVE SHOPPING BEHAVIOR AND THE BUYER DECISION PROCESS

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### ABSTRACT

This study investigates the online purchase behavior of a key segment of the population, the undergraduate college-aged student. In addition to identifying college students' internet activities, this research provides useful information concerning how frequently students interactively shop online, how much they spend, what they buy as well as answer the question of how students approach the Buyer Decision Process in their use of the internet. The results provide useful guidance to electronic marketers.

### INTRODUCTION

Electronic commerce is expected to represent only about 8 percent of total U.S. consumer and industrial goods and services expenditures in 2001, and less than 1 percent of global expenditures (Berkowitz, Kerin Hartley and Rudelius, 2000). But the projected growth of online consumers and expenditures leads marketers to believe that the possibilities for consumer value creation are greater in the electronic commerce marketplace than in the traditional marketplace (Green and Growder, 1998). For example, it is expected that the number of U.S. households buying online will quadruple from 1998 to 2002, and more than 50 percent of all U.S. households will buy something online by 2002 (Berkowitz, Kerin Hartley and Rudelius, 2000). The estimated number of e-shoppers will continue to accelerate from about 45 million in 2001 to over 61 million by 2002, and it is projected that the spending of these cybershoppers will grow from \$31 billion in 2001 to at least \$42 billion in 2002 (Krantz, 1998). Consumer shopping on the Web is expected to exceed \$800 billion by 2003 (Schneider and Perry, 2000).

Currently North America has the greatest number of Internet usage with 110 million in the United States and another 13 million in Canada. However, European users are growing rapidly and by 2003 will surpass North America with over 170 million internet users. Worldwide internet access is also impressive with citizens in 56 of the 200 countries having an online capability (*eTForecasts*, 2000). Approximately

85 percent (219.2 million) of all global internet users (259 million) reside in only 15 countries (*CyberAtlas*, 2000). The *Computer Industry Almanac* (CIA) predicts 490 million worldwide internet users (7.9%) by 2002 and 11.8 percent penetration by 2005 (*CyberAtlas*, 2000; *Computer Industry Almanac*, 1999). The CIA predicts 720 million adult internet users by 2005 (11.1%) (*Computer Industry Almanac*, 1999).

Additionally, the "The Net Generation," which represents about 14.5 percent of the total population, is one of the fastest growing online segments. Globally, over 77 million are expected by 2005 (NUA, 1999). Because online consumers tend to be better educated, younger, and more affluent than the general population, this segment is extremely attractive to marketers (Berkowitz, Kerin, Hartley and Rudelius, 2000). Thus, because of the implications of these powerful trends as well as the vast opportunities for strategic electronic marketing worldwide, industry and specifically marketing managers must learn everything possible about online consumers, their buyer behavior as well as the buyers' electronic decision making process in today's rapidly expanding global online marketplace.

This study investigates the online purchase behavior of a key segment of the population, the undergraduate college-aged student. In addition to identifying college students' internet activities, this research provides useful information concerning how frequently students interactively shop online, how much they spend, what they buy as well as answer the question of how students approach the Buyer Decision Process in their use of the internet.

### METHODOLOGY

The sampling plan required that a multi-page questionnaire be self-administered by a randomly selected sample of undergraduate students. The sample consisted of 152 undergraduate students attending a college located north of Boston, Massachusetts. Approximately an equal number of respondents were gathered from three schools/divisions of the college: Science &

Engineering, n=42 (27.6%); Liberal Arts, n=57 (37.5%); and the Business School, n=53 (34.9%). Close-ended questions allowed for responses on computer ownership, subscriber service, online frequency and activities, including interactive shopping behavior, as well as the use of the internet by students in the Buyer Decision Process.

## ANALYSIS & RESULTS

### Students' Use of the Internet

Not surprising because of ready access to computers and online networks, it was found that almost all students use the internet, 97 percent. Fewer students actually own their own computers (88.1%) and only 70.2 percent personally subscribe to an online service. Students were found to spend an average of 11.9 hours per week online.

It was found that students use the internet primarily to do research, communicate with e-mail, obtain maps/directions, download music, view weather reports, shop, conduct job searches, play games, and get news, as illustrated in TABLE 1 below.

**TABLE 1 – Primary Activities The Internet Is Used For By Students**

Student Question: What activities do you use the internet for?

	Response %
Research	96.0
E-Mail	94.0
Maps/Directions	74.8
Download Music	69.5
Weather Reports	55.0
Shopping	50.3
Job Search	48.3
Games	45.0
News	42.4
Banking/Stocks/Investments	27.8
Download Software -such as Virus Scans	20.5
Chat Rooms	14.6
Other	9.9

### Purchase Behavior and the Buyer Decision Process

The buyer decision process consists of five stages: Need Recognition, Information Search, Evaluation, Purchase Decision, and Postpurchase Behavior.

#### 1. Need Recognition

The buying process begins with Need Recognition. When the buyer senses a difference between his or

her actual state and a desired state, the buyer has perceived a need. Need Recognition can be triggered by internal or external stimuli (Kotler and Armstrong, 2001). Clearly a person online may be exposed to products and service information that may arouse their recognition of a perceived need. Students in this study reported that they "Frequently" (21.5%) and "Sometimes" (74.5%) discovered products and/or services that they were interested in while online. The internet's role in providing Need Recognition for students is displayed in TABLE 2.

**TABLE 2 – Percentage Of Students Who Discovered Need Recognition Online**

Student Question: While online, I have discovered products and/or services that I am interested in?

	Response %
Frequently	21.5
Sometimes	74.5
Never	4.0

#### 2. Information Search

If the consumer's need is strong enough, he or she may search for information bearing on the need. The amount of search activity and information the consumer gathers normally is related to the strength of the Need Recognition and the complexity of the problem solving involved (Kotler and Armstrong, 2001). According to Berkowitz, Kerin, Hartley and Rudelius (2000), about 55 percent of internet/web users have sought product or service information online before making a purchase. Ninety-four percent of the students in this study either "Frequently" or "Sometimes" searched web sites for information about products and/or services they were interested in, as TABLE 3 illustrated.

**TABLE 3 – Percentage Of Students Who Have Conducted Online Information Searches**

Student Question: I have searched web sites for information about products and/or services I am interested in.

	Response %
Frequently	36.0
Sometimes	58.0
Never	6.0

#### 3. Evaluation

As a result of the information search, consumers increase their awareness and knowledge of the specific brands, prices, features and availability of the products and/or services that they feel may solve their recognized need. Consumers use this valuable

information to evaluate alternatives and arrive at a set of final choices from which to decide. It was found that almost 24 percent of the students in this study use web sites 'Frequently' to accomplish this important product and/or service option evaluation while 59 percent of the respondents use web sites "Some of the time" for this purpose. TABLE 4 shows that female students were found to evaluate services and/or products, brands, prices, features and their availability by using web sites more predominately than male students. Female students (27%) were much more likely to use web sites "Frequently" to make these evaluations than males (20%), and fewer females (14.9%) indicated that they "Never" use web sites for this evaluative purpose compared to males (20%).

**TABLE 4 – Percentage Of Students Who Used Web Sites To Evaluate Services And/OR Products, Brands, Prices, Features And Availability.**

Student Question: I use web sites to evaluate different services and/or products, brands, prices, features, and their availability.

	Overall Response %	Male %	Female %
Frequently	24.0	20.0	27.0
Sometimes	58.7	60.0	58.1
Never	17.3	20.0	14.9

**4. Purchase Decision**

At the conclusion of the Evaluation stage, the consumer usually has ranked the options and formed a purchase intent. Over 63 percent of the students in this study reported that they had actually made their final product and/or service purchase decisions while online. These data may be viewed in Table 5 below.

**TABLE 5 – Percentage Of Students Who Made Final Product And/Or Service Purchase Decisions While Online**

Student Question: I make my final product and/or service purchase decisions while online.

	Response %
Frequently	8.4
Sometimes	55.2
Never	36.4

According to Berkowitz, Kerin, Hartley and Rudelius (2000), by mid-1999, only 25 percent of internet/web users had ever actually purchased a product or service online. It was found in this study that over 27 percent of the students had made two online purchases within the last month; over 48 percent had

bought four to five items online within the last six months; and almost one-half of the students had successfully shopped for more than eight items online within the last year.

Each student who had purchased items online reported spending \$100.45 buying online within the last month. An average of \$205.37 per student spending online was reported for the last six-month period, and \$375.68 was spent by each student for online purchases over the last year. TABLE 6 shows the number of items and the amount spent by students for the last month, six months and one-year period.

**TABLE 6 – Number Of Items Bought And Amount Spent For Online Purchases By Students**

Student Question: If you have purchased online, approximately how many items have you bought and about how much money did you spend on all your purchases?

		Responses
In the last month	Avg. Items =	2.15
	% Responses	27.2%
	Avg. \$ Spent	\$100.45
	% Responses	27.8%
In the last six (6) months	Avg. Items =	4.56
	% Responses	48.3%
	Avg. \$ Spent	\$205.37
	% Responses	45.0%
In the last year (12 months)	Avg. Items =	8.01
	% Responses	49.7%
	Avg. \$ Spent	\$375.68
	% Responses	48.3%

Students were found to primarily have bought clothes, airline tickets, event tickets, music, books, flowers, computer software, hotel accommodations, movies, and sporting goods online. TABLE 7 shows the percentage breakdown for these most frequently purchased products and services in the last year.

Of interest is the fact that almost one-half of the students indicated that they used the internet to search for product/service and store location information but they usually did not buy online, preferring to go to a store to make their final purchase, as TABLE 8 illustrates below.

Some of the reasons which may explain this behavior are that 13.2 percent of the students indicated that they did not have a credit card with which to make an online purchase, 44.4 percent

reported that they enjoyed shopping in stores, and 32.5 percent were afraid to send personal information online.

**TABLE 7 – Products/Services Most Frequently Purchased Online By Students Within Last Year**

Student Question: What products/services have you purchased online within the last year?

	Response %
Clothes	33.1
Airline Tickets	25.2
Event Tickets	22.5
Music	17.2
Books	15.9
Flowers	13.2
Computer Software	11.3
Movies	9.3
Hotel	9.3
Sporting Goods	7.3

**TABLE 8 – Percentage Of Students Who Search Online But Buy In Stores**

Student Question: I use the internet to search for product/service and store location information but I usually do not buy online. I will most likely go to a store to make my final purchase.

	Response %
Frequently	42.3
Sometimes	52.3
Never	5.4

With respect to the security of information sent over the internet, in related questions reported in TABLES 9 & 10, over 82 percent of the students expressed some concern about the security of the information they would have to provide online to make a purchase and 64 percent reported the most important disadvantage was providing credit card information online.

**TABLE 9 – Percentage Of Students Indicating Most Important Disadvantages Of Shopping Online**

Student Question: Which of the following do you believe are the most important disadvantages of shopping online?

	Response %
<b>Providing credit card information online</b>	<b>63.6</b>
Difficulty returning merchandise	49.0
Being targeted for repeat/future purchases	40.4
Out-of-stock merchandise	30.5
Slow delivery	24.5
Poor site navigation or performance	15.9

With respect to purchasing online, of those students who have not bought online recently, over 94 percent indicated some likelihood that they will make an online purchase in the future. Only 5.8 percent of the students do not envision themselves making an online purchase in the future.

**TABLE 10 – Percentage Of Students Expressing Confidence In Providing Information Necessary To Make Online Purchases**

Student Question: How confident are you that the information you provide to make online purchases is secure?

	Response %
Very Confident	17.8
A Little Worried	78.5
Extremely Worried	3.7

### 5. Postpurchase Behavior

Once the consumer has made a purchase, his or her satisfaction is determined by the relationship between the consumer's expectations and the perceived performance of the product and/or service received from the shopping experience. If there is conflict or discomfort after the purchase has been consummated, the consumer is not likely to repeat the shopping experience (LaBarbara and Mazursky, 1983).

Over 92 percent of the students surveyed confirmed that if they were satisfied with a purchase from a particular web site, they would most likely visit and purchase from that site again as TABLE 11 shows.

**TABLE 11 – Students' Satisfaction With Particular Web Site Purchases And Their Repurchase Intent**

Student Question: If I am satisfied with a purchase from a particular web site, I will most likely visit and purchase from the site again.

	Response %
Frequently	49.5
Sometimes	43.0
Never	7.5

Students reported many advantages to shopping online which included the fact that it is more convenient (67.5% of students), easier, saves time (59.6%), has better prices (29.8%), online product reviews (17.9%), and featured sales item pages (18.5%). About 38 percent of the students reported a high satisfaction level with their overall online purchase experiences while almost 62 percent indicated a moderate level of satisfaction.

## SOME KEY POINTS FOR MARKETERS TO PONDER

- College students are online a lot and they discover products and services that interest them during their time online, [**Need Recognition**].
- College students search web sites for information about products and/or services that interest them, [**Information Search**].
- College students evaluate alternatives while online and arrive at a final set of choices from which to buy while online, [**Evaluation**].
- College students make final product and/or service purchase decisions while online. Some do not have credit cards with which to buy interactively, but they do indeed shop while online, [**Purchase Decision**].
- College students develop web site loyalty and will repeat purchases if their total shopping experience is satisfying and they have confidence in and trust the site, [**Postpurchase Behavior**].
- College students buy online, more so than the general population. They frequently spend money on clothing, computer software, books, event tickets, music, flowers, airline tickets, and hotels. Almost all of the college students, who have not purchased online recently, report that they are likely to purchase online in the future.
- College students view the primary advantages of online shopping to be ease of placing orders, convenience, time saving, with helpful online product reviews, better prices, and featured sale items. With respect to their online purchase experiences, students also expressed a high degree of satisfaction with product selection, information and quality, as well as web site navigation.
- College students have concerns about security and providing credit card information online, slow delivery, being targeted for repeat/future purchases online, out-of-stock merchandise, difficulty returning merchandise, and dissatisfaction with purchase tracking abilities.
- As college students progress through the stages of the Buyer Decision Process, they are clearly engaged with the internet. Over

time, it is likely that students, as they spend more online, will continue to develop a dependent online relationship in all phases of the Buyer Decision Process.

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