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I walked into my classroom last semester only to be surprised that less than half of my graduate class purchased books from the Rutgers bookstore. Instead, they ordered the books online. They explained to be that all they had to do was type in "Kendall" (for the first couple weeks of the semester when these books were in demand) and click the mouse a couple of times and the book was theirs. This month's outstanding column, by Professors Hyo-Joo Han and Rosalie Ocker, begins with just such a textbook example, then goes on to discuss a broader topic about whether online merchants should specifically target university students. Read this column from beginning to end—you will find it very interesting.

## Is It Worthwhile to Target University Students?

by Hyo-Joo Han, College of Computing, New Jersey Institute of Technology; and Rosalie Ocker, Fox School of Business and Management, Temple University



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A bulletin board with a hefty pile of flyers titled "Textbooks On Sale" was an expected scene at every corner of campus at the beginning of each semester. Most of us still remember that we would make several trips to a campus bookstore to buy textbooks and stand in a long line, sometimes for more than one day. Can you imagine a campus bookstore not jam-packed with students and a bulletin board without "Used Textbooks" ads at the beginning of each semester? Perhaps it's around the corner, as more and more students not only buy, but also sell, their books via on line sites.

Today's campus conversation about textbooks is more likely to involve web URLs, credit cards, and shipping charges than "Oh no, they're out of stock," or complaints about campus bookstore prices.

### Demographics of the Internet users and on-line shoppers

Scott Smith and William Swinyard, professors at Brigham Young University predict that between 65 percent and 70 percent of Internet users have the potential to become on-line shoppers, with more than 40 percent being regular on-line shoppers in the future. According to eMarketer (June 2000), 77 percent of U.S. on-line users will be converted into on-line shoppers by 2003. The

three words, young, white, and educated can be used to describe the characteristics of early adopters of any technology in the United States, which also applies to on-line shopping. They represent the mainstream of on-line shoppers in this infant stage of on-line shopping. As the ratio of typical day Internet users, as well as the ratio of on-line shoppers by gender, age, and ethnic group have changed, on-line shopping companies have started targeting minorities, senior citizens, women, and university students. According to eMarketer, the Internet provides a good channel for advertisers to find a "highly targeted" audience, as well as to interact with people at an unprecedented high level.

### Reasons to target university students

About 78 percent of the Internet users have been using the Web for at least three years, and 90 percent of them go on-line daily. A survey of e-marketers found that, although university students comprise 25% to 30% of all web users, they are the most elusive target group to market (Gannon, 1999). A study done by Greenfield Online (Pastore, 2000), an on-line marketing research company, shows that university students are active on-line shoppers and e-mail users, with 81 percent having made a purchase

on-line. One quarter of university students have purchased a book on-line, which is the second most frequently purchased item on-line by university students, after CDs.

CollegeByte.com is an Internet hub developed to help marketers reach university students. From recent studies, we are well aware of the importance of relationships in e-marketing due to the lack of choice and higher prices. Most university students are dissatisfied with their shopping experience in campus towns. Students go to malls/wholesale markets in neighboring cities just for shopping, taking one or two day trips with their friends as a weekend activity. They purchase more valuable items when they visit neighboring cities.

Against this backdrop, the following reasons, we think, make it worthwhile to target university students for on-line shopping.

- **Computer Dependence:** More than 90 percent of university students are Internet users and more than 30 percent of students perceive that they are computer dependent (Pastore, 2000).
- **Easy for Email Marketing:** Most of them automatically receive an email address when they register for courses. Their email

addresses are easy for companies to obtain.

- **Computer Access:** University students often use a school server to connect to faster Internet services.
- **Potential Lifetime Member:** Some companies lure university student by giving them discounts on their brand, hoping that students will stay and become lifetime, brand-loyal customers.
- **Future Money Maker:** Students will make significant amount of money as they are building their careers in the near future.
- **High Education:** In general, people with a college education make more money and are expected to spend more money for shopping.

### The Correlation between Computing Behavior and Intention of Shopping On-line

Although the potential of university students' purchasing power is significant, very little is known about their characteristics and buying habits. There have been very few empirical studies focusing on university students. Given the increasing importance of web-based e-commerce, and that a significant portion of the web population consists of university students, the empirical study reported in this paper attempts

to shed some light on several characteristics of students who purchase products and services on-line. We confined the study to investigating e-commerce within the business-to-consumer market as it occurs over the web.

To target the audience more efficiently, it is necessary for on-line companies to understand university students' on-line shopping behavior by understanding their characteristics, not only to boost sales initially but also to enhance pre-purchase and post-purchase customer services. Kendall (2000) said that the meaning of e-commerce expands from buying and selling goods and services to informing people of service or product characteristics prior to the sales. Specifically, we try to examine whether there is a relationship between university students' computing behavior and their intention of shopping on-line (Han, Ocker, and Fjermestad, 2001). The theoretical model presented in Figure 1 below is based on the scant amount of available research. The model includes five independent variables that are hypothesized to directly influence shopping conducted via the web. These variables are: the level of experience using other media for shopping, the amount of time spent on-line, the level of experience using computer technology, the level of experience using web tools, and

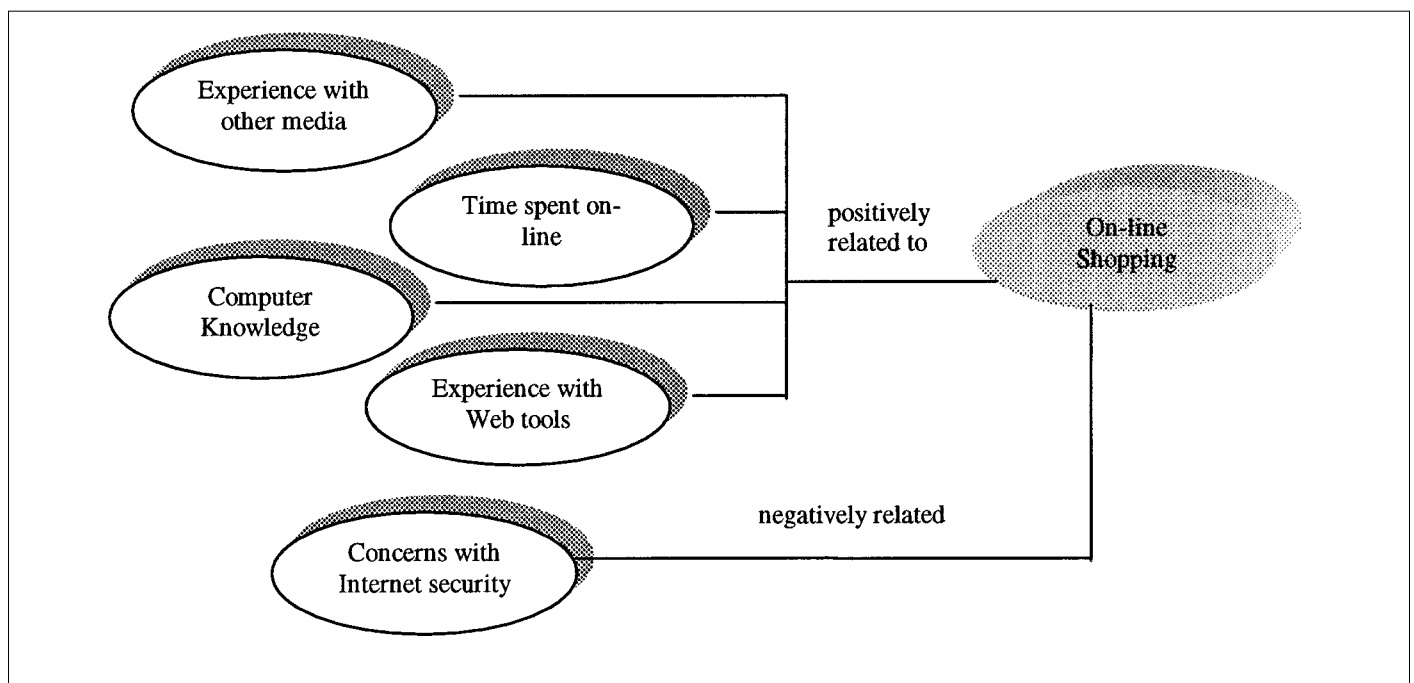


Figure 1: A factor model relating characteristics of university students to on-line shopping.

the concern for security risks associated with on-line shopping.

## Procedures and Findings

We developed a six-page survey to capture data regarding students' background, characteristics, and the intent to purchase products or services via the web within the next 12 months. Seventy-five students attending a branch campus of a major university with various technology backgrounds participated in this study. Students were randomly drawn from the Information Systems, Computer Science, Business Administration, and Engineering Technology Programs. It was decided to focus on intent to purchase rather than actual purchases so that the varying purchasing power of students in the sample would not confound the results.

Our study addressed the following questions:

1. Will students who spend more time using *other media* for shopping actually shop more on the web?

It is expected that students who have shopped using other media such as catalogs, home shopping channels, or multimedia CD-ROMs will be more likely to shop on-line. Based on our analysis, although there was a positive correlation between students who used other media for shopping and those who indicated that they intend to shop on the web within the next 12 months, it was not significant.

2. Do students who spend more *time on-line* shop more on the web?

It is expected that on-line shopping is a function of the amount of time that students spend on-line. There was a significant positive correlation between students who spent more time on-line and those who intend to shop on-line, supporting our second assumption.

3. Are students with more *computer experiences* more likely to shop on the web?

It is anticipated that students with a higher level of experiences using computers will be more likely to shop on-line due to an increased comfort-level with technology. There was a significant positive correlation between students with more computer experiences and intentions of future on-line shopping.

4. Will students with more *experiences using web tools* shop more on the web?

Similarly, it is expected that students with more experiences using web tools such as a history list and bookmarks, search engines, downloading files, and creating web sites will be more likely to shop on-line. There was a significant, positive correlation between students who have experiences of using web tools and intentions of shopping on-line in the future.

5. Do you think students with more *concerns about web security* will shop less on-line?

Finally, it is expected that students concerned about the security risks associated with web-commerce will shop less on the web. There was a significant, negative correlation between students' concern about web security and intentions of shopping on the web in the future.

## What Did We Learn from This Study?

The results of this study indicate that students' current computing profile is a good predictor of their intention to shop on-line in the near future (within the next 12 months). Specifically, the profile of students who intend to shop on-line within the next year:

- spend more time on-line;
- have a higher degree of computer experiences;
- have more experiences of using web tools; and
- have less concern for the security of their Internet transactions.

The degree to which students use media such as television and catalogs for shopping is not a good predictor of future on-line shopping behavior. The results of recent studies by marketing research companies (Youth Culture Inc., Internet.com, and e-gateway) are not consistent in terms of the amount of time spent on-line vs. time spent watching TV. Some survey results indicate that people who spend more time watching TV also spend more time surfing the Internet. Meanwhile, some experts point out that the increased time spent on surfing the Internet has been taken away from the time that was otherwise spent watch-

ing TV. We anticipate that more and more university students will adopt to surf the Internet while they are watching TV or listening to radio at the same time. Our study indicates that when marketing to university students, marketers may see their best results when they target students who are not only comfortable using computers and on-line tools, but also spend a fair amount of time on-line (i.e., at least five hours per week).

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